

Literature Search Request

Search query	COVID-19
Search strategy CAB Abstracts on the OVID interface	Database: CAB Abstracts <2000 to 2021 Week 13> Search Strategy: ----- 1 ('covid 19' or 'novel coronavirus' or 'sars-cov-2').mp. (5997) 2 1 and 202103*.up. (861) ***** [mp=abstract, title, original title, broad terms, heading words, identifiers, cabicodes]
Date of coverage	March 2021

Search results

	Date searched	No of items found
CAB Abstracts	8/4/2021	861

References from CAB Abstracts

<1>

Accession Number

20210111305

Author

Baral, B. D.; Thapa, K.

Title

Effect of the COVID-19 lockdown on ambient air quality in major cities of Nepal.

Source

Journal of Health & Pollution; 2021. 11(29). 40 ref.

Publisher

Pure Earth

Location of Publisher

New York

Country of Publication

USA

Abstract

Background. The Nepalese government announced a nationwide lockdown beginning on March 24, 2020 as an attempt to restrain the spread of COVID-19. The prohibition in flight operations and movement of vehicles, factory shutdowns and restriction in people's movement due to the lockdown led to a significant reduction in the amounts of pollutants degrading air quality in many countries. **Objectives.** The present study aimed to analyze changes in particulate matter (PM) emissions and the air quality index (AQI) of six cities in Nepal i.e., Damak, Simara, Kathmandu, Pokhara, Nepalgunj and Surkhet due to the nationwide lockdown in response to the COVID-19 outbreak. **Methods.** Daily PM concentrations of each of the six study cities from January 24 to September 21, 2020 were obtained from the World Air Quality Index project (<https://aqicn.org>) and analyzed using R Studio software. The drop percentage was calculated to determine the change in PM_{2.5} and PM₁₀ concentration during different time periods. Independent sample Mann-Whitney U tests were performed to test the significance of differences in mean concentration for each site during the lockdown period (24 March-24 July 2020) and its corresponding period in 2019. Similarly, the significance of differences in mean concentrations between the lockdown period and the period immediately before lockdown (23 January-23 March) was also examined using the same test. **Results.** During the lockdown period, in overall Nepal, AQIPM_{2.5} and AQIPM₁₀ were within the moderate zone for the maximum number of days. As a result of the lockdown, the highest immediate and final drop of PM_{2.5} was observed in Damak (26.37%) and Nepalgunj (80.86%), respectively. Similarly, the highest immediate drop of PM₁₀ was observed in Surkhet (37.22%) and finally in Nepalgunj (81.14%). Analysis with the Mann-Whitney U test indicated that for both PM types, all sites showed a statistically significant ($p < 0.05$) difference in mean concentrations during lockdown and the corresponding period in 2019. **Conclusions.** The present study explored the positive association between vehicular movement and PM emissions, highlighting the need for alternative fuel sources to improve air quality and human health.

Publication Type

Journal article.

<2>

Accession Number

20210111028

Author

Ma Li; Zou ShiYue; Liu YanYi; Lai Jing; Yang JunHua

Title

The application of hazard vulnerability analysis in the prevention and control of COVID-19 in medical institutions.

Source

Iranian Journal of Public Health; 2021. 50(2):271-279. 12 ref.

Publisher

School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background: Coronavirus disease 2019 (COVID-19) has caused massive casualties, severe economic losses, and poses a threat to the world. This study's primary objective was to analyze the hospital's potential hazards of COVID-19 prevention and control. The second objective was to review the disaster plan and make recommendations to minimize the spread of COVID-19 in hospitals. Methods: An expert group for the prevention and control of COVID-19 in the First People's Hospital of Longquanyi District, Chengdu, China was established. We adopted the hazard vulnerability analysis (HVA) to risk-stratify potential hazards and calculated relative risk values. We used the Delphi expert consultation method to propose and implement targeted improvement measures for the top five potential hazards. Then, the effects before and after the intervention were compared. Results: The top five hazards were: insufficient Personal Protective Equipment (PPE) (25.68%), inadequate diagnosis ability of clinicians (22.55%), and inadequate management strategies of patients and caregivers (22.38%), lack of professional ability of pre-checking and triage staff (16.96%), lack of knowledge of COVID-19 of medical staff (15.59%). After taking targeted improvement measures, the average score of the hospital staff's COVID-19 knowledge test increased from 73.26 points to 90.44 points, the average test score of the outsourcing company employees increased from 68.55 to 89.75 points. The differences were statistically significant ($P < 0.05$). Conclusion: HVA can be used to systematically risk-stratify potential threats, measure the probability of those potential hazards, and develop various hospital prevention and control measures for COVID-19 epidemics.

Publication Type

Journal article.

<3>

Accession Number

20210111025

Author

Askarian, M.; Groot, G.; Taherifard, E.; Taherifard, E.; Akbarialiabad, H.; Borazjani, R.; Askarian, A.; Taghrir, M. H.

Title

Basics of developing a COVID-19 reopening roadmap: a systematic scoping review.

Source

Iranian Journal of Public Health; 2021. 50(2):232-244. 39 ref.

Publisher

School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background: The necessity of easing pandemic restrictions is explicit. Due to the harsh consequences of lockdowns, governments are willing to find reasonable pathways to reopen their activities. **Methods:** To find out the basics of developing a reopening roadmap, on 6th-10th July 2020, we conducted a systematic search on PubMed, Scopus, and Web of Science to review the databases; and Google by manual to review the grey literature. Two independent authors extracted the data, and the senior author solved the discrepancies. **Results:** Sixteen documents were included. Data categorized into four sections: principals, general recommendations for individuals, health key metrics, and in-phases strategy. The number of phases or stages differed from three to six, with a minimum of two weeks considered for each one. Health key metrics were categorized into four subsets: sufficient preventive capacities, appropriate diagnostic capacity, appropriate epidemiological monitoring, and sufficient health system capacity. These metrics were used as the criteria for progressing or returning over the roadmap, which guarantees a roadmap's dynamicity. Noticeably, few roadmaps did not mention the criteria that may alter the dynamicity of their roadmap. When some areas face new surges, the roadmap's dynamicity is essential, and it is vital to describe the criteria to stop the reopening process and implement the restrictions again. **Conclusion:** Providing evidence for policymaking about lifting the COVID-19 restrictions seems to be missed in the literature should be addressed more, and further studies are recommended.

Publication Type

Journal article.

<4>

Accession Number

20210110719

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Farrokhpour, M.; Rezaie, N.; Moradi, N.; Rad, F. G.; Izadi, S.; Azimi, M.; Zamani, F.; Izadi, S.; Ranjbar, M.; Makiani, M. J.; Laali, A.; Roham, M.; Yadollahzadeh, M.

Title

Infliximab and intravenous gammaglobulin in hospitalized severe COVID-19 patients in intensive care unit.

Source

Archives of Iranian Medicine; 2021. 24(2):139-143. 18 ref.

Publisher

Academy of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background: Severe coronavirus disease 2019 (COVID-19) may lead to the cytokine storm syndrome which may cause acute respiratory failure syndrome and death. Our aim was to investigate the therapeutic effects of infliximab, intravenous gammaglobulin (IVIg) or combination therapy in patients with severe COVID-19 disease admitted to the intensive care unit (ICU). Methods: In this observational research, we studied 104 intubated adult patients with severe COVID-19 infection (based on clinical symptoms, and radiographic or CT scan parameters) who were admitted to the ICU of a multispecialty hospital during March 2020 in Tehran, Iran. All cases received standard treatment regimens as local protocol (Oseltamivir + hydroxychloroquine + lopinavir/ritonavir or sofosbuvir or atazanavir +or- ribavirin). The cases were grouped as controls (n = 43), infliximab (n = 27), IVIg (n = 23) and combination (n = 11). Results: There was no significant difference between controls and treatment groups in terms of underlying diseases or the number of underlying diseases. The mean age (SD) of cases was 72.42 (16.06) in the control group, 64.52 (12.965) in IVIg, 63.40 (17.57) in infliximab and 64.00 (11.679) in combination therapy; (P = 0.047, 0.031 and 0.11, respectively). Also, 37% in the infliximab group, 26.1% in IVIg, 45.5% in combination therapy, and 62.8% in the control group expired (all P < 0.05). Hazard ratios were 0.31 in IVIg (95% CI: 0.12-0.76, P = 0.01), 0.30 in infliximab (95% CI: 0.13-0.67, P = 0.004), 0.39 in combination therapy (95% CI: 0.12-1.09, P = 0.071). Conclusion: According to the findings of this study, it seems that infliximab and IVIg, alone or together, in patients with severe COVID-19 disease can be considered an effective treatment.

Publication Type

Journal article.

<5>

Accession Number

20210110469

Author

Li YuanChao; Yang TuoYun; Wang SiCong; Zheng JunBo; Zhou Jing; Jiang Min; Zhou Tong; Cao Yang; Wang HongLiang

Title

The value of lymphocyte count in determining the severity of COVID-19 and estimating the time for nucleic acid test results to turn negative.

Source

Bosnian Journal of Basic Medical Sciences; 2021. 21(2):235-241. 32 ref.

Publisher

Association of Basic Medical Sciences of the Federation of Bosnia and Herzegovina

Location of Publisher

Sarajevo

Country of Publication

Bosnia-Herzegovina

Abstract

Peripheral blood lymphocyte count is shown to be decreased in patients with COVID-19 in the early stage of the disease. The degree of lymphocyte count reduction is related to COVID-19 severity and could be used as an indicator to reflect the disease severity. Our aim was to investigate the value of lymphocyte count in determining COVID-19 severity and estimating the time for SARS-CoV-2 nucleic acid test results to turn negative. We retrospectively analyzed clinical data of 201 patients with severe and critical COVID-19. The patients were admitted to the West Campus of Union Hospital of Tongji Medical College of Huazhong University of Science and Technology. The data included age, gender, chronic disease, lymphocyte count, and SARS-CoV-2 nucleic acid test results. The age of patients in critically ill group was higher than in severely ill group ($p=0.019$). The lymphocyte count of critically ill patients was lower than of severely ill patients. The cutoff value of lymphocyte count to distinguish between the critically ill and the severely ill was $0.735 \times 10^9/L$ ($p=0.001$). The cutoff value of lymphocyte count for SARS-CoV-2 nucleic acid test results turning negative in severely and critically ill patients with chronic diseases (hypertension, diabetes, and coronary heart disease) was $0.835 \times 10^9/L$ ($p=0.017$). The cutoff value of lymphocyte count for SARS-CoV-2 nucleic acid test results turning negative in severely and critically ill male patients was $0.835 \times 10^9/L$ ($p < 0.0001$). Lymphocyte count could be an effective indicator to predict COVID-19 severity. It may also be useful in determining the time for nucleic acid test results to turn negative in COVID-19 patients with underlying chronic diseases or male COVID-19 patients with severe and critical conditions.

Publication Type

Journal article.

<6>

Accession Number

20210110379

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Magazzino, C.; Mele, M.; Sarkodie, S. A.

Title

The nexus between COVID-19 deaths, air pollution and economic growth in New York state: evidence from deep machine learning.

Source

Journal of Environmental Management; 2021. 286. 2 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The aim of this paper is to assess the relationship between COVID-19-related deaths, economic growth, PM10, PM2.5, and NO2 concentrations in New York state using city-level daily data through two Machine Learning experiments. PM2.5 and NO2 are the most significant pollutant agents responsible for facilitating COVID-19 attributed death rates. Besides, we found only six out of many tested causal inferences to be significant and true within the AUPRC analysis. In line with the causal findings, a unidirectional causal effect is found from PM2.5 to Deaths, NO2 to Deaths, and economic growth to both PM2.5 and NO2. Corroborating the first experiment, the causal results confirmed the capability of polluting variables (PM2.5 to Deaths, NO2 to Deaths) to accelerate COVID-19 deaths. In contrast, we found evidence that unsustainable economic growth predicts the dynamics of air pollutants. This shows how unsustainable economic growth could increase environmental pollution by escalating emissions of pollutant agents (PM2.5 and NO2) in New York state.

Publication Type

Journal article.

<7>

Accession Number

20210110333

Author

Hantoko, D.; Li XiaoDong; Agamuthu Pariatamby; Yoshikawa, K.; Horttanainen, M.; Yan Mi

Title

Challenges and practices on waste management and disposal during COVID-19 pandemic.

Source

Journal of Environmental Management; 2021. 286. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The COVID-19 pandemic has imposed a global emergency and also has raised issues with waste management practices. This study emphasized the challenges of increased waste disposal during the COVID-19 crisis and its response practices. Data obtained from the scientific research papers, publications from the governments and multilateral organizations, and media reports were used to quantify the effect of the pandemic towards waste generation. A huge increase in the amount of used personal protective equipments (facemasks, gloves, and other protective stuffs) and wide distribution of infectious wastes from hospitals, health care facilities, and quarantined households was found. The amount of food and plastic waste also increased during the pandemic. These factors caused waste treatment facilities to be overwhelmed, forcing emergency treatment and disposals (e.g., co-disposal in a municipal solid waste incinerator, cement kilns, industrial furnaces, and deep burial) to ramp up processing capacity. This paper discussed the ways the operation of those facilities must be improved to cope with the challenge of handling medical waste, as well as working around the restrictions imposed due to COVID-19. The study also highlights the need for short, mid, and longer-term responses towards waste management during the pandemic. Furthermore, the practices discussed in this paper may provide an option for alternative approaches and development of sustainable strategies for mitigating similar pandemics in the future.

Publication Type

Journal article.

<8>

Accession Number

20210110247

Author

Rothan, H. A.; Teoh TeowChong

Title

Cell-based high-throughput screening protocol for discovering antiviral inhibitors against SARS-CoV-2 main protease (3 CLpro).

Source

Molecular Biotechnology; 2021. 63(3):240-248. 45 ref.

Publisher

Springer US

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

The global public health has been compromised since the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) emerged in late December 2019. There are no specific antiviral drugs available to combat SARS-CoV-2 infection. Besides the rapid dissemination of SARS-CoV-2, several variants have been identified with a potential epidemiologic and pathogenic variation. This fact has forced antiviral drug development strategies to stay innovative, including new drug discovery protocols, combining drugs, and establishing new drug classes. Thus, developing novel screening methods and direct-targeting viral enzymes could be an attractive strategy to combat SARS-CoV-2 infection. In this study, we designed, optimized, and validated a cell-based assay protocol for high-throughput screening (HTS) antiviral drug inhibitors against main viral protease (3CLpro). We applied the split-GFP complementation to develop GFP-split-3CLpro HTS system. The system consists of GFP-based reporters that become fluorescent upon cleavage by SARS-CoV-2 protease 3CLpro. We generated a stable GFP-split-3CLpro HTS system valid to screen large drug libraries for inhibitors to SARS-CoV-2 main protease in the bio-safety level 2 laboratory, providing real-time antiviral activity of the tested compounds. Using this assay, we identified a new class of viral protease inhibitors derived from quinazoline compounds that worth further in vitro and in vivo validation.

Publication Type

Journal article.

<9>

Accession Number

20210110208

Author

Su Shan; Du LanYing; Jiang ShiBo

Title

Learning from the past: development of safe and effective COVID-19 vaccines.

Source

Nature Reviews Microbiology; 2021. 19(3):211-219. 139 ref.

Publisher

Nature Publishing Group

Location of Publisher

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London

Country of Publication

UK

Abstract

The rapid spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has elicited an equally rapid response aiming to develop a COVID-19 vaccine. These efforts are encouraging; however, comprehensive efficacy and safety evaluations are essential in the development of a vaccine, and we can learn from previous vaccine development campaigns. In this Perspective, we summarize examples of vaccine-associated disease enhancement in the history of developing vaccines against respiratory syncytial virus, dengue virus, SARS-CoV and Middle East respiratory syndrome coronavirus, which highlight the importance of a robust safety and efficacy profile, and present recommendations for preclinical and clinical evaluation of COVID-19 vaccine candidates as well as for vaccine design and optimization.

Publication Type

Journal article.

<10>

Accession Number

20210110203

Author

Hu Ben; Guo Hua; Zhou Peng; Shi ZhengLi

Title

Characteristics of SARS-CoV-2 and COVID-19.

Source

Nature Reviews Microbiology; 2020. 19(3):141-154. 166 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a highly transmissible and pathogenic coronavirus that emerged in late 2019 and has caused a pandemic of acute respiratory disease, named 'coronavirus disease 2019' (COVID-19), which threatens human health and public safety. In this Review, we describe the basic virology of SARS-CoV-2, including genomic characteristics and receptor use, highlighting

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its key difference from previously known coronaviruses. We summarize current knowledge of clinical, epidemiological and pathological features of COVID-19, as well as recent progress in animal models and antiviral treatment approaches for SARS-CoV-2 infection. We also discuss the potential wildlife hosts and zoonotic origin of this emerging virus in detail.

Publication Type

Journal article.

<11>

Accession Number

20210110201

Author

Amrita Panja

Title

Perspectives, politics and prospects to combat the Coronavirus.

Source

Asian Journal of Medical Sciences; 2021. 12(2):101-107. 32 ref.

Publisher

Manipal College of Medical Sciences

Location of Publisher

Pokhara

Country of Publication

Nepal

Abstract

The Coronavirus disease (Covid-19) pandemic emerged in Wuhan, China during December 2019 and has spread all over the world. It has brought about huge threats to health and lives. The virus is highly contagious and it continuously evolves in the human population. The article is aimed to analyse the perspective, politics and probable prospects of Covid-19. It is further focused on possible challenges during the pandemic situation. Intensive research required in the field of virology to identify the probable potential drug invention for developing treatment strategies. This pandemic causes emotional, economic and social problems. Although the pandemic has some positive effects also. The article emphasizes the political and sociological aspects of the pandemic situation. Under the crisis, people have realised the value of caring, sharing, loving and helping the distressed ones instead of luxurious lifestyle. The pandemic has surely led to a new normal in our lives.

Publication Type

Journal article.

<12>

Accession Number

20210110196

Author

Yin WanChao; Luan XiaoDong; Li ZhiHai; Zhou ZiWei; Wang QingXing; Gao MinQi; Wang Xiaoxi; Zhou FuLai; Shi JingJing; You ErLi; Liu MingLiang; Wang QingXia; Jiang Yi; Jiang HuaLiang; Xiao GengFu; Zhang LeiKe; Yu XueKui; Zhang ShuYang; Xu H. Eric

Title

Structural basis for inhibition of the SARS-CoV-2 RNA polymerase by suramin.

Source

Nature Structural and Molecular Biology; 2021. 28(3):319-325. 34 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

The COVID-19 pandemic caused by nonstop infections of SARS-CoV-2 has continued to ravage many countries worldwide. Here we report that suramin, a 100-year-old drug, is a potent inhibitor of the SARS-CoV-2 RNA-dependent RNA polymerase (RdRp) and acts by blocking the binding of RNA to the enzyme. In biochemical assays, suramin and its derivatives are at least 20-fold more potent than remdesivir, the currently approved nucleotide drug for treatment of COVID-19. The 2.6 Å cryo-electron microscopy structure of the viral RdRp bound to suramin reveals two binding sites. One site directly blocks the binding of the RNA template strand and the other site clashes with the RNA primer strand near the RdRp catalytic site, thus inhibiting RdRp activity. Suramin blocks viral replication in Vero E6 cells, although the reasons underlying this effect are likely various. Our results provide a structural mechanism for a nonnucleotide inhibitor of the SARS-CoV-2 RdRp.

Publication Type

Journal article.

<13>

Accession Number

20210110164

Author

Umesh Shukla; Nita Radhakrishnan; Bhakhri, B. K.; Ravi Shankar; Sohini Ghosh; Vikas Jain; Singh, D. K.; Gupta, D. K.

Title

Children, comorbidities and COVID-19 - what tilts the balance?

Source

Asian Journal of Medical Sciences; 2021. 12(3):10-13. 9 ref.

Publisher

Manipal College of Medical Sciences

Location of Publisher

Pokhara

Country of Publication

Nepal

Abstract

Background: Data on the outcome of children with SARS-COV-2 infection (COVID-19) is still evolving as the pandemic unfolds. Aims and Objective: The present study aims at describing the clinical severity, course and outcome of COVID-19 in children who had underlying illnesses or co-infections. Materials and Methods: Retrospective, single center, observational study, conducted in a pediatric tertiary care center at Noida (National Capital Region, India). Results: We analyzed the data of 15 children with co-morbidities associated with COVID-19. Cancer (n=4, 26.6%), co-infections (n=5, 33.3%), Thalassemia major (n=2, 13.3%) and one child each with celiac disease, cholelithiasis, Duchenne muscular dystrophy and multiple rib fractures were diagnosed with COVID-19. None were asymptomatic. 9 children (60%) had mild symptoms and 4 had moderate symptoms (26.6%) with respiratory distress. 2 children had severe respiratory distress requiring high flow oxygen. Convalescent plasma, IVIG, Oseltamivir, Azithromycin, Hydroxychloroquine were given as treatment in varying combinations. All children recovered from COVID-19. Conclusion: Active malignancy, hypogammaglobinemia, underlying lung disease were associated with moderate to severe symptoms in this series of patients. Convalescent plasma helped in both children with severe hypoxia.

Publication Type

Journal article.

<14>

Accession Number

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20210110163

Author

Chaitali Nikam; Caesar Sengupta; Kallathikumar, K.; Krishnakumar, S.; Praveenkumar Ganesan

Title

1 to 1, 11,111 COVID sample testing; decoding the testing matrix!

Source

Asian Journal of Medical Sciences; 2021. 12(3):1-9. 12 ref.

Publisher

Manipal College of Medical Sciences

Location of Publisher

Pokhara

Country of Publication

Nepal

Abstract

Almost 100 yrs. after the 1918 Spanish Flu Pandemic, world is witnessing "Covid-19", another Pandemic of similar scale. Interesting, parallels are being drawn between these two pandemics -occurring a century apart; on their scale of spread, potential impact, global scare and attention, containment measures and even people are framing similar projections on possible course of the pandemic. While world was equally unprepared on many terms to safeguard itself from such a pandemic from SARS Cov-2 Virus, one scenario quite distinct from the previous pandemic scenario, is the current status of laboratories with advanced tools. Ground breaking genomic technologies such as NAAT (Nucleic acid Amplification technologies) or PCR (Polymerase Chain Reaction), which currently exist can be positioned as crucial weapons strategically for both community level operations and patient level care. We have the opportunity for cross learning from the experiences of the laboratories involved in Covid testing while informing our peers across policy, diagnostic and research domains, exciting the newcomers to join forces and educating all our associates who can be involved in supportive roles and the large numbers of innovators/supporters who can offer to improvise and strengthen on our current solutions.

Publication Type

Journal article.

<15>

Accession Number

20210110151

Author

Tokuc, B.; Varol, G.

Title

COVID-19 pandemics and medical education in Turkey. [Turkish]

Source

Namik Kemal Tip Dergisi / Namik Kemal Medical Journal; 2020. 8(3):595-599. 11 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

The coronavirus disease 2019 (COVID-19) disease has been effecting worldwide with nearly 14 million infected people and more than half a million deaths in the past 8 months. COVID-19 pandemic affected the whole education process in general, and medical education in particular in Turkey as in all World and started the virtual education process. This extraordinary situation and its deep effects have raised some questions about medical education. In the article, while trying to answer these questions, the virtual education process that started with the pandemic was evaluated.

Publication Type

Journal article.

<16>

Accession Number

20210110150

Author

Varol, G.; Tokuc, B.

Title

The evaluation of COVID-19 pandemic course in Turkey in public health aspects. [Turkish]

Source

Namik Kemal Tip Dergisi / Namik Kemal Medical Journal; 2020. 8(3):579-594. 41 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

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Country of Publication

Turkey

Abstract

New Corona Virus continues to maintain its mystery with many unknown features, there are many problems related to its structure, features, transmission routes since its first detection. In this respect, sharing country experiences is important learning from mistakes during the pandemic course, creating future guidelines, and case management correctly. In this review, we aimed to evaluate the accessible international and/or national literature about COVID-19 pandemic course in Turkey in public health aspects.

Publication Type

Journal article.

<17>

Accession Number

20210110148

Author

Akpinar, S.

Title

COVID-19 related coagulopathy. [Turkish]

Source

Namik Kemal Tıp Dergisi / Namik Kemal Medical Journal; 2020. 8(3):564-569. 25 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

A novel coronavirus of zoonotic origin named "severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2)" emerged at the end of 2019, in Wuhan province of China. The infection called COVID-19 was declared by World Health Organization a global pandemic. Coronavirus disease-2019 (COVID-19) is frequently associated with a hypercoagulable state as a result of endothelial injury, stasis and increased levels of circulating protrombotic factors. Especially patients in intensive care units have an increased risk for venous thromboembolism despite prophylactic anticoagulant treatment. In this review, we summarized

current data regarding pathophysiology, coagulation parameters, evaluation and management of COVID-19 associated coagulopathy.

Publication Type

Journal article.

<18>

Accession Number

20210110139

Author

Sahin, B.; Hosoglu, E.; Onal, B. S.

Title

Anxiety symptoms in healthcare workers and their children during the COVID-19 pandemic in Turkey.

Source

Namik Kemal Tıp Dergisi / Namik Kemal Medical Journal; 2020. 8(3):321-330. 30 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Aim: Infectious disease outbreaks not only affect the physical health of patients but also affect the psychological health and well-being of the uninfected population. High rates of psychiatric symptoms and stress are observed in the general population in COVID-19 pandemic and healthcare workers (HCWs) reported higher-risk perception and anxiety level. We aimed to evaluate the anxiety levels of HCWs and their children during the COVID-19 pandemic in Turkey. **Materials and Methods:** A total of 121 HCWs and 121 HCWs' children aged 8-17 were included from 23 different cities to assess the anxiety level of them during the COVID-19 pandemic by using an online questionnaire. The Beck Anxiety Inventory and the parent Screen for Child Anxiety Related Emotional Disorders (SCARED) were applied to all the HCWs. The child SCARED which has a self-report scale for children of the HCWs had completed. COVID-19 Pandemic Questionnaire was applied to determine stress levels and lifestyle changes. **Results:** All of the HCWs had mild to severe anxiety, about 17% reported moderate and 27% reported severe anxiety severity. 40 (33.06%) children were over cut-off for total score in both SCARED the parents and the child version. Children anxiety showed a positive correlation with Beck Anxiety Inventory and COVID-19 Pandemic Questionnaire (<0.001). **Conclusion:** The current study found that HCWs and their children experienced a high level of anxiety in the COVID-19 pandemic. It was detected that a positive correlation between HCWs and their children's anxiety.

Publication Type

Journal article.

<19>

Accession Number

20210110138

Author

Nalbantoglu, A.; Nalbantoglu, B.; Gokcay, G.

Title

Knowledge and attitudes of mothers about breastfeeding during COVID-19 infection. [Turkish]

Source

Namik Kemal Tip Dergisi / Namik Kemal Medical Journal; 2020. 8(3):314-320. 14 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Aim: The aim of this study is; to obtain information about the knowledge and attitudes of mothers who live in Tekirdag region with high risk contact of COVID-19 in family or who have been diagnosed with a definite laboratory finding of COVID-19 about breastfeeding during the COVID-19 pandemic period. **Materials and Methods:** Mothers with COVID-19 high risk contact in the family and have been diagnosed with definite laboratory findings of COVID-19 who are living in Tekirdag and having a baby between 30 days and 6 months were included in the study. The records of the patients were obtained from Namik Kemal University Medical School, Pediatric Outpatient Clinic Well Child Unit and a questionnaire was applied to the volunteers who accepted to be included in the study. 31 mothers who met the study criteria were reached and 28 of them agreed to participate in the study. After reaching the whole study group, the survey data were collected and their demographic characteristics and breastfeeding experiences, information sources and attitudes during the COVID-19 process were processed using IBM SPSS 20.0 package program and $p < 0.05$ was accepted as the statistical significance level. **Results:** Of the mothers participating in the study, 11 (39.3%) were in high risk contact at home, 17 (60.7%) mothers were definitively diagnosed with COVID-19 by laboratory tests, had mild clinical findings and were treated at home. When the breastfeeding experiences of the mothers were questioned, it was observed that 54.5% of the mothers who were in high risk contact only fed their babies with breast milk, and 36.4% used formula in addition to breast milk. However, 35.3% of the mothers preferred to feed their babies only with formula, in the group that was sick and receiving treatment at home, only 17.6% of them fed their babies with breast milk alone. According to our findings, it was observed that mothers who were sick fed their babies with

formula at a higher rate and tended to share a different room with their babies. Conclusion: Care should be taken to maintain breastfeeding during treatment for COVID-19. According to the results of our research, it is important to inform families in this regard.

Publication Type

Journal article.

<20>

Accession Number

20210110137

Author

Sahin, A.; Gultekin, A.; Sahin, G. G.; Yildirim, I.; Mordeniz, C.; Arar, M. C.

Title

Perioperative considerations in urgent surgical care and operating room practice and guidance during COVID-19 pandemic; our experiences.

Source

Namik Kemal Tip Dergisi / Namik Kemal Medical Journal; 2020. 8(3):303-313. 20 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Aim: The novel coronavirus SARS-CoV-2 (COVID-19) can infect healthcare workers. We developed an institutional algorithm to protect operating room team members during the COVID-19 pandemic and rationally conserve personal protective equipment (PPE). We aimed to review the latest data on the COVID-19 pandemic and essential information for practice in emergency surgery and the operating room. **Materials and Methods:** An interventional platform (operating room, interventional suite, and endoscopy) with our committee formed with our doctors consisting of different branches, we developed our guidelines based on potential patterns of spread, risk of exposure, and conservation of PPE. We aimed to share our experiences with 128 patients who were taken into operation in a 2-month period. Anesthetic management and infection control guidelines for emergency procedures for patients with suspected 2019-nCoV were drafted and applied in Medical Faculty of Namik Kemal University. **Results:** A decision tree algorithm describing our institutional guidelines for precautions for operating room team members was created. This algorithm is based on the urgency of operation, anticipated viral burden at the surgical site, the opportunity for a procedure to aerosolize virus, and the likelihood a patient could be infected based on symptoms and testing. **Conclusion:** Despite COVID-19 being a new threat, we have shown that by

developing an easy-to-follow decision algorithm for the interventional platform teams, we can ensure optimal healthcare worker safety.

Publication Type

Journal article.

<21>

Accession Number

20210110136

Author

Alp, S. I.; Deveci, M.; Erdal, B.; Akalin, R. B.; Terzi, D.

Title

Quality of sleep and insomnia violence in university students in the period of COVID-19. [Turkish]

Source

Namik Kemal Tıp Dergisi / Namik Kemal Medical Journal; 2020. 8(3):295-302. 26 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Aim: To determine the sleep quality and insomnia severity of university students and the factors affecting them during the coronavirus pandemic (COVID-19) process. **Materials and Methods:** Our study was conducted by e-mail using Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI) and Perceived Stress Scale (PSS) between 15 March and 31 May 2020 at our university's Health Services Vocational School. **Results:** 446 (414 F, 32 M) students participated in the study. Participants' mean time to fall asleep is 26.19 +or- 22 minutes, and their average sleep time is 7.98 +or- 2.10 hours. PSQI total score average is 15.69 +or- 2.96. The mean PSS score was determined as 30.94 +or- 8.46. The mean ISI score is 10.87 +or- 5.35 and its level is above the lower threshold. It is observed that the group with the curfew has a lower severity of insomnia than the group without it. Sleep quality and perceived stress differ according to alcohol use, but insomnia severity does not differ. It has been found that those who consume more than 2 cups of coffee a day have the worst sleep quality and the highest severity of insomnia. It was found that the participants who did not exercise at all and those who spent 3 hours or more a day on social media had the highest perceived stress level. **Conclusion:** It is seen that measures applied as staying at home during the COVID-19 pandemic have a negative effect on sleep health.

Publication Type

Journal article.

<22>

Accession Number

20210110134

Author

Terzi, D.; Akalin, R. B.; Erdal, B.

Title

The effect of COVID-19 outbreak on education of health science students: example of tekirdag namik kemal university health services vocational. [Turkish]

Source

Namik Kemal Tip Dergisi / Namik Kemal Medical Journal; 2020. 8(3):279-287. 21 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Aim: The study aims to investigate the advantages and disadvantages of the distance education system, which has become widespread after the coronavirus outbreak that has been affecting the world since December 2019. **Materials and Methods:** The questionnaire was filled in by 308 two-year degree students from Tekirdag Namik Kemal University Health Services Vocational School of Higher Education that is mostly based on applied education. The questionnaire was analyzed by factor analysis. General information and differences between factors were investigated by non-parametric tests, and relationships between factors were analyzed by correlation analysis. **Results:** 84.4% (n: 260) of the participants were female and 15.6% (n: 48) were male. The Cronbach alpha coefficient calculated to measure the reliability of the applied questionnaire was 0,894 and the Kaiser-Mayer-Olkin criterion was 0,906. The results show that there are significant differences between the department variable and the perception of distance education ($p=0,02$), and between the gender variable and the follow-up of the course ($p=0,039$). There was no significant difference between age groups ($p=0,401$), grade level ($p=0,074$), gender ($0,847$) and distance learning perception. There was a significant positive correlation between distance education system and infrastructure factor and distance education perception ($r=0,516$, $p<0,01$). **Conclusion:** Although the factors affecting students' distance education satisfaction vary, general satisfaction is high, but students prefer face to face education in terms of applied education efficiency.

Publication Type

Journal article.

<23>

Accession Number

20210110089

Author

Koska, M. C.; Suslu, H.

Title

Cutaneous findings of COVID-19: a review of the literature.

Source

Journal of the Turkish Academy of Dermatology; 2020. 14(2):30-43. 48 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Many different cutaneous findings have been reported in coronavirus disease 2019 (COVID-19) patients. It is still uncertain whether these findings are associated with disease. On the other hand, lesions had different features, time of onset and prognostic relations. We reviewed published data in PubMed database with keywords of "COVID-19" and "cutaneous". We found out 34 articles consisted with 563 patients. Urticarial rash was the most common followed by chilblain-like and vesicular lesions. However, total number non-specified maculopapular rashes were higher than other lesions according to one article which included both confirmed and suspected patients. Livedo-like lesions and acro-ischemia tend to appear in severe COVID-19 patients. Chilblain-like lesions were reported more frequently in young patients at late periods of disease and also, in young normal population without history of COVID-19. Petechial and purpuric lesions were developed either true vasculitis or thrombogenic vasculopathy. Vesicular eruptions resembled to herpes simplex virus and varicella-zoster virus infections and these infections should strongly be considered. More studies and reports are needed to determine non-specific maculopapular and rare lesions such as mottling. Although many reports and classifications exist about cutaneous findings of COVID-19, their exact relationships remain to be elucidated especially for maculopapular and urticarial lesions which can also be seen in other viral exanthems and drug eruptions. Furthermore, clinical data and histopathologic features weren't reported in several articles. In conclusion, varied types of cutaneous lesions can be seen in COVID-19 and beneficial for suspicion of disease and prognosis.

Publication Type

Journal article.

<24>

Accession Number

20210109963

Author

Li QiWei; Bedi, T.; Lehmann, C. U.; Xiao GuangHua; Xie Yang

Title

Evaluating short-term forecasting of COVID-19 cases among different epidemiological models under a bayesian framework.

Source

Gigascience; 2021. 10(2). 61 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Forecasting of COVID-19 cases daily and weekly has been one of the challenges posed to governments and the health sector globally. To facilitate informed public health decisions, the concerned parties rely on short-term daily projections generated via predictive modeling. We calibrate stochastic variants of growth models and the standard susceptible-infectious-removed model into 1 Bayesian framework to evaluate and compare their short-term forecasts. Results: We implement rolling-origin cross-validation to compare the short-term forecasting performance of the stochastic epidemiological models and an autoregressive moving average model across 20 countries that had the most confirmed COVID-19 cases as of August 22, 2020. Conclusion: None of the models proved to be a gold standard across all regions, while all outperformed the autoregressive moving average model in terms of the accuracy of forecast and interpretability.

Publication Type

Journal article.

<25>

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Accession Number

20210109956

Author

Osuagwu, U. L.; Miner, C. A.; Bhattarai, D.; Mashige, K. P.; Oloruntoba, R.; Abu, E. K.; Ekpenyong, B.; Chikasirimobi, T. G.; Goson, P. C.; Ovenseri-Ogbomo, G. O.; Langsi, R.; Charwe, D. D.; Ishaya, T.; Nwaeze, O.; Agho, K. E.

Title

Misinformation about COVID-19 in sub-Saharan Africa: evidence from a cross-sectional survey. (Special Feature: Infodemics and health security.)

Source

Health Security; 2021. 19(1):44-56. 47 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

Misinformation about coronavirus disease 2019 (COVID-19) is a significant threat to global public health because it can inadvertently exacerbate public health challenges by promoting spread of the disease. This study used a convenience sampling technique to examine factors associated with misinformation about COVID-19 in sub-Saharan Africa using an online cross-sectional survey. A link to the online self-administered questionnaire was distributed to 1,969 participants through social media platforms and the authors' email networks. Four false statements-informed by results from a pilot study-were included in the survey. The participants' responses were classified as Agree, Neutral, and Disagree. A multinomial logistic regression was used to examine associated factors. Among those who responded to the survey, 19.3% believed that COVID-19 was designed to reduce world population, 22.2% thought the ability to hold your breath for 10 seconds meant that you do not have COVID-19, 27.8% believed drinking hot water flushes down the virus, and 13.9% thought that COVID-19 had little effect on Blacks compared with Whites. An average of 33.7% were unsure whether the 4 false statements were true. Multivariate analysis revealed that those who thought COVID-19 was unlikely to continue in their countries reported higher odds of believing in these 4 false statements. Other significant factors associated with belief in misinformation were age (older adults), employment status (unemployed), gender (female), education (bachelor's degree), and knowledge about the main clinical symptoms of COVID-19. Strategies to reduce the spread of false information about COVID-19 and other future pandemics should target these subpopulations, especially those with limited education. This will also enhance compliance with public health measures to reduce spread of further outbreaks.

Publication Type

Journal article.

<26>

Accession Number

20210109953

Author

Baggio, O.; Erlach, E.; Reader, S.; Nichol, B.

Title

Using community feedback to guide the COVID-19 response in sub-Saharan Africa: red cross and red crescent approach and lessons learned from Ebola. (Special Feature: Infodemics and health security.)

Source

Health Security; 2021. 19(1):13-20. 21 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

Risk communication and community engagement are critical elements of epidemic response. Despite progress made in this area, few examples of regional feedback mechanisms in Africa provide information on community concerns and perceptions in real time. To enable humanitarian responders to move beyond disseminating messages, work in partnership with communities, listen to their ideas, identify community-led solutions, and support implementation of solutions systems need to be in place for documenting, analyzing, and acting on community feedback. This article describes how the International Federation of Red Cross and Red Crescent Societies and its national societies in sub-Saharan Africa have worked to establish and strengthen systems to ensure local intelligence and community insights inform operational decision making. As part of the COVID-19 response, a system was set up to collect, compile, and analyze unstructured community feedback from across the region. We describe how this system was set up based on a system piloted in the response to Ebola in the Democratic Republic of the Congo, which tools were adapted and shared across the region, and how the information gathered was used to shape and adapt the response of the Red Cross and Red Crescent Societies and the broader humanitarian response.

Publication Type

Journal article.

<27>

Accession Number

20210109952

Author

Bernard, R.; Bowsheer, G.; Sullivan, R.; Gibson-Fall, F.

Title

Disinformation and epidemics: anticipating the next phase of biowarfare. (Special Feature: Infodemics and health security.)

Source

Health Security; 2021. 19(1):3-12. 59 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

While biological warfare has classically been considered a threat requiring the presence of a distinct biological agent, we argue that in light of the rise of state-sponsored online disinformation campaigns we are approaching a fifth phase of biowarfare with a "cyber-bio" framing. By examining the rise of measles cases following disinformation campaigns connected to the US 2016 presidential elections, the rise of disinformation in the current novel coronavirus disease 2019 pandemic, and the impact of misinformation on public health interventions during the 2014-2016 West Africa and 2019-2020 Democratic Republic of the Congo Ebola outbreaks, we ask whether the potential impact of these campaigns - which includes the undermining of sociopolitical systems, the delegitimization of public health and scientific bodies, and the diversion of the public health response - can be characterized as analogous to the impacts of more traditional conceptions of biowarfare. In this paper, we look at these different impacts and the norms related to the use of biological weapons and cyber campaigns. By doing so, we anticipate the advent of a combined cyber and biological warfare. The latter is not dependent on the existence of a manufactured biological weapon; it manages to undermine sociopolitical systems and public health through the weaponization of naturally occurring outbreaks.

Publication Type

Journal article.

<28>

Accession Number

20210109838

Author

Barcala-Furelos, R.; Abelairas-Gomez, C.; Alonso-Calvete, A.; Cano-Noguera, F.; Carballo-Fazanes, A.; Martinez-Isasi, S.; Rodriguez-Nunez, A.

Title

Safe on-boat resuscitation by lifeguards in COVID-19 era: a pilot study comparing three sets of personal protective equipment.

Source

Prehospital and Disaster Medicine; 2021. 36(2):163-169. 25 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Introduction: On-boat resuscitation can be applied by lifeguards in an inflatable rescue boat (IRB). Due to Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-COV-2) and recommendations for the use of personal protective equipment (PPE), prehospital care procedures need to be re-evaluated. The objective of this study was to determine how the use of PPE influences the amount of preparation time needed before beginning actual resuscitation and the quality of cardiopulmonary resuscitation (CPR; QCPR) on an IRB. **Methods:** Three CPR tests were performed by 14 lifeguards, in teams of two, wearing different PPE: (1) Basic PPE (B-PPE): gloves, a mask, and protective glasses; (2) Full PPE (F-PPE): B-PPE + a waterproof apron; and (3) Basic PPE + plastic blanket (B+PPE). On-boat resuscitation using a bag-valve-mask (BVM) and high efficiency particulate air (HEPA) filter was performed sailing at 20 km/hour. **Results:** Using B-PPE takes less time and is significantly faster than F-PPE (B-PPE 17 [SD = 2] seconds versus F-PPE 69 [SD = 17] seconds; P = .001), and the use of B+PPE is slightly higher (B-PPE 17 [SD = 2] seconds versus B+PPE 34 [SD = 6] seconds; P = .002). The QCPR remained similar in all three scenarios (P >.05), reaching values over 79%. **Conclusion:** The use of PPE during on-board resuscitation is feasible and does not interfere with quality when performed by trained lifeguards. The use of a plastic blanket could be a quick and easy alternative to offer extra protection to lifeguards during CPR on an IRB.

Publication Type

Journal article.

<29>

Accession Number

20210109837

Author

Fayed, M. M.; Sharif, A. F.

Title

Impact of lockdown due to COVID-19 on the modalities of intoxicated patients presenting to the emergency room.

Source

Prehospital and Disaster Medicine; 2021. 36(2):145-162. 65 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Introduction: Coronavirus disease 2019 (COVID-19) pandemic influences health care facilities world-wide. The flow rate, type, and severity of cases presented to emergency departments varied during the pandemic in comparison to the past years. However, this change has not been well-described among the cases of hospital admission due to toxic exposure. Study Objective: Recognition of the pattern of toxic exposure among the cases referred to Tanta Poison Control Center (TPCC; Tanta, Egypt) during the past five years, and furthermore, exploration of the impact of lockdown due to the COVID-19 pandemic on the pattern of presented cases. Methods: The current study is a five-year retrospective, comparative cross-sectional study carried out among acutely intoxicated patients admitted to TPCC during the spring months (March through May) of 2016-2020. A total of 1,916 patients with complete medical records were recruited. The type and manner of toxic exposure, demographic, clinical data, and outcomes were analyzed. Results: The current study noted that there were delays in time from toxic exposure to emergency services during the lockdown period. This was reflected in significant lower recovery rates (884.8/1,000 population; $z=-3.0$) and higher death rates (49.4/1,000 population; $z=2.1$) despite the marked decrease in the total number of hospital admissions in comparison to the past four years. The lockdown period showed significantly higher phosphides ($z=3.5$; $X^2=34.295$; $P < .001$) and antipsychotics exposure ($z=3.6$; $X^2=21.494$; $P < .001$) than the previous years. However, predominance of female exposure and intentional self-poisoning was maintained over the past five years, including the lockdown. Conclusion: COVID-19-associated lockdown greatly reformed the usual intoxication pattern of the cases admitted to emergency room. Also, it played a role in delaying time of hospital arrival, which was reflected as lower recovery rates and higher death rates.

Publication Type

Journal article.

<30>

Accession Number

20210109836

Author

Keim, M. E.; Lovallo, A. P.

Title

Validity of the national health security preparedness index as a predictor of excess COVID-19 mortality.

Source

Prehospital and Disaster Medicine; 2021. 36(2):141-144. 16 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Objective: This study compared 2019 values for the National Health Security Preparedness Index (NHSPI) with 2020 rates of coronavirus disease 2019 (COVID-19)-related mortality as reported by the 50 US states and Puerto Rico during the first six months of the US pandemic (March 1 - August 31, 2020). Methods: Data regarding provisional death counts and estimates of excess deaths for COVID-19 according to state and territory were downloaded from the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics website. Reporting included the six-month-long period of March 1 - August 31, 2020. Excess mortality rates were calculated as the number of excess deaths per 100,000 persons in each state population using 2019 US Census Bureau data. Mean values for state and territorial NHSPI domain indices were compared to state and territorial rates of COVID-19-related excess mortality using multiple linear regression, including analysis of variance. Correlations between the 51 state and territorial NHSPI values and corresponding COVID-19 excess mortality rates were calculated using Pearson's correlation coefficient. Results: These calculations revealed a high degree of variance (adjusted r square = 0.02 and 0.25) and poor correlation (P = .16 and .08) among values for the overall NHSPI as compared to low and high estimates of excess COVID-19 mortality rates for 50 US states and Puerto Rico. There was also a high degree of variance (adjusted r square = 0.001 and 0.03) and poor correlation (P values ranging from .09 to .94) for values for the six individual domains of the NHSPI as compared to low and high estimates of excess COVID-19 mortality rates for 50 US states and Puerto Rico. Conclusion: The NHSPI does not appear to be a valid predictor of excess COVID-19 mortality rates for 50 US states and Puerto Rico during the first six months of the pandemic.

Publication Type

Journal article.

<31>

Accession Number

20210109834

Author

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McGuire, S. S.; Klassen, A. B.; Heywood, J.; Sztajnkrzyer, M. D.

Title

Prevalence of COVID-19 IgG antibodies in a cohort of municipal first responders.

Source

Prehospital and Disaster Medicine; 2021. 36(2):131-134. 16 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Background: Although first responders (FRs) represent a high-risk group for exposure, little information is available regarding their risk of coronavirus disease 2019 (COVID-19) infection. The purpose of the current study was to determine the serological prevalence of past COVID-19 infection in a cohort of municipal law enforcement (LE) and firefighters (FFs). Methods: Descriptive analysis of a de-identified data reporting Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) immunoglobulin G (IgG), or COR2G, serology results for municipal FRs. As part of the serology process, FRs were surveyed for COVID-19-like symptoms since February 2020 and asked to report any prior COVID-19 nasal swab testing. Descriptive statistics and two-sided Chi Square tests with Yates correction were used to compare groups. Results: Of 318 FRs, 225 (80.2%) underwent serology testing (LE: 163/207 [78.7%]; FF: 92/111 [82.9%]). The prevalence of positive serology for all FRs tested was 3/255 (1.2%). Two LE (1.2%) and one FF (1.1%) had positive serology (P=1.0). Two hundred and twenty-four FRs responded to a survey regarding prior symptoms and testing. Fifty-eight (25.9%) FRs (44 LE; 14 FFs) reported the presence of COVID-19-like symptoms. Of these, only nine (15.5%) received reverse transcriptase - polymerase chain reaction (RT-PCR) testing; none were positive. Two of the three FRs with positive serology reported no COVID-19-like symptoms and none of these responders had received prior nasal RT-PCR swabs. The overall community positive RT-PCR rate was 0.36%, representing a three-fold higher rate of positive seroprevalence amongst FRs compared with the general population (P=.07). Conclusions: Amongst a cohort of municipal FRs with low community COVID-19 prevalence, the seroprevalence of SARS-CoV-19 IgG Ab was three-fold greater than the general community. Two-thirds of positive FRs reported a lack of symptoms. Only 15.5% of FRs with COVID-19-like symptoms received RT-PCR testing. In addition to workplace control measures, increased testing availability to FRs is critical in limiting infection spread and ensuring response capability.

Publication Type

Journal article.

<32>

Accession Number

20210109833

Author

Goldenfeld, M.; Nir-Paz, R.; Segal, G.; Bar-On, E.; Mendelson, E.; Mandelboim, M.; Wolf, D. G.; Marom, E. M.; Israely, T.; Achdout, H.; Rahav, G.; Hanage, W. P.; Regev-Yochay, G.

Title

Characteristics of clinically asymptomatic patients with SARS-CoV-2 infections, case series.

Source

Prehospital and Disaster Medicine; 2021. 36(1):125-128. 7 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Up until now, there is much debate about the role of asymptomatic patients and pauci-symptomatic patients in severe acute respiratory syndrome novel coronavirus 2 (SARS-CoV-2) transmission, and little is known about the kinetics of viral ribonucleic acid (RNA) shedding in these populations. This article aims to describe key features and the nature of asymptomatic and pauci-symptomatic SARS-CoV-2 infected patients. The cohort consisted of six participants, three pairs, which were infected with SARS-CoV-2 during February 2020 on board the Diamond Princess. Of the six confirmed (reverse transcription polymerase chain reaction [RT-PCR]) cases, four were initially diagnosed in Japan and two upon their arrival to Israel. Duration of infection was between four days and up to 26 days. Of the six patients, three were completely asymptomatic and the others were pauci-symptomatic. All five patients in whom a computerized tomography (CT) scan was performed had lung pathology. In one patient, infectivity was tested using cell culture and a cytopathic effect was demonstrated. A serology test was performed in three of the patients and all three had a positive immunoglobulin G (IgG) four to eight weeks after disease onset. This case series demonstrates that asymptomatic and pauci-symptomatic patients may play a role in infection transmission by demonstrating probable transmission among asymptomatic spouses and by demonstrating a viable virus via a cell culture. Additionally, asymptomatic and pauci-symptomatic patients can have lung pathology and developing IgG antibodies.

Publication Type

Journal article.

<33>

Accession Number

20210109824

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Title

Use of in situ simulation to improve emergency department readiness for the COVID-19 pandemic.

Source

Prehospital and Disaster Medicine; 2021. 36(1):6-13. 27 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Introduction: During the world-wide coronavirus disease 2019 (COVID-19) outbreak, there is an urgent need to rapidly increase the readiness of hospitals. Emergency departments (EDs) are at high risk of facing unusual situations and need to prepare extensively in order to minimize risks to health care providers (HCPs) and patients. In situ simulation is a well-known method used in training to detect system gaps that could threaten safety. Study Objectives: One objective is to identify gaps, test hospital systems, and inform necessary modifications to the standard processes required by patients with COVID-19 presenting at the hospital. The other objective is to improve ED staff confidence in managing such patients, and to increase their skills in basic and advanced airway management and proper personal protective equipment (PPE) techniques. Methods: This is a quasi-experimental study in which 20 unannounced mock codes were carried out in ED resuscitation and isolation rooms. A checklist was designed, validated, and used to evaluate team performances in three areas: donning, basic and advanced airway skills, and doffing. A pre- and post-intervention survey was used to evaluate staff members' perceived knowledge of ED procedures related to COVID-19 and their airway management skills. Results: A total of 20 mock codes were conducted in the ED. Overall, 16 issues that posed potential harm to staff or patients were identified and prioritized for immediate resolution. Approximately 57.4% of HCPs felt comfortable dealing with suspected/confirmed, unstable COVID-19 cases after mock codes, compared with 33.3% beforehand ($P=0.033$). Of ED HCPs, 44.4% felt comfortable performing airway procedures for suspected/confirmed COVID-19 cases after mock codes compared with 29.6% beforehand. Performance of different skills was observed to be variable following the 20 mock codes. Skills with improved performance included: request of chest x-ray after intubation (88.0%), intubation done by the most experienced ED physician (84.5%), and correct sequence and procedure of PPE (79.0%). Conclusion: Mock codes identified significant defects, most of which were easily fixed. They included critical equipment availability, transporting beds that were too large to fit through doors, and location of biohazard bins. Repeated mock codes improved ED staff confidence in dealing with patients, in addition to performance of certain skills. In situ simulation proves to be an effective method for increasing the readiness of the ED to address the COVID-19 pandemic and other infection outbreaks.

Publication Type

Journal article.

<34>

Accession Number

20210109823

Author

Underwood, A.

Title

COVID-19: a rural US emergency department perspective.

Source

Prehospital and Disaster Medicine; 2021. 36(1):4-5. 6 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Several aspects led to the poor control of the coronavirus disease 2019 (COVID-19) outbreak in the US from a rural emergency department (ED) perspective. These include US residents' attitude towards political involvement in health and civil rights; lack of enough testing kits and rapid test results, or not available at all; and personal protective equipment (PPE) shortages. These obstacles related to medical supplies and resources, and lack of coordinated approach to the pandemic in the US, are important information for retrospective disaster research to understand study limitations, extrapolate accurate and valid data, and for other countries to understand how and why the US had higher numbers of COVID-19 cases and deaths compared to other countries.

Publication Type

Editorial.

<35>

Accession Number

20210109510

Author

Cooper, R. S.; Fraser, A. R.; Smith, L.; Burgoyne, P.; Imlach, S. N.; Jarvis, L. M.; Turner, D. M.; Zahra, S.; Turner, M. L.; Campbell, J. D. M.

Title

Rapid GMP-compliant expansion of SARS-CoV-2-specific T cells from convalescent donors for use as an allogeneic cell therapy for COVID-19.

Source

Frontiers in Immunology; 2021. 12(January). 46 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

COVID-19 disease caused by the SARS-CoV-2 virus is characterized by dysregulation of effector T cells and accumulation of exhausted T cells. T cell responses to viruses can be corrected by adoptive cellular therapy using donor-derived virus-specific T cells. One approach is the establishment of banks of HLA-typed virus-specific T cells for rapid deployment to patients. Here we show that SARS-CoV-2-exposed blood donations contain CD4 and CD8 memory T cells which recognize SARS-CoV-2 spike, nucleocapsid and membrane antigens. Peptides of these antigens can be used to isolate virus-specific T cells in a GMP-compliant process. The isolated T cells can be rapidly expanded using GMP-compliant reagents for use as an allogeneic therapy. Memory and effector phenotypes are present in the selected virus-specific T cells, but our method rapidly expands the desirable central memory phenotype. A manufacturing yield ranging from 10¹⁰ to 10¹¹ T cells can be obtained within 21 days culture. Thus, multiple therapeutic doses of virus-specific T cells can be rapidly generated from convalescent donors for potential treatment of COVID-19 patients.

Publication Type

Journal article.

<36>

Accession Number

20210109507

Author

Lakota, K.; Perdan-Pirkmajer, K.; Hocevar, A.; Sodin-Semrl, S.; Rotar, Z.; Zigon, P.; Cucnik, S.

Title

COVID-19 in association with development, course, and treatment of systemic autoimmune rheumatic diseases.

Source

Frontiers in Immunology; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Autoimmune diseases and infections are often closely intertwined. Patients with autoimmune diseases are more susceptible to infections due to either active autoimmune disease or the medications used to treat them. Based on infections as environmental triggers of autoimmunity, an autoimmune response would also be expected in COVID-19. Although some studies have shown the occurrence of autoantibodies and the possible development of autoimmune diseases after SARS-CoV-2 infection, current data suggest that the levels of autoantibodies following SARS-CoV-2 infection is comparable to that of some other known infections and that the autoantibodies might only be transient. The risk of SARS-CoV-2 infection in patients with a systemic autoimmune rheumatic disease (SARD) appears slightly higher compared to the general population and the course of COVID-19 disease does not seem to be very different, however, specific therapies such as glucocorticoids and anti-TNF might modulate the risk of hospitalization/death. Cytokine release syndrome is a severe complication in COVID-19. Many drugs used for the treatment of SARD are directly or indirectly targeting cytokines involved in the cytokine release syndrome, therefore it has been suggested that they could also be effective in COVID-19, but more evidence on the use of these medications for the treatment of COVID-19 is currently being collected.

Publication Type

Journal article.

<37>

Accession Number

20210109506

Author

Xie Bing; Zhang JianCheng; Li YuWen; Yuan ShiYing; Shang You

Title

COVID-19: imbalanced immune responses and potential immunotherapies.

Source

Frontiers in Immunology; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The ongoing pandemic coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is rapidly spreading and has resulted in grievous morbidity and mortality worldwide. Despite the high infectiousness of SARS-CoV-2, the majority of infected individuals are asymptomatic or have mild symptoms and could eventually recover as a result of their balanced immune function. On the contrary, immuno-compromised patients are prone to progress into severe or critical types underpinned by the entanglement of an overexuberant proinflammatory response and injured immune function. Therefore, well-coordinated innate and adaptive immune systems are pivotal to viral eradication and tissue repair. An in-depth understanding of the immunological processes underlying COVID-19 could facilitate rapidly identifying and choosing optimal immunotherapy for patients with severe SARS-CoV-2 infection. In this review, based on current immunological evidence, we describe potential immune mechanisms and discuss promising immunotherapies for COVID-19, including IL-6R blockades, convalescent plasma, intravenous gamma globulin, thymosin alpha1, corticosteroids, and type-I interferon, and recent advances in the development of COVID-19 vaccines.

Publication Type

Journal article.

<38>

Accession Number

20210109505

Author

Tavasolian, F.; Rashidi, M.; Hatam, G. R.; Jeddi, M.; Hosseini, A. Z.; Mosawi, S. H.; Abdollahi, E.; Inman, R. D.

Title

HLA, immune response, and susceptibility to COVID-19.

Source

Frontiers in Immunology; 2021. 12(January). 65 ref.

Publisher

Frontiers Media S.A.

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Location of Publisher

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Country of Publication

Switzerland

Abstract

The severe acute respiratory syndrome caused by Coronavirus 2 (SARS-CoV-2) that appeared in December 2019 has precipitated the global pandemic Coronavirus Disease 2019 (COVID-19). However, in many parts of Africa fewer than expected cases of COVID-19, with lower rates of mortality, have been reported. Individual human leukocyte antigen (HLA) alleles can affect both the susceptibility and the severity of viral infections. In the case of COVID-19 such an analysis may contribute to identifying individuals at higher risk of the disease and the epidemiological level to understanding the differences between countries in the epidemic patterns. It is also recognized that first antigen exposure influences the consequence of subsequent exposure. We thus propose a theory incorporating HLA antigens, the "original antigenic sin (OAS)" effect, and presentation of viral peptides which could explain with differential susceptibility or resistance to SARS-CoV-2 infections.

Publication Type

Journal article.

<39>

Accession Number

20210109504

Author

Marcus, N.; Frizinsky, S.; Hagin, D.; Ovadia, A.; Hanna, S.; Farkash, M.; Maoz-Segal, R.; Agmon-Levin, N.; Broides, A.; Nahum, A.; Rosenberg, E.; Kuperman, A. A.; Dinur-Schejter, Y.; Berkun, Y.; Toker, O.; Goldberg, S.; Confino-Cohen, R.; Scheuerman, O.; Badarneh, B.; Epstein-Rigbi, N.; Etzioni, A.; Dalal, I.; Somech, R.

Title

Minor clinical impact of COVID-19 pandemic on patients with primary immunodeficiency in Israel.

Source

Frontiers in Immunology; 2021. 12(January). 30 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

In the last few months the world has witnessed a global pandemic due to severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) infection causing coronavirus disease 2019 (COVID-19). Obviously, this pandemic affected individuals differently, with a significant impact on populations considered to be at high-risk. One such population, was assumed to be patients with primary genetic defect involving components or pathways of the immune system. While human immunity against COVID-19 is not fully understood, it is, so far, well documented, that both adaptive and innate cells have a critical role in protection against SARS-CoV-2. Here, we aimed to summarize the clinical and laboratory data on primary immunodeficiency (PID) patients in Israel, who were tested positive for SARS-CoV-2, in order to estimate the impact of COVID-19 on such patients. Data was collected from mid-February to end-September. During this time Israel experienced two "waves" of COVID-19 diseases; the first, from mid-February to mid-May and the second from mid-June and still ongoing at the end of data collection. A total of 20 PID patients, aged 4 months to 60 years, were tested positive for SARS-CoV-2, all but one, were detected during the second wave. Fourteen of the patients were on routine monthly IVIG replacement therapy at the time of virus detection. None of the patients displayed severe illness and none required hospitalization; moreover, 7/20 patients were completely asymptomatic. Possible explanations for the minimal clinical impact of COVID-19 pandemic observed in our PID patients include high level of awareness, extra-precautions, and even self-isolation. It is also possible that only specific immune pathways (e.g. type I interferon signaling), may increase the risk for a more severe course of disease and these are not affected in many of the PID patients. In some cases, lack of an immune response actually may be a protective measure against the development of COVID-19 sequelae.

Publication Type

Journal article.

<40>

Accession Number

20210109503

Author

Vojdani, A.; Vojdani, E.; Kharrazian, D.

Title

Reaction of human monoclonal antibodies to SARS-CoV-2 proteins with tissue antigens: implications for autoimmune diseases.

Source

Frontiers in Immunology; 2021. 12(January). 63 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

We sought to determine whether immune reactivity occurs between anti-SARS-CoV-2 protein antibodies and human tissue antigens, and whether molecular mimicry between COVID-19 viral proteins and human tissues could be the cause. We applied both human monoclonal anti-SARS-Cov-2 antibodies (spike protein, nucleoprotein) and rabbit polyclonal anti-SARS-Cov-2 antibodies (envelope protein, membrane protein) to 55 different tissue antigens. We found that SARS-CoV-2 antibodies had reactions with 28 out of 55 tissue antigens, representing a diversity of tissue groups that included barrier proteins, gastrointestinal, thyroid and neural tissues, and more. We also did selective epitope mapping using BLAST and showed similarities and homology between spike, nucleoprotein, and many other SARS-CoV-2 proteins with the human tissue antigens mitochondria M2, F-actin and TPO. This extensive immune cross-reactivity between SARS-CoV-2 antibodies and different antigen groups may play a role in the multi-system disease process of COVID-19, influence the severity of the disease, precipitate the onset of autoimmunity in susceptible subgroups, and potentially exacerbate autoimmunity in subjects that have pre-existing autoimmune diseases. Very recently, human monoclonal antibodies were approved for use on patients with COVID-19. The human monoclonal antibodies used in this study are almost identical with these approved antibodies. Thus, our results can establish the potential risk for autoimmunity and multi-system disorders with COVID-19 that may come from cross-reactivity between our own human tissues and this dreaded virus, and thus ensure that the badly-needed vaccines and treatments being developed for it are truly safe to use against this disease.

Publication Type

Journal article.

<41>

Accession Number

20210109502

Author

Fisher, E.; Padula, L.; Podack, K.; O'Neill, K.; Strbo, N.; Seavey, M. M.; Jayaraman, P.; Jasuja, R.

Title

Induction of SARS-CoV-2 protein S-specific CD8+ T cells in the lungs of gp96-Ig-S vaccinated mice.

Source

Frontiers in Immunology; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Given the aggressive spread of COVID-19-related deaths, there is an urgent public health need to support the development of vaccine candidates to rapidly improve the available control measures against SARS-CoV-2. To meet this need, we are leveraging our existing vaccine platform to target SARS-CoV-2. Here, we generated cellular heat shock chaperone protein, glycoprotein 96 (gp96), to deliver SARS-CoV-2 protein S (spike) to the immune system and to induce cell-mediated immune responses. We showed that our vaccine platform effectively stimulates a robust cellular immune response against protein S. Moreover, we confirmed that gp96-Ig, secreted from allogeneic cells expressing full-length protein S, generates powerful, protein S polyepitope-specific CD4+ and CD8+ T cell responses in both lung interstitium and airways. These findings were further strengthened by the observation that protein-S -specific CD8+ T cells were induced in human leukocyte antigen HLA-A2.1 transgenic mice thus providing encouraging translational data that the vaccine is likely to work in humans, in the context of SARS-CoV-2 antigen presentation.

Publication Type

Journal article.

<42>

Accession Number

20210109501

Author

Butler, S. E.; Crowley, A. R.; Natarajan, H.; Xu ShiWei; Weiner, J. A.; Bobak, C. A.; Mattox, D. E.; Lee Jiwon; Wieland-Alter, W.; Connor, R. I.; Wright, P. F.; Ackerman, M. E.

Title

Distinct features and functions of systemic and mucosal humoral immunity among SARS-CoV-2 convalescent individuals.

Source

Frontiers in Immunology; 2021. 12(January). 93 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Understanding humoral immune responses to SARS-CoV-2 infection will play a critical role in the development of vaccines and antibody-based interventions. We report systemic and mucosal antibody responses in convalescent individuals who experienced varying severity of disease. Whereas assessment of neutralization and antibody-mediated effector functions revealed polyfunctional antibody responses in serum, only robust neutralization and phagocytosis were apparent in nasal wash samples. Serum neutralization and effector functions correlated with systemic SARS-CoV-2-specific IgG response magnitude, while mucosal neutralization was associated with nasal SARS-CoV-2-specific IgA. Antibody depletion experiments support the mechanistic relevance of these correlations. Associations between nasal IgA responses, virus neutralization at the mucosa, and less severe disease suggest the importance of assessing mucosal immunity in larger natural infection cohorts. Further characterization of antibody responses at the portal of entry may define their ability to contribute to protection from infection or reduced risk of hospitalization, informing public health assessment strategies and vaccine development efforts.

Publication Type

Journal article.

<43>

Accession Number

20210109500

Author

Ma AiPing; Zhang Liang; Ye XiaoKai; Chen Jing; Yu Jie; Zhuang LiangJin; Weng ChaoHang; Petersen, F.; Wang ZhanXiang; Yu XinHua

Title

High levels of circulating IL-8 and soluble IL-2R are associated with prolonged illness in patients with severe COVID-19.

Source

Frontiers in Immunology; 2021. 12(January). 37 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Objectives: The coordinated immune response of the host is the key of the successful combat of the body against SARS-CoV-2 infection and is decisive for the development and progression of COVID-19. In this study, we aimed to investigate whether the immunological phenotype of patients are associated with

duration of illness in patients with severe COVID-19. Method: In this single-center study, 69 patients with severe or critical COVID-19 were recruited retrospectively. Immunological parameters including counts of white blood cells, neutrophils, lymphocytes, the neutrophil-to-lymphocyte ratio, and levels of circulating cytokines and cytokine receptors were screened for their association with disease severity, survival and duration of illness of COVID-19. Results: Our data confirmed previous results that neutrophil-to-lymphocyte ratio and circulating levels of IL-6 represent prominent biomarker for the prediction of disease severity and survival of COVID-19. However, this study shows for the first time that duration of illness in patients with severe COVID-19 is positively associated with serum levels of IL-8 (P=0.004) and soluble IL-2Ra (P=0.025). Conclusion: The significant association of duration of illness with circulating levels of IL-8 and soluble IL-2Ra in patients with severe COVID-19 implicates that neutrophils and T cells are involved in the evolution of COVID-19.

Publication Type

Journal article.

<44>

Accession Number

20210109499

Author

Tang XianFang; Cai LiJun; Meng YaJie; Xu JunLin; Lu ChangCheng; Yang JiaLiang

Title

Indicator regularized non-negative matrix factorization method-based drug repurposing for COVID-19.

Source

Frontiers in Immunology; 2021. 12(January). 58 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

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Country of Publication

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Abstract

A novel coronavirus, named COVID-19, has become one of the most prevalent and severe infectious diseases in human history. Currently, there are only very few vaccines and therapeutic drugs against COVID-19, and their efficacies are yet to be tested. Drug repurposing aims to explore new applications of approved drugs, which can significantly reduce time and cost compared with de novo drug discovery. In this study, we built a virus-drug dataset, which included 34 viruses, 210 drugs, and 437 confirmed related virus-drug pairs from existing literature. Besides, we developed an Indicator Regularized non-negative Matrix Factorization (IRNMF) method, which introduced the indicator matrix and Karush-Kuhn-Tucker condition

into the non-negative matrix factorization algorithm. According to the 5-fold cross-validation on the virus-drug dataset, the performance of IRNMF was better than other methods, and its Area Under receiver operating characteristic Curve (AUC) value was 0.8127. Additionally, we analyzed the case on COVID-19 infection, and our results suggested that the IRNMF algorithm could prioritize unknown virus-drug associations.

Publication Type

Journal article.

<45>

Accession Number

20210109498

Author

Turner, J. S.; Day, A.; Alsoussi, W. B.; Liu ZhuoMing; O'Halloran, J. A.; Presti, R. M.; Patterson, B. K.; Whelan, S. P. J.; Ellebedy, A. H.; Mudd, P. A.

Title

SARS-CoV-2 viral RNA shedding for more than 87 days in an individual with an impaired CD8+ T cell response.

Source

Frontiers in Immunology; 2021. 12(January). 15 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

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Country of Publication

Switzerland

Abstract

Prolonged shedding of viral RNA occurs in some individuals following SARS-CoV-2 infection. We perform comprehensive immunologic evaluation of one individual with prolonged shedding. The case subject recovered from severe COVID-19 and tested positive for SARS-CoV-2 viral RNA repeatedly as many as 87 days after the first positive test, 97 days after symptom onset. The subject did not have any associated rise in anti-Spike protein antibody titers or plasma neutralization activity, arguing against re-infection. This index subject exhibited a profoundly diminished circulating CD8+ T cell population and correspondingly low SARS-CoV-2-specific CD8+ T cell responses when compared with a cohort of other recovering COVID-19 subjects. CD4+ T cell responses and neutralizing antibody responses developed as expected in this individual. Our results demonstrate that detectable viral RNA shedding in the upper airway can occur more than 3 months following infection in some individuals with COVID-19 and suggest that impaired CD8+ T cells may play a role in prolonged viral RNA shedding.

Publication Type

Journal article.

<46>

Accession Number

20210109497

Author

Li LiLi; Li Jie; Gao Meiling; Fan HuiMin; Wang YanAn; Xu Xin; Chen ChunFeng; Liu JunXiao; Kim, J.; Aliyari, R.; Zhang JiCai; Jin YuJie; Li XiaoRong; Ma Feng; Shi MinXin; Cheng GenHong; Yang Heng

Title

Interleukin-8 as a biomarker for disease prognosis of coronavirus disease-2019 patients.

Source

Frontiers in Immunology; 2021. 12(January). 44 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

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Abstract

The widespread prevalence of coronavirus disease-2019 (COVID-19) which is caused by severe respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, has resulted in a severe global public health emergency. However, there are no sensitive biomarkers to predict the disease prognosis of COVID-19 patients. Here, we have identified interleukin-8 (IL-8) as a biomarker candidate to predict different disease severity and prognosis of COVID-19 patients. While serum IL-6 become obviously elevated in severe COVID-19 patients, serum IL-8 was easily detectible in COVID-19 patients with mild syndromes. Furthermore, IL-8 levels correlated better than IL-6 levels with the overall clinical disease scores at different stages of the same COVID-19 patients. Thus, our studies suggest that IL-6 and IL-8 can be respectively used as biomarkers for severe COVID-19 patients and for COVID-19 disease prognosis.

Publication Type

Journal article.

<47>

Accession Number

20210109495

Author

Barcellini, W.; Giannotta, J. A.; Fattizzo, B.

Title

Are patients with autoimmune cytopenias at higher risk of COVID-19 pneumonia? The experience of a reference center in northern Italy and review of the literature.

Source

Frontiers in Immunology; 2021. 12(January). 56 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

During COVID-19 pandemic the care of onco-hematologic and autoimmune patients has raised the question whether they are at higher risk of infection and/or worse outcome. Here, we describe the clinical course of COVID-19 pneumonia in patients with autoimmune cytopenias (AIC) regularly followed at a reference center in Northern Italy. The study period started from COVID-19 outbreak (February 22, 2020) until the time of writing. Moreover, we provide a review of the literature, showing that most cases reported so far are AIC developed during or secondary to COVID-19 infection. At variance, data about AIC pre-existing to COVID infection are scanty. The 4 patients here described (2 autoimmune hemolytic anemias, AIHA, 1 Evans syndrome, and 1 immune thrombocytopenia) with COVID-19 pneumonia belong to a large cohort of 500 AIC patients, making this study nearly population-based. The observed frequency (4/501; 0.7%) is only slightly superior to that of the general population admitted to hospital/intensive care unit (0.28/0.03%, respectively) in Lombardy in the same period of observation. All cases occurred between March 21 and 25, whilst no more AIC were recorded later on. Although different in intensity of care needed, all patients recovered from COVID-19 pneumonia, with apparently no detrimental effect of previous/current immunomodulatory treatments. AIHA relapse occurred in two patients, but promptly responded to therapy. With limitations due to sample size, these results suggest a favorable outcome and a lower-than-expected incidence of COVID-19 pneumonia in patients with previously diagnosed AIC, and allow speculating that immunomodulatory drugs used for AIC may play a beneficial rather than a harmful effect on COVID-19 infection.

Publication Type

Journal article.

<48>

Accession Number

20210109494

Author

Fraga-Silva, T. F. de C.; Maruyama, S. R.; Sorgi, C. A.; Russo, E. M. de S.; Fernandes, A. P. M.; Cardoso, C. R. de B.; Faccioli, L. H.; Dias-Baruffi, M.; Bonato, V. L. D.

Title

COVID-19: integrating the complexity of systemic and pulmonary immunopathology to identify biomarkers for different outcomes.

Source

Frontiers in Immunology; 2021. 12(January). 194 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

In the last few months, the coronavirus disease 2019 (COVID-19) pandemic has affected millions of people worldwide and has provoked an exceptional effort from the scientific community to understand the disease. Clinical evidence suggests that severe COVID-19 is associated with both dysregulation of damage tolerance caused by pulmonary immunopathology and high viral load. In this review article, we describe and discuss clinical studies that show advances in the understanding of mild and severe illness and we highlight major points that are critical for improving the comprehension of different clinical outcomes. The understanding of pulmonary immunopathology will contribute to the identification of biomarkers in an attempt to classify mild, moderate, severe and critical COVID-19 illness. The interface of pulmonary immunopathology and the identification of biomarkers are critical for the development of new therapeutic strategies aimed to reduce the systemic and pulmonary hyperinflammation in severe COVID-19.

Publication Type

Journal article.

<49>

Accession Number

20210109492

Author

Meng JianFen; Ma YuNing; Jia JinChao; Wang MengYan; Teng JiaLin; Shi Hui; Liu HongLei; Su YuTong; Ye JunNa; Sun Yue; Cheng XiaoBing; Chi HuiHui; Liu TingTing; Zhu DeHao; Zhou ZhuoChao; Wan LiYan; Wang ZhiHong; Wang Fan; Qiao Xin; Chen Xia; Zhang Hao; Tang ZiHan; Yang ChengDe; Hu QiongYi

Title

Cytokine storm in coronavirus disease 2019 and adult-onset still's disease: similarities and differences.

Source

Frontiers in Immunology; 2021. 12(January). 72 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The catastrophic outbreak of coronavirus disease 2019 (COVID-19) is currently a public emergency. Adult-onset Still's disease (AOSD) is an autoinflammatory disease characterized by life-threatening complications. Systemic hyperinflammation and cytokine storm play a critical role in the pathogenesis of both COVID-19 and AOSD. We aimed to compare the similarities and differences focusing on ferritin and cytokine levels between severe COVID-19 and active AOSD. A literature search was performed using the databases PubMed, EMBASE, and Web of Science to collect the levels of cytokine including IL-1beta, IL-6, IL-18, TNF-a, IL-10, and ferritin in severe COVID-19 patients. After extracting available data of indicators of interest, we acquired these statistics with a single-arm meta-analysis. Furthermore, a comparison was conducted between 52 patients with active AOSD in our center and severe COVID-19 patients from databases. The levels of IL-6 and IL-10 were higher in severe COVID-19 compared with those in active AOSD. There were no significant differences on the cytokine of IL-1beta and TNF-a. Fold changes of IL-18 were defined as the mean expression level ratio of severe COVID-19 to healthy controls in the COVID-19 study and active AOSD to healthy controls in our study, individually. Although the fold change of IL-18 in patients with AOSD was significantly higher than patients with severe COVID-19 (fold change: 594.00 vs 2.17), there was no statistical comparability. In addition, the level of ferritin was higher in active AOSD in comparison with severe COVID-19. Our findings suggest that severe COVID-19 and active AOSD have differences in cytokine panel and ferritin level, indicating the pathogenic role of ferritin in overwhelming inflammation. And it paves the way to make efficacy therapeutic strategy targeting the hyperinflammatory process in COVID-19 according to AOSD management, especially in severe COVID-19.

Publication Type

Journal article.

<50>

Accession Number

20210109490

Author

Gu TingXuan; Zhi YaFei; Zhao SiMin; Jin GuoGuo; Song MengQiu; Zhao Ran; Ma FaYang; Zheng YaQiu; Wang KeKe; Liu Hui; Xin MingXia; Han Wei; Li Xiang; Dong, C. D.; Liu KangDong; Dong ZiGang

Title

Cytokine signature induced by SARS-CoV-2 spike protein in a mouse model.

Source

Frontiers in Immunology; 2021. 12(January). 43 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Although COVID-19 has become a major challenge to global health, there are currently no efficacious agents for effective treatment. Cytokine storm syndrome (CSS) can lead to acute respiratory distress syndrome (ARDS), which contributes to most COVID-19 mortalities. Research points to interleukin 6 (IL-6) as a crucial signature of the cytokine storm, and the clinical use of the IL-6 inhibitor tocilizumab shows potential for treatment of COVID-19 patient. In this study, we challenged wild-type and adenovirus-5/human angiotensin-converting enzyme 2-expressing BALB/c mice with a combination of polyinosinic-polycytidylic acid and recombinant SARS-CoV-2 spike-extracellular domain protein. High levels of TNF- α and nearly 100 times increased IL-6 were detected at 6 h, but disappeared by 24 h in bronchoalveolar lavage fluid (BALF) following immunostimulant challenge. Lung injury observed by histopathologic changes and magnetic resonance imaging at 24 h indicated that increased TNF- α and IL-6 may initiate CSS in the lung, resulting in the continual production of inflammatory cytokines. We hypothesize that TNF- α and IL-6 may contribute to the occurrence of CSS in COVID-19. We also investigated multiple monoclonal antibodies (mAbs) and inhibitors for neutralizing the pro-inflammatory phenotype of COVID-19: mAbs against IL-1 α , IL-6, TNF- α , and granulocyte-macrophage colony-stimulating factor (GM-CSF), and inhibitors of p38 and JAK partially relieved CSS; mAbs against IL-6, TNF- α , and GM-CSF, and inhibitors of p38, extracellular signal-regulated kinase, and myeloperoxidase somewhat reduced neutrophilic alveolitis in the lung. This novel murine model opens a biologically safe, time-saving avenue for clarifying the mechanism of CSS/ARDS in COVID-19 and developing new therapeutic drugs.

Publication Type

Journal article.

<51>

Accession Number

20210109489

Author

Schlickeiser, S.; Schwarz, T.; Steiner, S.; Wittke, K.; Al-Besher, N.; Meyer, O.; Kalus, U.; Pruss, A.; Kurth, F.; Zoller, T.; Witzentrath, M.; Sander, L. E.; Muller, M. A.; Scheibenbogen, C.; Volk, H. D.; Drosten, C.; Corman, V. M.; Hanitsch, L. G.

Title

Disease severity, fever, age, and sex correlate with SARS-CoV-2 neutralizing antibody responses.

Source

Frontiers in Immunology; 2021. 12(January). 60 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Clinical trials on the use of COVID-19 convalescent plasma remain inconclusive. While data on safety is increasingly available, evidence for efficacy is still sparse. Subgroup analyses hint to a dose-response relationship between convalescent plasma neutralizing antibody levels and mortality. In particular, patients with primary and secondary antibody deficiency might benefit from this approach. However, testing of neutralizing antibodies is limited to specialized biosafety level 3 laboratories and is a time- and labor-intensive procedure. In this single center study of 206 COVID-19 convalescent patients, clinical data, results of commercially available ELISA testing of SARS-CoV-2 spike-IgG and -IgA, and levels of neutralizing antibodies, determined by plaque reduction neutralization testing (PRNT), were analyzed. At a medium time point of 58 days after symptom onset, only 12.6% of potential plasma donors showed high levels of neutralizing antibodies (PRNT50 1:320). Multivariable proportional odds logistic regression analysis revealed need for hospitalization due to COVID-19 (odds ratio 6.87; p-value 0.0004) and fever (odds ratio 3.00; p-value 0.0001) as leading factors affecting levels of SARS-CoV-2 neutralizing antibody titers in convalescent plasma donors. Using penalized estimation, a predictive proportional odds logistic regression model including the most important variables hospitalization, fever, age, sex, and anosmia or dysgeusia was developed. The predictive discrimination for PRNT50 1:320 was reasonably good with AUC: 0.86 (with 95% CI: 0.79-0.92). Combining clinical and ELISA-based pre-screening, assessment of neutralizing antibodies could be spared in 75% of potential donors with a maximal loss of 10% of true positives (PRNT50 1:320).

Publication Type

Journal article.

<52>

Accession Number

20210109488

Author

Reza-Zaldivar, E. E.; Hernandez-Sapiens, M. A.; Minjarez, B.; Gomez-Pinedo, U.; Marquez-Aguirre, A. L.; Mateos-Diaz, J. C.; Matias-Guiu, J.; Canales-Aguirre, A. A.

Title

Infection mechanism of SARS-CoV-2 and its implication on the nervous system.

Source

Frontiers in Immunology; 2021. 12(January). 77 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

In late December 2019, multiple atypical pneumonia cases resulted in severe acute respiratory syndrome caused by a pathogen identified as a novel coronavirus SARS-CoV-2. The most common coronavirus disease 2019 (COVID-19) symptoms are pneumonia, fever, dry cough, and fatigue. However, some neurological complications following SARS-CoV-2 infection include confusion, cerebrovascular diseases, ataxia, hypogeusia, hyposmia, neuralgia, and seizures. Indeed, a growing literature demonstrates that neurotropism is a common feature of coronaviruses; therefore, the infection mechanisms already described in other coronaviruses may also be applicable for SARS-CoV-2. Understanding the underlying pathogenetic mechanisms in the nervous system infection and the neurological involvement is essential to assess possible long-term neurological alteration of COVID-19. Here, we provide an overview of associated literature regarding possible routes of COVID-19 neuroinvasion, such as the trans-synapse-connected route in the olfactory pathway and peripheral nerve terminals and its neurological implications in the central nervous system.

Publication Type

Journal article.

<53>

Accession Number

20210109485

Author

Cui HaoRan; Zhang LeiLiang

Title

Key components of inflammasome and pyroptosis pathways are deficient in canines and felines, possibly affecting their response to SARS-CoV-2 infection.

Source

Frontiers in Immunology; 2021. 12(January). 45 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

However, the symptoms in canines and felines were mild. The underlying mechanisms are unknown. Excessive activation of inflammasome pathways can trigger cytokine storm and severe damage to host. In current study, we performed a comparative genomics study of key components of inflammasome and pyroptosis pathways in dogs, cats and tigers. Cats and tigers do not have AIM2 and NLRP1. Dogs do not contain AIM2, and encode a short form of NLRC4. The activation sites in GSDMB were absent in dogs, cats and tigers, while GSDME activation sites in cats and tigers were abolished. We propose that deficiencies of inflammasome and pyroptosis pathways might provide an evolutionary advantage against SARS-CoV-2 by reducing cytokine storm-induced host damage. Our findings will shed important lights on the mild symptoms in canines and felines infected with SARS-CoV-2.

Publication Type

Journal article.

<54>

Accession Number

20210109483

Author

Pfister, F.; Vonbrunn, E.; Ries, T.; Jack, H. M.; Uberla, K.; Lochnit, G.; Sheriff, A.; Herrmann, M.; Buttner-Herold, M.; Amann, K.; Daniel, C.

Title

Complement activation in kidneys of patients with COVID-19.

Source

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Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Most patients who became critically ill following infection with COVID-19 develop severe acute respiratory syndrome (SARS) attributed to a maladaptive or inadequate immune response. The complement system is an important component of the innate immune system that is involved in the opsonization of viruses but also in triggering further immune cell responses. Complement activation was seen in plasma adsorber material that clogged during the treatment of critically ill patients with COVID-19. Apart from the lung, the kidney is the second most common organ affected by COVID-19. Using immunohistochemistry for complement factors C1q, MASP-2, C3c, C3d, C4d, and C5b-9 we investigated the involvement of the complement system in six kidney biopsies with acute kidney failure in different clinical settings and three kidneys from autopsy material of patients with COVID-19. Renal tissue was analyzed for signs of renal injury by detection of thrombus formation using CD61, endothelial cell rarefaction using the marker E-26 transformation specific-related gene (ERG-) and proliferation using proliferating cell nuclear antigen (PCNA)-staining. SARS-CoV-2 was detected by in situ hybridization and immunohistochemistry. Biopsies from patients with hemolytic uremic syndrome (HUS, n = 5), severe acute tubular injury (ATI, n = 7), zero biopsies with disseminated intravascular coagulation (DIC, n = 7) and 1 year protocol biopsies from renal transplants (Ctrl, n = 7) served as controls. In the material clogging plasma adsorbers used for extracorporeal therapy of patients with COVID-19 C3 was the dominant protein but collectin 11 and MASP-2 were also identified. SARS-CoV-2 was sporadically present in varying numbers in some biopsies from patients with COVID-19. The highest frequency of CD61-positive platelets was found in peritubular capillaries and arteries of COVID-19 infected renal specimens as compared to all controls. Apart from COVID-19 specimens, MASP-2 was detected in glomeruli with DIC and ATI. In contrast, the classical pathway (i.e. C1q) was hardly seen in COVID-19 biopsies. Both C3 cleavage products C3c and C3d were strongly detected in renal arteries but also occurs in glomerular capillaries of COVID-19 biopsies, while tubular C3d was stronger than C3c in biopsies from COVID-19 patients. The membrane attack complex C5b-9, demonstrating terminal pathway activation, was predominantly deposited in COVID-19 biopsies in peritubular capillaries, renal arterioles, and tubular basement membrane with similar or even higher frequency compared to controls. In conclusion, various complement pathways were activated in COVID-19 kidneys, the lectin pathway mainly in peritubular capillaries and in part the classical pathway in renal arteries whereas the alternative pathway seem to be crucial for tubular complement activation. Therefore, activation of the complement system might be involved in the worsening of renal injury. Complement inhibition might thus be a promising treatment option to prevent deregulated activation and subsequent collateral tissue injury.

Publication Type

Journal article.

<55>

Accession Number

20210109358

Author

McGraw, C.; Salottolo, K.; Carrick, M.; Lieser, M.; Madayag, R.; Berg, G.; Banton, K.; Hamilton, D.; Bar-Or, D.

Title

Patterns of alcohol and drug utilization in trauma patients during the COVID-19 pandemic at six trauma centers.

Source

Injury Epidemiology; 2021. 8(24):(22 March 2021). many ref.

Publisher

SpringerOpen

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Background: Since the national stay-at-home order for COVID-19 was implemented, clinicians and public health authorities worldwide have expressed growing concern about the potential repercussions of drug and alcohol use due to social restrictions. We explored the impact of the national stay-at-home orders on alcohol or drug use and screenings among trauma admissions. **Methods:** This was a retrospective cohort study at six Level I trauma centers across four states. Patients admitted during the period after the onset of the COVID-19 restrictions (defined as March 16, 2020-May 31, 2020) were compared with those admitted during the same time period in 2019. We compared (1) rate of urine drug screens and blood alcohol screens; (2) rate of positivity for drugs or alcohol (blood alcohol concentration 10 mg/dL); (3) characteristics of patients who were positive for drug or alcohol, by period using chi-squared tests or Fisher's exact tests, as appropriate. Two-tailed tests with an alpha of $p < 0.05$ was used on all tests. **Results:** There were 4762 trauma admissions across the study period; 2602 (55%) in 2019 and 2160 (45%) in 2020. From 2019 to 2020, there were statistically significant increases in alcohol screens (34% vs. 37%, $p = 0.03$) and drug screens (21% vs. 26%, $p < 0.001$). Overall, the rate of alcohol positive patients significantly increased from 2019 to 2020 (32% vs. 39%, $p = 0.007$), while the rate of drug positive patients was unchanged (57% vs. 52%, $p = 0.13$). Of the 1025 (22%) patients who were positive for alcohol or drugs, there were significant increases in a history of alcoholism (41% vs. 26%, $p < 0.001$), and substance abuse (11% vs. 23%, $p < 0.001$) in the 2020 period. No other statistically significant differences were identified among alcohol or drug positive patients during COVID-19 compared to the same period in 2019. **Conclusions:** Our first wave of COVID-19 data suggests that trauma centers were admitting significantly more patients who were alcohol positive, as well those with substance use disorders, potentially due to the impact of social restrictions and guidelines. Further longitudinal research is warranted to assess the alcohol and drug positive rates of trauma patients over the COVID-19 pandemic.

Publication Type

Journal article.

<56>

Accession Number

20210109345

Author

Kim YoungIl; Kim DokYun; Yu KwangMin; Seo, H. D.; Lee ShinAe; Casel, M. A. B.; Jang SeungGyu; Kim, S.; Jung WooRam; Lai ChihJen; Choi YoungKi; Jung, J. U.

Title

Development of spike receptor-binding domain nanoparticles as a vaccine candidate against SARS-CoV-2 infection in ferrets.

Source

mBio; 2021. 12(2). many ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a causative agent of the CoV disease 2019 (COVID-19) pandemic, enters host cells via the interaction of its receptor-binding domain (RBD) of the spike protein with host angiotensin-converting enzyme 2 (ACE2). Therefore, the RBD is a promising vaccine target to induce protective immunity against SARS-CoV-2 infection. In this study, we report the development of an RBD protein-based vaccine candidate against SARS-CoV-2 using self-assembling *Helicobacter pylori*-bullfrog ferritin nanoparticles as an antigen delivery system. RBD-ferritin protein purified from mammalian cells efficiently assembled into 24-mer nanoparticles. Sixteen- to 20-month-old ferrets were vaccinated with RBD-ferritin nanoparticles (RBD nanoparticles) by intramuscular or intranasal inoculation. All vaccinated ferrets with RBD nanoparticles produced potent neutralizing antibodies against SARS-CoV-2. Strikingly, vaccinated ferrets demonstrated efficient protection from SARS-CoV-2 challenge, showing no fever, body weight loss, or clinical symptoms. Furthermore, vaccinated ferrets showed rapid clearance of infectious virus in nasal washes and lungs as well as of viral RNA in respiratory organs. This study demonstrates that spike RBD-nanoparticles are an effective protein vaccine candidate against SARS-CoV-2.

Publication Type

Journal article.

<57>

Accession Number

20210109344

Author

Amanat, F.; Strohmeier, S.; Rathnasinghe, R.; Schotsaert, M.; Coughlan, L.; Garcia-Sastre, A.; Krammera, F.

Title

Introduction of two prolines and removal of the polybasic cleavage site lead to higher efficacy of a recombinant spike- based SARS-CoV-2 vaccine in the mouse model.

Source

mBio; 2021. 12(2). 44 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

The spike protein of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been identified as the prime target for vaccine development. The spike protein mediates both binding to host cells and membrane fusion and is also so far the only known viral target of neutralizing antibodies. Coronavirus spike proteins are large trimers that are relatively unstable, a feature that might be enhanced by the presence of a polybasic cleavage site in SARS-CoV-2 spike. Exchange of K986 and V987 for prolines has been shown to stabilize the trimers of SARS-CoV-1 and the Middle East respiratory syndrome coronavirus spike proteins. Here, we test multiple versions of a soluble spike protein for their immunogenicity and protective effect against SARS-CoV-2 challenge in a mouse model that transiently expresses human angiotensin- converting enzyme 2 via adenovirus transduction. Variants tested include spike proteins with a deleted polybasic cleavage site, proline mutations, or a combination thereof, besides the wild-type protein. While all versions of the protein were able to induce neutralizing antibodies, only the antigen with both a deleted cleavage site and the K986P and V987P (PP) mutations completely protected from challenge in this mouse model.

Publication Type

Journal article.

<58>

Accession Number

20210109343

Author

Adams, L. E.; Dinno, K. H. D., III; Hou, Y. J.; Sheahan, T. P.; Heise, M. T.; Baric, R. S.

Title

Critical ACE2 determinants of SARS-CoV-2 and group 2B coronavirus infection and replication.

Source

mBio; 2021. 12(2). 38 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

The angiotensin-converting enzyme 2 (ACE2) receptor is a major severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) host range determinant, and understanding SARS-CoV-2-ACE2 interactions will provide important insights into COVID-19 pathogenesis and animal model development. SARS-CoV-2 cannot infect mice due to incompatibility between its receptor binding domain and the murine ACE2 receptor. Through molecular modeling and empirical in vitro validation, we identified 5 key amino acid differences between murine and human ACE2 that mediate SARS-CoV-2 infection, generating a chimeric humanized murine ACE2. Additionally, we examined the ability of the humanized murine ACE2 receptor to permit infection by an additional preemergent group 2B coronavirus, WIV-1, providing evidence for the potential pan-virus capabilities of this chimeric receptor. Finally, we predicted the ability of these determinants to inform host range identification of preemergent coronaviruses by evaluating hot spot contacts between SARS-CoV-2 and additional potential host receptors. Our results identify residue determinants that mediate coronavirus receptor usage and host range for application in SARS-CoV-2 and emerging coronavirus animal model development.

Publication Type

Journal article.

<59>

Accession Number

20210109266

Author

Manocha, K. K.; Kirzner, J.; Ying Xiaohan; Yeo, I.; Peltzer, B.; Ang, B.; Li, H. A.; Lerman, B. B.; Safford, M. M.; Goyal, P.; Cheung, J. W.

Title

Troponin and other biomarker levels and outcomes among patients hospitalized with COVID-19: derivation and validation of the HA2T2 COVID-19 mortality risk score.

Source

Journal of the American Heart Association; 2021. 10(6). 21 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Background: The independent prognostic value of troponin and other biomarker elevation among patients with coronavirus disease 2019 (COVID-19) are unclear. We sought to characterize biomarker levels in patients hospitalized with COVID-19 and develop and validate a mortality risk score. Methods and Results: An observational cohort study of 1053 patients with COVID-19 was conducted. Patients with all of the following biomarkers measured-troponin-I, B-type natriuretic peptide, C-reactive protein, ferritin, and d-dimer (n=446) -were identified. Maximum levels for each biomarker were recorded. The primary end point was 30-day in-hospital mortality. Multivariable logistic regression was used to construct a mortality risk score. Validation of the risk score was performed using an independent patient cohort (n=440). Mean age of patients was 65.0+or-15.2 years and 65.3% were men. Overall, 444 (99.6%) had elevation of any biomarker. Among tested biomarkers, troponin-I 0.34 ng/mL was the only independent predictor of 30-day mortality (adjusted odds ratio, 4.38; P < 0.001). Patients with a mortality score using hypoxia on presentation, age, and troponin-I elevation, age (HA2T2) 3 had a 30-day mortality of 43.7% while those with a score <3 had mortality of 5.9%. Area under the receiver operating characteristic curve of the HA2T2 score was 0.834 for the derivation cohort and 0.784 for the validation cohort. Conclusions: Elevated troponin and other biomarker levels are commonly seen in patients hospitalized with COVID-19. High troponin levels are a potent predictor of 30-day in-hospital mortality. A simple risk score can stratify patients at risk for COVID-19-associated mortality.

Publication Type

Journal article.

<60>

Accession Number

20210109106

Author

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Schoenfeld-Tacher, R. M.; Dorman, D. C.

Title

Effect of delivery format on student outcomes and perceptions of a veterinary medicine course: synchronous versus asynchronous learning.

Source

Veterinary Sciences; 2021. 8(2). 39 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic prompted instruction at many veterinary schools to switch to an emergency remote teaching format to prevent viral transmission associated with in-person synchronous lectures. This study surveyed student perspectives and academic performance in a pre-planned online second-year veterinary toxicology course given at North Carolina State University in Spring 2020. This course relied on asynchronous narrated presentations for content delivery. This method of delivery predated the pandemic and was used throughout the course. Academic performance and patterns of access to materials in the online course was compared with the access patterns and performance of students given classroom-based synchronous teaching in Spring 2019. Assessments evaluated in this study were identical across courses. Students' academic performance was unaffected by delivery method. Lack of instructor interaction was an important perceived barrier in the asynchronous course. Asynchronous course materials were uniformly accessed across all days of the week, while supplemental materials for the face-to-face course showed a weekly pattern. Moving from letter grades to pass/fail did not change access frequency to supplemental course materials but led to decreased video usage in the asynchronous course. Results suggest that although some veterinary students perceived the switch in delivery format negatively, the method of delivery did not adversely affect performance in this preclinical course.

Publication Type

Journal article.

<61>

Accession Number

20210108978

Author

Mavroulis, S.; Mavrouli, M.; Lekkas, E.

Title

Geological and hydrometeorological hazards and related disasters amid COVID-19 pandemic in Greece: post-disaster trends and factors affecting the COVID-19 evolution in affected areas.

Source

Safety Science; 2021. 138. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Since the first confirmed COVID-19 case in December 2019 the pandemic has severely affected humanity in various ways on all sectors of the everyday life. Natural hazards and related disasters did not stop for the novel virus. The parallel evolution of disasters and the pandemic have high potential for producing compound emergencies characterized by new unprecedented challenges. Greece was no exception. It was struck by disasters induced by geological and hydrometeorological hazards amid the pandemic. The most destructive events in terms of human and economic losses were the Mw = 5.7 Epirus and Mw = 6.9 Samos earthquakes on March 21 and October 30 respectively, the Evia flood on August 9 and the Ianos medicane in mid-September 2020. We studied the daily recorded laboratory confirmed COVID-19 cases in the disaster-affected areas in selected pre- and post- disaster periods. Increase of the reported COVID-19 cases in the post-disaster period has been detected only after the Ianos medicane in affected areas. No change in cases was observed after the studied earthquakes and flood. We examined various factors related to the evolving pandemic, the studied disasters and their management plan that may have contributed to the post-disaster evolution of cases. It is shown that the preexisting viral load and the infection rate in the affected areas, the intensity of the disaster effects and the measures adopted for the effective disaster management of the compound emergencies have the potential to affect the post-disaster evolution of the pandemic in the disaster affected areas.

Publication Type

Journal article.

<62>

Accession Number

20210108944

Author

Hu MaoGui; Lin Hui; Wang JinFeng; Xu ChengDong; Tatem, A. J.; Meng Bin; Zhang Xin; Liu YiFeng; Wang PengDa; Wu GuiZhen; Xie HaiYong; Lai ShengJie

Title

Risk of coronavirus disease 2019 transmission in train passengers: an epidemiological and modeling study.

Source

Clinical Infectious Diseases; 2020. 72(4):604-610. 33 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Train travel is a common mode of public transport across the globe; however, the risk of coronavirus disease 2019 (COVID-19) transmission among individual train passengers remains unclear. Methods: We quantified the transmission risk of COVID-19 on high-speed train passengers using data from 2334 index patients and 72 093 close contacts who had co-travel times of 0-8 hours from 19 December 2019 through 6 March 2020 in China. We analyzed the spatial and temporal distribution of COVID-19 transmission among train passengers to elucidate the associations between infection, spatial distance, and co-travel time. Results: The attack rate in train passengers on seats within a distance of 3 rows and 5 columns of the index patient varied from 0 to 10.3% (95% confidence interval [CI], 5.3%-19.0%), with a mean of 0.32% (95% CI, .29%-.37%). Passengers in seats on the same row (including the adjacent passengers to the index patient) as the index patient had an average attack rate of 1.5% (95% CI, 1.3%-1.8%), higher than that in other rows (0.14% [95% CI, .11%-.17%]), with a relative risk (RR) of 11.2 (95% CI, 8.6-14.6). Travelers adjacent to the index patient had the highest attack rate (3.5% [95% CI, 2.9%-4.3%]) of COVID-19 infection (RR, 18.0 [95% CI, 13.9-23.4]) among all seats. The attack rate decreased with increasing distance, but increased with increasing co-travel time. The attack rate increased on average by 0.15% (P = .005) per hour of co-travel; for passengers in adjacent seats, this increase was 1.3% (P = .008), the highest among all seats considered. Conclusions: COVID-19 has a high transmission risk among train passengers, but this risk shows significant differences with co-travel time and seat location. During disease outbreaks, when traveling on public transportation in confined spaces such as trains, measures should be taken to reduce the risk of transmission, including increasing seat distance, reducing passenger density, and use of personal hygiene protection.

Publication Type

Journal article.

<63>

Accession Number

20210108936

Author

Hormanstorfer, M.; Ragusa, M. A.; Poggio, L.; Moreira-Facundo, J.; Orellana-Villa, Z.; Bobrowski, F. A.; Martinez-Serventi, J.; Adanza, S. N. P.; Barletta, J. A. E.; Sisto, A.; Delle-Piane, H.; Carrillo, J. M.; Presas, J. L.; Paulin, F.

Title

Development of simple and sensitive score to assess the risk of pneumonia in COVID-19 patients.

Source

Revista de Investigacion Clinica - Clinical and Translational Investigation; 2021. 73(1):52-58. 23 ref.

Publisher

Permanyer Mexico

Location of Publisher

Mexico city

Country of Publication

Mexico

Abstract

Background: Severe pneumonia is the most common cause of intensive care unit (ICU) admission and death due to novel coronavirus (SARS-CoV-2) respiratory disease (COVID-19). Due to its rapid outbreak, units for the evaluation of febrile patients in the pre-hospital setting were created. Background: The objective of the study was to develop a sensitive and simple tool to assess the risk of pneumonia in COVID-19 patients and thus select which patients would require a chest imaging study. Materials and Methods: We conducted a cross-sectional study in a cohort of individuals with suspected COVID-19 evaluated in a public academic healthcare center in Buenos Aires city. All adult patients with positive RT-PCR assay for SARS-COV2 between April 24 and May 19 of 2020 were included in the study. Pneumonia was defined as the presence of compatible signs and symptoms with imaging confirmation. Univariate and multivariate logistic regression was performed. A risk indicator score was developed. Results: One hundred and forty-eight patients were included, 71 (48%) received the diagnosis of pneumonia. The final clinical model included four variables: age 40 years, cough, absence of sore throat, and respiratory rate 22. To create the score, we assigned values to the variables according to their ORs: 2 points for respiratory rate 22 and 1 point to the other variables. The AUC of the ROC curve was 0.80 (CI 95% 0.73-0.86). A cutoff value of 2 showed a sensitivity of 95.7% and a specificity of 43.24%. Conclusion: This sensible score may improve the risk stratification of COVID-19 patients in the pre-hospital setting.

Publication Type

Journal article.

<64>

Accession Number

20210108840

Author

Watanabe, H. A. W.; Costa Domingues, M. A. R. da; Oliveira Duarte, Y. A. de

Title

COVID-19 and homes for the aged: care or an announced death?

Source

Geriatrics, Gerontology and Aging; 2020. 14(2):143-145. 6 ref.

Publisher

Brazilian Society of Geriatrics and Gerontology

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

Despite all efforts to contain the COVID-19 pandemic in Brazil, little attention has been paid to homes for the aged, which are the home of thousands of older people and serve as social care facilities. There is no provision in the national regulations for the operation of these long-term care facilities with respect to physical structure, human resources or equipment to offer specific health care services to residents. Thus, homes for the aged are unable to offer proper care to people with COVID-19. These facilities have had difficulty in acquiring and maintaining the stocks of personal protective equipment for residents and staff. This letter is intended to draw attention to this reality and prevent the occurrence of a cruel and inhumane geronticide. Government authorities and the media need to work together and help unveil this reality, which, although present, is hidden and unknown to the majority of the population.

Publication Type

Journal article.

<65>

Accession Number

20210108766

Author

Muhammad Shoaib; Farooq Abdullah

Title

COVID-19 backlash: psycho-social impacts of outbreak in Pakistan.

Source

Health Education; 2021. 121(3):265-274.

Publisher

Emerald Publishing

Location of Publisher

Bingley

Country of Publication

UK

Abstract

Purpose: This paper aimed to examine the psycho-social aspects of coronavirus disease 2019 (COVID-19) in Pakistan. The study was conducted in Pakistan by using an online survey technique. The rationale to opt for this method was mainly based on the country's lock-down situations, social distancing and for the care of respondents. **Design/methodology/approach:** A total of 1,536 individuals participated from different parts of the country. An attitudinal scale was administered consisting of statements to measure (dis)agreement of the individuals facing the current situations of COVID-19. The ethical considerations and confidentiality of the respondents were opted by describing the purpose of research on the first page of the questionnaire. **Findings:** The study findings showed that the cost of personal protective equipment (PPE), social isolation and loss of intimacy have favourable positive effects on the psychological problems of individuals through the mediation of fake news and misinformation during COVID-19. Furthermore, the study findings were interpreted as per the effects of current situations of epidemic, i.e. COVID-19 on the psycho-social life of individuals. **Research limitations/implications:** This paper is purely limited to the quantitative approach including variables, i.e. COVID-19, risk of infection, social distancing, cost of PPE, social isolation, fake news and psychological problems. **Practical implications:** The present research will enhance the awareness and knowledge regarding psychological problems faced by the individuals during COVID-19. It will be a significant addition to the existing body of knowledge in the field of health and well-being. It will also provide guidelines to students, research scholars, policymakers and academicians to develop policies in future to improve the health of people during epidemics such as COVID-19 and similar nature of outbreak in the future. **Originality/value:** This paper focused on an important gap in the research on COVID-19 in the country in the context of COVID-19, risk of infection, social distancing, cost of PPE, social isolation, fake news and psychological problems.

Publication Type

Journal article.

<66>

Accession Number

20210108708

Author

Song ZhiQi; Bao LinLin; Yu Pin; Qi FeiFei; Gong ShuRan; Wang Jie; Zhao BinBin; Liu MingYa; Han YunLin; Deng Wei; Liu JiangNing; Wei Qiang; Xue Jing; Zhao WenJie; Qin Chuan

Title

SARS-CoV-2 causes a systemically multiple organs damages and dissemination in hamsters.

Source

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Frontiers in Microbiology; 2021. 12(January). 27 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has spread across the world and impacted global healthcare systems. For clinical patients, COVID-19 not only induces pulmonary lesions but also affects extrapulmonary organs. An ideal animal model that mimics COVID-19 in humans in terms of the induced systematic lesions is urgently needed. Here, we report that Syrian hamster is highly permissive to SARS-CoV-2 and exhibit diffuse alveolar damage and induced extrapulmonary multi-organs damage, including spleen, lymph nodes, different segments of alimentary tract, kidney, adrenal gland, ovary, vesicular gland and prostate damage, at 3-7 days post inoculation (dpi), based on qRT-PCR, in situ hybridization and immunohistochemistry detection. Notably, the adrenal gland is a novel target organ, with abundant viral RNA and antigen expression detected, accompanied by focal to diffuse inflammation. Additionally, viral RNA was also detected in the corpus luteum of the ovary, vesicular gland and prostate. Focal lesions in liver, gallbladder, myocardium, and lymph nodes were still present at 18 dpi, suggesting potential damage after disease. Our findings illustrate systemic histological observations and the viral RNA and antigen distribution in infected hamsters during disease and convalescence to recapitulate those observed in humans with COVID-19, providing helpful data to the pathophysiologic characterization of SARS-CoV-2-induced systemic disease and the development of effective treatment strategies.

Publication Type

Journal article.

<67>

Accession Number

20210108705

Author

Fu Yu; Pan YunBao; Li ZhiQiang; Li YiRong

Title

The utility of specific antibodies against SARS-CoV-2 in laboratory diagnosis.

Source

Frontiers in Microbiology; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The Coronavirus Disease 2019 (COVID-19) caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has now become a global pandemic due to its high transmissibility. The unavoidable shortcomings of traditional diagnostic assay, including nucleic acid testing, diverse serological assays characterized by high-throughput and less workload, are playing a more and more crucial role to supplement the nucleic acid test. In this review, we summarize the dynamic change of the specific IgM, IgG, and IgA antibodies against SARS-CoV-2 as well as neutralizing antibodies and discuss the clinical utility and limitations of the different serological assays. SARS-CoV-2, a newly discovered virus, shows some unique pathogenetic and epidemiological characteristics that have not been completely understood so far. Currently, studies about the antibody responses against SARS-CoV-2 and the clinical utility of serological testing are increasing. It's well suggested that the combination of serological tests and nucleic acid tests can cohesively improve the testing efficiency for identifying COVID-19 suspected patients.

Publication Type

Journal article.

<68>

Accession Number

20210108702

Author

Eweas, A. F.; Alhossary, A. A.; Abdel-Moneim, A. S.

Title

Molecular docking reveals ivermectin and remdesivir as potential repurposed drugs against SARS-CoV-2.

Source

Frontiers in Microbiology; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

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Abstract

SARS-CoV-2 is a newly emerged coronavirus that causes a respiratory disease with variable severity and fatal consequences. It was first reported in Wuhan and subsequently caused a global pandemic. The viral spike protein binds with the ACE-2 cell surface receptor for entry, while TMPRSS2 triggers its membrane fusion. In addition, RNA dependent RNA polymerase (RdRp), 3'-5' exoribonuclease (nsp14), viral proteases, N, and M proteins are important in different stages of viral replication. Accordingly, they are attractive targets for different antiviral therapeutic agents. Although many antiviral agents have been used in different clinical trials and included in different treatment protocols, the mode of action against SARS-CoV-2 is still not fully understood. Different potential repurposed drugs, including, chloroquine, hydroxychloroquine, ivermectin, remdesivir, and favipiravir, were screened in the present study. Molecular docking of these drugs with different SARS-CoV-2 target proteins, including spike and membrane proteins, RdRp, nucleoproteins, viral proteases, and nsp14, was performed. Moreover, the binding affinities of the human ACE-2 receptor and TMPRSS2 to the different drugs were evaluated. Molecular dynamics simulation and MM-PBSA calculation were also conducted. Ivermectin and remdesivir were found to be the most promising drugs. Our results suggest that both these drugs utilize different mechanisms at the entry and post-entry stages and could be considered potential inhibitors of SARS-CoV-2 replication.

Publication Type

Journal article.

<69>

Accession Number

20210108697

Author

Farha Mehdi; Souvick Chattopadhyay; Ramachandran Thiruvengadam; Sarla Yadav; Manjit Kumar; Sinha, S. K.; Sandeep Goswami; Pallavi Kshetrapal; Nitya Wadhwa; Natchu, U. C.; Shailaja Sopory; Desiraju, B. K.; Pandey, A. K.; Asim Das; Nikhil Verma; Nandini Sharma; Pragya Sharma; Vandita Bhartia; Mudita Gosain; Rakesh Lodha; Lamminmaki, U.; Tripti Shrivastava; Shinjini Bhatnagar; Gaurav Batra

Title

Development of a fast SARS-CoV-2 IgG ELISA, based on receptor-binding domain, and its comparative evaluation using temporally segregated samples from RT-PCR positive individuals.

Source

Frontiers in Microbiology; 2021. 12(January). 36 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

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Abstract

SARS-CoV-2 antibody detection assays are crucial for gathering seroepidemiological information and monitoring the sustainability of antibody response against the virus. The SARS-CoV-2 Spike protein's receptor-binding domain (RBD) is a very specific target for anti-SARS-CoV-2 antibodies detection. Moreover, many neutralizing antibodies are mapped to this domain, linking antibody response to RBD with neutralizing potential. Detection of IgG antibodies, rather than IgM or total antibodies, against RBD is likely to play a larger role in understanding antibody-mediated protection and vaccine response. Here we describe a rapid and stable RBD-based IgG ELISA test obtained through extensive optimization of the assay components and conditions. The test showed a specificity of 99.79% (95% CI: 98.82-99.99%) in a panel of pre-pandemic samples (n = 470) from different groups, i.e., pregnancy, fever, HCV, HBV, and autoantibodies positive. Test sensitivity was evaluated using sera from SARS-CoV-2 RT-PCR positive individuals (n = 312) and found to be 53.33% (95% CI: 37.87-68.34%), 80.47% (95% CI: 72.53-86.94%), and 88.24% (95% CI: 82.05-92.88%) in panel 1 (days 0-13), panel 2 (days 14-20) and panel 3 (days 21-27), respectively. Higher sensitivity was achieved in symptomatic individuals and reached 92.14% (95% CI: 86.38-96.01%) for panel 3. Our test, with a shorter runtime, showed higher sensitivity than parallelly tested commercial ELISAs for SARS-CoV-2-IgG, i.e., Euroimmun and Zydus, even when equivocal results in the commercial ELISAs were considered positive. None of the tests, which are using different antigens, could detect anti-SARS-CoV-2 IgGs in 10.5% RT-PCR positive individuals by the fourth week, suggesting the lack of IgG response.

Publication Type

Journal article.

<70>

Accession Number

20210108694

Author

Kubo, S.; Ohtake, N.; Miyakawa, K.; Jeremiah, S. S.; Yamaoka, Y.; Murohashi, K.; Hagiwara, E.; Mihara, T.; Goto, A.; Yamazaki, E.; Ogura, T.; Kaneko, T.; Yamanaka, T.; Ryo, A.

Title

Development of an automated chemiluminescence assay system for quantitative measurement of multiple anti-SARS-CoV-2 antibodies.

Source

Frontiers in Microbiology; 2021. 12(January). 28 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Objectives: Serological tests for COVID-19 have been instrumental in studying the epidemiology of the disease. However, the performance of the currently available tests is plagued by the problem of variability. We have developed a high-throughput serological test capable of simultaneously detecting total immunoglobulins (Ig) and immunoglobulin G (IgG) against nucleocapsid protein (NP) and spike protein (SP) and report its performance in detecting COVID-19 in clinical samples. **Methods:** We designed and prepared reagents for measuring NP-IgG, NP-Total Ig, SP-IgG, and SP-Total Ig (using N-terminally truncated NP (N-NP) or receptor-binding domain (RBD) antigen) dedicated automated chemiluminescent enzyme immunoassay analyzer AIA-CL1200. After determining the basal thresholds based on 17 sera obtained from confirmed COVID-19 patients and 600 negative sera, the clinical validity of the assay was evaluated using independent 202 positive samples and 1,000 negative samples from healthy donors. **Results:** All of the four test parameters showed 100% specificity individually (1,000/1,000; 95%CI, 99.63-100). The sensitivity of the assay increased proportionally to the elapsed time from symptoms onset, and all the tests achieved 100% sensitivity (153/153; 95%CI, 97.63-100) after 13 days from symptoms onset. NP-Total Ig was the earliest to attain maximal sensitivity among the other antibodies tested. **Conclusion:** Our newly developed serological testing exhibited 100% sensitivity and specificity after 13 days from symptoms onset. Hence, it could be used as a reliable method for accurate detection of COVID-19 patients and to evaluate seroprevalence and possibly for surrogate assessment of herd immunity.

Publication Type

Journal article.

<71>

Accession Number

20210108541

Author

Wachholz, P. A.; Moreira, V. G.; Oliveira, D.; Watanabe, H. A. W.; Boas, P. J. F. V.

Title

Estimates of infection and mortality from COVID-19 in care homes for older people in Brazil.

Source

Geriatrics, Gerontology and Aging; 2020. 14(4):290-293. 10 ref.

Publisher

Brazilian Society of Geriatrics and Gerontology

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

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Abstract

OBJECTIVE: To describe infection and mortality rates associated with COVID-19 in older people living in Brazilian care homes. **METHODS:** A descriptive cross-sectional study was conducted using primary and secondary data sources. Nationwide care home administrators were invited to report, via an online questionnaire, the occurrence of infection and mortality associated with COVID-19 from April to August 2020. State Public Prosecutor Offices, State Health Departments, and the Unified Social Security System were also contacted for information. Data were analyzed using descriptive statistics. **RESULTS:** Data were collected from 2154 care homes located in 14 states, covering 59878 older residents. The incidence rate of COVID-19 was 6.57%, and 883 deaths were recorded in the period, with a case-fatality rate of 22.44%. **CONCLUSIONS:** The incidence and mortality rates observed in this study were lower than those observed in other (high-income) countries. Data sources related to COVID-19 outbreaks in Brazilian care homes are currently limited to self-report. Structuring and systematizing data recording and reporting in these settings is essential to better understand the spread of the virus and to protect care home residents in Brazil.

Publication Type

Journal article.

<72>

Accession Number

20210108537

Author

Wachholza, P. A.; Jacintob, A. F.; Meloc, R. C. de; Dinamarca-Montecinosd, J. L.; Boasa, P. J. F. V.

Title

COVID-19: challenges in long-term care facilities for older adults in Hispanic American countries.

Source

Geriatrics, Gerontology and Aging; 2020. 14(4):259-266. 29 ref.

Publisher

Brazilian Society of Geriatrics and Gerontology

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

INTRODUCTION: Little is known about management and mitigation of COVID-19 in long-term care facilities (LTCF) for older adults in Latin America. **OBJECTIVE:** To describe how the management of LTCF in Hispanic American countries plan and adapt their routines for coping with COVID-19 and whether they have been able to fulfill recommendations published by the World Health Organization (WHO). **METHODOLOGY:** A

cross-sectional study was conducted by online survey of managers of LTCF located in Hispanic American countries. A 46-item questionnaire (adopting the WHO principles) was sent to participants. Descriptive statistics were used to summarize the data. RESULTS: Twenty-three care home managers replied, responsible for a total of 874 older people (range: 5 - 270). One questionnaire was excluded because of missing responses. Fourteen LTCF (63.60%) were private, for-profit facilities. The rate of compliance with WHO recommendations exceeded 70% for the majority of items. Just over half of the institutions had developed a strategic management plan, or had identified strategies for dealing with deaths of suspected cases. Difficulty acquiring personal protective equipment (PPE) was reported by 59.10% of the LTCF surveyed. The homes' capacity for SARS-Cov-2 testing was limited (36.36% of the institutions did not have any tests). CONCLUSIONS: The rate of compliance with recommendations published by the WHO for dealing with COVID-19 was greater than 70% at the majority of the LTCF surveyed. More than half of the institutions had strategic management plans. Availability of PPE and SARS-Cov-2 testing capacity were very unsatisfactory.

Publication Type

Journal article.

<73>

Accession Number

20210108450

Author

Jordan, D.; Guiu-Segura, J. M.; Sousa-Pinto, G.; Wang LinNam

Title

How COVID-19 has impacted the role of pharmacists around the world. [Spanish]

Source

Farmacia Hospitalaria; 2021. 45(2):89-95. 40 ref.

Publisher

Sociedad Espanola de Farmacia Hospitalaria

Location of Publisher

Madrid

Country of Publication

Spain

Abstract

COVID-19 and showing their commitment to the communities they serve. As the COVID-19 pandemic has tested global health systems to their limits, pharmacy professionals have shown themselves to be an integral part of them. Community pharmacists have supported government initiatives to control the pandemic and have ensured patients continued to receive their medicines. Hospital pharmacists have been moving beyond their specialties to help provide critical care to patients while dealing with ICU drug

shortages. Pharmaceutical scientists have been involved in finding effective vaccines and identifying effective treatments. In short, the pharmacy profession has been demonstrating expertise, strength, courage and dedication to care at the highest level. The International Pharmaceutical Federation (FIP), which represents the pharmacy profession globally, has a mission to advance pharmacy worldwide by sharing best pharmacy practice and innovation with the world. In this article, it describes how pharmacy has stepped up during the COVID-19 crisis by giving examples from several countries. It highlights, for example, how virtual practice became more prominent as face-to-face meetings became impossible, how pharmacists' scope of practice has been extended, and how pharmacy educators have embraced digital technologies to teach and assess students remotely. In particular, the article highlights pharmacists' involvement in the COVID-19 vaccination programmes in Australia, Canada, Germany, Ireland, Switzerland, the UK and the USA. As a result of all this, FIP sees an exciting future for the profession. Health ministers and heads of state have been praising pharmacists for their service, and FIP wants governments to translate this recognition into support for expanded roles and scientific research. It continues to gather data and intelligence to support an expansion of pharmacy practice, education and pharmaceutical workforce that builds on the profession's scientific base. All these advances are supported by scientific studies about our specialty. Finally, FIP expresses its worries about equity of access to medicines during the pandemic, as younger, healthier people in rich countries are vaccinated before people at greater risk in poor countries. It insists it will continue to advocate on this topic as a core component of its global vision. In this article, we share with readers a snapshot of how our profession around the world has adapted to the challenges posed by the COVID-19 pandemic, and our thoughts on the how it is affecting the evolution of pharmacy practice.

Publication Type

Journal article.

<74>

Accession Number

20210108436

Author

Midthun, K. M.; Nelson, L. S.; Logan, B. K.

Title

Levamisole - a toxic adulterant in illicit drug preparations: a review.

Source

Therapeutic Drug Monitoring; 2021. 43(2):221-228.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Discovered in the 1960s, the common anthelmintic levamisole has seen widespread use in veterinary applications. Its use rapidly expanded thereafter to include human medical treatments for a variety of acute and chronic disorders. Because of reports of severe adverse effects, the US Food and Drug Administration withdrew levamisole's approval for human use in 2000; however, medical options outside the United States and illicit options worldwide allow continued accessibility to levamisole. The compound is rapidly metabolized in the body, with at least 2 known active metabolites. Levamisole has a broad range of immunomodulatory effects, including both stimulatory and inhibitory effects on immune responses. It is generally well tolerated at therapeutic concentrations, although a variety of autoimmune-related adverse effects have been reported, including agranulocytosis, leukopenia, purpura, and visible necrotized skin tissue. Individuals with levamisole-compromised immune systems are more susceptible to infections, including COVID-19. Since the early 2000's, levamisole has been frequently used as an adulterating agent in illicit street drugs, especially cocaine, fentanyl, and heroin. Although its prevalence has varied over time and geographically, levamisole has been detected in up to 79% of the street supply of cocaine at levels up to 74% by weight. Its presence in illicit drug markets also raises concern over the potential for exposure of children and neonates, although this is supported by only limited anecdotal evidence. Levamisole is not currently included in routine drug testing panels, although a variety of confirmatory testing techniques exist across a range of antemortem and postmortem specimen options. Because of its varying presence in illicit drug markets, both the medical and forensic communities need to be aware of levamisole and its potential impact on toxicological investigations.

Publication Type

Journal article.

<75>

Accession Number

20210108427

Author

Shokri, A.; Moradi, G.; Bolbanabad, A. M.; Satary, M.; Shabrandi, M.; Sadeghkhan, P.; Mohammadi, A.; Ghorishi, A.; Veisy, R.; Veysi, A.; Piroozi, B.; Hoseini, S. A.; Darvishi, S.; Asadi, H.

Title

Stigma and COVID-19 in Iran: a rapid assessment.

Source

International Journal of Human Rights in Healthcare; 2021. 14(1):4-9.

Publisher

Emerald Publishing

Location of Publisher

Bingley

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Country of Publication

UK

Abstract

Purpose: The purpose of the study is to investigate the perceived stigma among residents of Sanandaj, west of Iran, following COVID-19 pandemic. **Design/methodology/approach:** This is a cross-sectional study conducted from March to April 2020. The sample consisted of 1,000 participants who live in Sanandaj. The data collection tool was a self-report electronic questionnaire. ANOVA and T-test were used to analyze the data. **Findings:** The mean perceived stigma for COVID-19 was 5.50+or-2.24 (IQR: 3.75-6.87) out of 10-point scale. The highest point was seen for perceived external stigma (6.73+or-2.49, IQR: 5-8.75) followed by disclosure stigma (4.95+or-3.92, IQR: 0-10). Interestingly, self-employers were more concerned about disclosing their illness than those with governmental jobs (25+or-3.93 vs. 4.31+or-4.14, P<0.05), and also had an overall higher stigma score; (5.72+or-2.23 vs. 5.19+or-2.37, P<0.05). **Originality/value:** COVID-19 stigma is high among Iranians and more common among men, youngsters and self-employers.

Publication Type

Journal article.

<76>

Accession Number

20210108411

Author

Malik, R. J.

Title

Across regions: are most COVID-19 deaths above or below life expectancy?

Source

GERMS; 2021. 11(1):59-65. 36 ref.

Publisher

European Academy of HIV/AIDS and Infectious Diseases

Location of Publisher

Bucharest

Country of Publication

Romania

Abstract

Introduction: Life expectancy varies across geographical and political landscapes for a multitude of reasons. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus responsible for the 2020 coronavirus disease (COVID-19) and pandemic, is present in 215 countries, and is described as a pathogen

that is most deadly to individuals 65 years and older. However, it is unclear if the majority of COVID-19-related deaths are targeting individuals above or below life expectancy. Methods: Through seven months of the 2020 COVID-19 pandemic, an association between life expectancy and COVID-19 related deaths was assessed. The reported age of those suffering from COVID-19-related deaths was evaluated across eight countries (United States, Germany, Italy, Hungary, Poland, South Africa, Sweden, and Switzerland), and placed into binary categories depending on whether or not the death occurred above or below the country's life expectancy. Results: Given this dataset, it was observed that there was a greater proportion of COVID related deaths above life expectancy (M=64.58%, SD=6.46) as opposed to below life expectancy (M=35.41%, SD=6.46), as these differences were significant (95%CI [18.518, 42.881], $p < 0.001$). In contrast, an insignificant trend was observed when examining the relationship between deaths above life expectancy and Gini index (Pearson correlation coefficient $r = -0.62$, $n = 8$, $p = 0.09$). The disparity, or percent difference in death occurring above versus below life expectancy was greatest in the countries with life expectancies of 80+ (Sweden, Switzerland, Germany). Conclusions: Considering life expectancy may be an appropriate approach for reporting COVID-19-related deaths, as well as planning responses to localized COVID-19 outbreaks, prioritizing drug treatment, and assessing ICU capacity.

Publication Type

Journal article.

<77>

Accession Number

20210108408

Author

Hafiz, M.; Icksan, A. G.; Harlivasari, A. D.; Andarini, S.; Susanti, F.; Yuliana, M. E.

Title

Association between clinical, laboratory findings and chest CT in COVID-19 in a secondary hospital in Jakarta, Indonesia.

Source

GERMS; 2021. 11(1):32-38. 18 ref.

Publisher

European Academy of HIV/AIDS and Infectious Diseases

Location of Publisher

Bucharest

Country of Publication

Romania

Abstract

Introduction: A new emerging infectious disease caused by SARS-CoV-2 has caused a global pandemic. Early diagnosis is essential to prevent and halt the spread of the disease, patient management and

isolation. In this study, we aimed to reveal correlations between clinical and laboratory findings with chest CT. Methods: This in an observational case series single center study in a secondary hospital in Jakarta, Indonesia. Patients were included if they had typical symptoms and positive RT-PCR for SARS-CoV-2. Results: Forty-two patients with positive RT-PCR were included in this study. Typical CT findings were present in 33 (78.6%). We found a positive correlation between patients in whom the imaging was performed after the 4th day of symptoms and chest CT findings ($r=0.365$ $p < 0.05$). In receiver operating characteristic analysis of this parameter, the area under curve (AUC) was 0.678, and the sensitivity and specificity were 0.96 and 0.44, respectively. Conclusions: Early diagnosis of COVID-19 is essential to promptly isolate and treat suspected patients. Utilization of chest CT to help diagnosis in this pandemic era needs to be considered by healthcare facilities especially if RT-PCR is limited.

Publication Type

Journal article.

<78>

Accession Number

20210108277

Author

Perez-Urrestarazu, L.; Kaltsidi, M. P.; Nektarios, P. A.; Markakis, G.; Loges, V.; Perini, K.; Fernandez-Canero, R.

Title

Particularities of having plants at home during the confinement due to the COVID-19 pandemic. (Special Issue: COVID-19.)

Source

Urban Forestry & Urban Greening; 2021. 59. many ref.

Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

The present study evaluated the role of having plants at home during the confinement period as a result of the COVID-19 pandemic that deprived people of freely visiting open green spaces. Preferences concerning the quantity of the desired vegetation as well as the ways in which the COVID-19 crisis affected the change of perceptions with regard to having plants at home were also evaluated. A questionnaire, which was filled by 4205 participants, provided an undistracted evaluation of the impact of indoor and outdoor plants on their emotional welfare considering behavioural, social, and demographic variables. The

emotional state of the respondents was neutral and a significant proportion expressed positive emotions. Having indoor plants was correlated with more positive emotions, and confined inhabitants allocated more time for plant maintenance. By contrast, negative emotions prevailed in respondents who related to a positive COVID-19 case, which was more frequent in females and young participants living in small houses that received low levels of natural light and had few or no plants. A few indoor plants placed in strategic positions were also preferred compared with a high number of plants. By contrast, an increased amount of vegetation accompanied by living walls was preferred for outdoor settings. Living walls were considered as advantageous for increasing indoor vegetation, but they were also associated with technical and economical hurdles.

Publication Type

Journal article.

<79>

Accession Number

20210108109

Author

Galanakis, C. M.; Rizou Myrto; Aldawoud, T. M. S.; Ucak, I.; Rowan, N. J.

Title

Innovations and technology disruptions in the food sector within the COVID-19 pandemic and post-lockdown era.

Source

Trends in Food Science & Technology; 2021. 110:193-200. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: COVID-19 pandemic has caused a global lockdown that has abruptly shut down core businesses and caused a worldwide recession. The forecast for a smooth transition for the agri-food and drink industry is, at best, alarming. Given that COVID-19 shutdown multiple core services (such as aviation, food services, supply chains, and export and import markets), there is an enormous deficiency in critical information to inform priority decision making for companies where this uncertainty is likely to impact negatively upon recovery. Scope and approach: The current article investigates potential innovations within the era of the COVID-19 crisis after framing them within the four issues of the food sector (food safety, bioactive food compounds, food security, and sustainability) that are directly affected by the pandemic. The

prospect of foreseen innovations to disrupt the food sector during lockdown periods and the post-COVID-19 era is also discussed. Key findings and conclusions: Internet and Communication Technologies, blockchain in the food supply chain and other Industry 4.0 applications, as well as approaches that redefine the way we consume food (e.g., lab-grown meat, plant-based alternatives of meat, and valorization of a vast range of bioresources), are the innovations with the highest potential in the new era. There is also an equally pressing need to exploit social marketing to understand attitudes, perceptions, and barriers that influence the behavior change of consumers and the agri-food industry. Subsequently, this change will contribute to adapting to new norms forged by the COVID-19 pandemic, where there is a significant gap in knowledge for decision making.

Publication Type

Journal article.

<80>

Accession Number

20210108091

Author

Risch, M.; Weber, M.; Thiel, S.; Grossmann, K.; Wohlwend, N.; Lung, T.; Hillmann, D.; Ritzler, M.; Ferrara, F.; Bigler, S.; Egli, K.; Bodmer, T.; Imperiali, M.; Salimi, Y.; Fleisch, F.; Cusini, A.; Renz, H.; Kohler, P.; Vernazza, P.; Kahlert, C. R.; Paprotny, M.; Risch, L.

Title

Temporal course of SARS-CoV-2 antibody positivity in patients with COVID-19 following the first clinical presentation.

Source

BioMed Research International; 2020. 2020(9878453). 23 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Knowledge of the sensitivities of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) antibody tests beyond 35 days after the clinical onset of COVID-19 is insufficient. We aimed to describe positivity rate of SARS-CoV-2 assays employing three different measurement principles over a prolonged period. Two hundred sixty-eight samples from 180 symptomatic patients with COVID-19 and a reverse transcription polymerase chain reaction (RT-PCR) test followed by serological investigation of SARS-CoV-2 antibodies were included. We conducted three chemiluminescence (including electrochemiluminescence assay

(ECLIA)), four enzyme-linked immunosorbent assay (ELISA), and one lateral flow immunoassay (LFIA) test formats. Positivity rates, as well as positive (PPVs) and negative predictive values (NPVs), were calculated for each week after the first clinical presentation for COVID-19. Furthermore, combinations of tests were assessed within an orthogonal testing approach employing two independent assays and predictive values were calculated. Heat maps were constructed to graphically illustrate operational test characteristics. During a follow-up period of more than 9 weeks, chemiluminescence assays and one ELISA IgG test showed stable positivity rates after the third week. With the exception of ECLIA, the PPVs of the other chemiluminescence assays were 95% for COVID-19 only after the second week. ELISA and LFIA had somewhat lower PPVs. IgM exhibited insufficient predictive characteristics. An orthogonal testing approach provided PPVs 95% for patients with a moderate pretest probability (e.g., symptomatic patients), even for tests with a low single test performance. After the second week, NPVs of all but IgM assays were 95% for patients with low to moderate pretest probability. The confirmation of negative results using an orthogonal algorithm with another assay provided lower NPVs than the single assays. When interpreting results from SARSCoV- 2 tests, the pretest probability, time of blood draw, and assay characteristics must be carefully considered. An orthogonal testing approach increases the accuracy of positive, but not negative, predictions.

Publication Type

Journal article.

<81>

Accession Number

20210108056

Author

Keric, D.; Stafford, J.

Title

Alcohol industry arguments for putting profit before health in the midst of a pandemic: the Western Australian experience.

Source

Drug and Alcohol Review; 2021. 40(2):201-204. 15 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

In an effort to limit the impact of alcohol on the Western Australian (WA) health system during the coronavirus disease (COVID-19) pandemic, the WA Government introduced temporary restrictions on takeaway alcohol purchases for several weeks in March and April 2020. In response, alcohol industry representatives encouraged the WA Government to remove the restrictions and replace them with a voluntary alcohol industry initiative. We looked at alcohol industry representatives' comments in media and online publications during this period. We found that the industry framed alcohol as an essential product, focused on the impact of the restrictions on WA businesses and framed the restrictions as complex and ineffective. The themes and arguments we identified are commonly used by the alcohol industry and are not unique to the pandemic. The alcohol industry's response to the COVID-19 restrictions in Australia provides a unique case study of how the alcohol industry attempts to interfere in public health policy.

Publication Type

Journal article.

<82>

Accession Number

20210107411

Author

Lin QianYu; Huang Yunchuanxiang; Jiang ZiYi; Wu Feng; Ma Lan

Title

Deciphering the subtype differentiation history of SARS-CoV-2 based on a new breadth-first searching optimized alignment method over a global data set of 24,768 sequences.

Source

Frontiers in Genetics; 2021. 12(January). 27 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

SARS-CoV-2 has caused a worldwide pandemic. Existing research on coronavirus mutations is based on small data sets, and multiple sequence alignment using a global-scale data set has yet to be conducted. Statistical analysis of integral mutations and global spread are necessary and could help improve primer design for nucleic acid diagnosis and vaccine development. Here, we optimized multiple sequence alignment using a conserved sequence search algorithm to align 24,768 sequences from the GISAID data set. A phylogenetic tree was constructed using the maximum likelihood (ML) method. Coronavirus subtypes were analyzed via t-SNE clustering. We performed haplotype network analysis and t-SNE clustering to

analyze the coronavirus origin and spread. Overall, we identified 33 sense, 17 nonsense, 79 amino acid loss, and 4 amino acid insertion mutations in full-length open reading frames. Phylogenetic trees were successfully constructed and samples clustered into subtypes. The COVID-19 pandemic differed among countries and continents. Samples from the United States and western Europe were more diverse, and those from China and Asia mainly contained specific subtypes. Clades G/GH/GR are more likely to be the origin clades of SARS-CoV-2 compared with clades S/L/V. Conserved sequence searches can be used to segment long sequences, making large-scale multisequence alignment possible, facilitating more comprehensive gene mutation analysis. Mutation analysis of the SARS-CoV-2 can inform primer design for nucleic acid diagnosis to improve virus detection efficiency. In addition, research into the characteristics of viral spread and relationships among geographic regions can help formulate health policies and reduce the increase of imported cases.

Publication Type

Journal article.

<83>

Accession Number

20210107410

Author

Cao BangRong; Zhang LiPing; Liu HuiFen; Ma ShiQi; Mi Kun

Title

The dynamic expression of potential mediators of severe acute respiratory syndrome coronavirus 2 cellular entry in fetal, neonatal, and adult rhesus monkeys.

Source

Frontiers in Genetics; 2021. 12(January). 35 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The coronavirus disease 2019 (COVID-19) pandemic, induced by the pathogenic severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has spread rapidly all over the world. There is considerable variability among neonates, children, and adults in the incidence of infection and severe disease following exposure to SARS-CoV-2. In our study, we analyzed the transcriptome data of primate animal model of Rhesus monkeys to evaluate the expression levels of possible SARS-CoV-2 receptors and proteases and immunologic features in the lungs, colons, livers, and brains at different developmental stages. Our results

revealed that ACE2 and TMPRSS2 were highly expressed in neonates compared with other populations, which imply the high incidence of infection. Other potential receptors and Type II transmembrane serine proteases (TTSPs) and cathepsin of endosomal proteases also exhibited dynamic and differential expression patterns. The expression of receptors (ACE2, BSG, and DPP4) and proteases (TMPRSS2, TMPRSS9, CTSL, and CTSB) were highly correlated during lung development, suggesting the high susceptibility of the lungs. TMPRSS9 was specifically highly expressed in the lungs and reached the highest level in neonates, similar to TMPRSS2. Moreover, the immune cell infiltration analysis revealed immunity immaturity in neonates, implying the association with the mild or moderate type of COVID-19. The results might help researchers design protective and therapeutic strategies for COVID-19 in populations at different ages.

Publication Type

Journal article.

<84>

Accession Number

20210107366

Author

Mehdizadehkashi, A.; Chaichian, S.; Haghighi, L.; Eshraghi, N.; Bordbar, A.; Hashemi, N.; Derakhshan, R.; Mirgalobayat, S.; Rokhgireh, S.; Tahermanesh, K.

Title

The impact of COVID-19 pandemic on stress and anxiety of non-infected pregnant mothers.

Source

Journal of Reproduction & Infertility; 2021. 23(2):125-132. 37 ref.

Publisher

Avicenna Research Institute

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background: The newly emerging COVID-19 has caused severe anxiety around the world and it is infecting more people each day since there is no preventive measure or definite therapy for the diseases. The present study aimed to evaluate its effect on anxiety and stress of pregnant mothers during perinatal care. **Methods:** Three-hundred pregnant mothers without COVID-19 infection who were referred to the hospitals affiliated to Iran University of Medical Sciences for delivery during April 2020, based on negative clinical symptoms and the results of polymerase chain reaction (rt-PCR) for COVID-19, were recruited by census method and asked to complete the Persian version of the perceived stress scale (PSS); participants views about their anxiety level and the role of COVID-19 as the source of their stress and worries were recorded.

Women who refused to continue the study were excluded. The frequency of variables and mean scores were calculated using SPSS v. 21. Results: Mean age of mothers was 30.20+or-16.19 years; 31.3% were primigravida and mean gestational age was 38.00+or-4.14 weeks. Moreover, 16.3% asked for earlier pregnancy termination and 39% requested Cesarean section (C/S). Assessing the mothers' anxiety revealed a high/very high level of anxiety in 51.3%. The majority felt worried and frustrated because of COVID-19 (86.4%). Social media had a great impact on the level of stress among these mothers (60.3%). Conclusion: COVID-19 pandemic is an important source for the increased anxiety and stress among healthy pregnant mothers.

Publication Type

Journal article.

<85>

Accession Number

20210107363

Author

Cao YuanYuan; Liu YueZhong; Lai HoYin [Lai, H. Y. J.]; Theng YinLeng

Title

A pilot study of health coaching on older adults' personal healthcare and maintenance during the outbreak of COVID-19 in Singapore.

Source

Health; 2021. 13(2):165-177. 21 ref.

Publisher

Scientific Research Publishing

Location of Publisher

Irvine

Country of Publication

USA

Abstract

With a rapidly ageing population in Singapore, older adults and their family members face challenges of age-related diseases, caregiver stress, and increasing demand for caregiving services. To address this pressing issue, this pilot study aims to introduce online health coaching for older adults in Singapore and evaluate its effectiveness on maintenance of personal healthcare. In the midst of the COVID-19 outbreak, older adults' activities were largely restricted by measures on social distancing. The online health coaching provided a solution for older adults to achieve a healthy lifestyle in a contactless manner. In this pilot study, 18 older adults (55 years old) who were willing to be coached by trained health coaches (n = 10) for 8 weeks (once a week) were recruited. Pre- and post-surveys with older adults were conducted. Furthermore, health coaching booklet was used to control the quality of coaching and to record diet and

exercise plans. The pilot study demonstrated that the health coaching provided older adults with knowledge of nutrition and exercise, raised their awareness of well-being in terms of daily meals and regular exercise, and provided an alternative to maintain a healthy lifestyle amidst global pandemic. Additionally, we also identified that the older adults' satisfactions with health coaching were positively associated with educational levels ($R^2 = 0.31$). Lastly, this pilot study highlighted that health coaching standardization process for older adults is critical for researchers and healthcare practitioners in the future.

Publication Type

Journal article.

<86>

Accession Number

20210107349

Author

Ke RuiAn; Romero-Severson, E.; Sanche, S.; Hengartner, N.

Title

Estimating the reproductive number R_0 of SARS-CoV-2 in the United States and eight European countries and implications for vaccination.

Source

Journal of Theoretical Biology; 2021. 517. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

SARS-CoV-2 rapidly spread from a regional outbreak to a global pandemic in just a few months. Global research efforts have focused on developing effective vaccines against COVID-19. However, some of the basic epidemiological parameters, such as the exponential epidemic growth rate and the basic reproductive number, R_0 , across geographic areas are still not well quantified. Here, we developed and fit a mathematical model to case and death count data collected from the United States and eight European countries during the early epidemic period before broad control measures were implemented. Results show that the early epidemic grew exponentially at rates between 0.18 and 0.29/day (epidemic doubling times between 2.4 and 3.9 days). We found that for such rapid epidemic growth, high levels of intervention efforts are necessary, no matter the goal is mitigation or containment. We discuss the current estimates of the mean serial interval, and argue that existing evidence suggests that the interval is between 6 and 8 days in the absence of active isolation efforts. Using parameters consistent with this range, we estimated the

median R0 value to be 5.8 (confidence interval: 4.7-7.3) in the United States and between 3.6 and 6.1 in the eight European countries. We further analyze how vaccination schedules depend on R0, the duration of protective immunity to SARS-CoV-2, and show that individual-level heterogeneity in vaccine induced immunity can significantly affect vaccination schedules.

Publication Type

Journal article.

<87>

Accession Number

20210107191

Author

Salepci, E.; Turk, B.; Ozcan, S. N.; Bektas, M. E.; Aybal, A.; Dokmetas, I.; Turgut, S.

Title

Symptomatology of COVID-19 from the otorhinolaryngology perspective: a survey of 223 SARS-CoV-2 RNA-positive patients.

Source

European Archives of Oto-Rhino-Laryngology; 2020. 278(2):525-535. 42 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Purpose: To determine prevalence, severity, duration, and time from onset to diagnosis of general and Otorhinolaryngologic symptoms related to COVID-19 in whole disease spectrum: from mild to critical patients. **Methods:** All adult patients with positive SARS-CoV-2 RNA found in nasopharyngeal and oropharyngeal swabs between March 10 and April 21, 2020 were surveyed by the authors for new onset symptoms during disease course. Demographic features, general symptoms, and Otorhinolaryngological symptoms were evaluated and compared by disease severity. **Results:** Of 223 included patients, 18.4% had mild, 61.4%; moderate, 14.3%; severe, and 5.8%; critical disease. Median age was 51 (range 20-93), 113 (50.7%) were male and 110 (49.3%) were female. The most common general symptoms were fatigue, cough, and fever with respective frequencies of 71.3%, 54.3%, and 50.7%. The most common Otorhinolaryngologic symptoms were taste loss, smell loss, and sore throat with respective frequencies of 34.5%, 31.8%, and 26%. Fatigue, fever, and dyspnea were more common in severe-critical patients compared to mild-moderate patients ($p= 0.029$, $p= 0.016$, and $p< 0.001$, respectively). Only smell loss was more common in mild-moderate group ($p= 0.003$). Prevalence of other symptoms did not differ between

groups. Symptom durations and onset time to diagnosis varied. Conclusion: When compared to the previous studies, while general symptoms were less common, Otorhinolaryngologic symptoms were more common in our study population. Considering high infection risks, Otorhinolaryngologists should be aware of COVID-19 patients presenting with Otorhinolaryngologic complaints.

Publication Type

Journal article.

<88>

Accession Number

20210107186

Author

Salcan, I.; Karakeçili, F.; Salcan, S.; Unver, E.; Akyuz, S.; Seckin, E.; Cingi, C.

Title

Is taste and smell impairment irreversible in COVID-19 patients?

Source

European Archives of Oto-Rhino-Laryngology; 2021. 278(2):411-415. 22 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Objective: It is known that the COVID-19 disease, which has affected the whole world, causes symptoms, such as cough, fever, shortness of breath, muscle pain, fatigue, diarrhea, headache and sore throat, in addition to various clinical findings, such as loss of smell and taste. In this study, we aimed to reveal the loss of sense of taste and smell in COVID-19 patients and to investigate whether these sensory losses are permanent in the healing process of the disease. **Method:** This prospective study included 94 COVID-19 patients. Smell and taste tests were applied to all patients. Ten days after the first test, a second test was applied to the patients with an impaired sense of smell to compare the results. **Results:** Of the 94 patients, 55.3% were male, and the mean age was 53 +or- 19.6 (21-90) years. There were 67 patients with smell and taste impairment, of whom 34 (50.7%) had smell impairment only, 3 (4.4%) had taste impairment only, and 30 (44.7%) had both smell and taste impairment. It was found that the smell scores of 55 patients with smell and taste impairment in the first evaluation were significantly higher at the second measurement; and their tasting period was significantly shortened compared to the first measurement ($p < 0.001$). **Conclusion:** COVID-19 patients may present to medical centers with a broad variety signs and symptoms. This study shows that impairment in the senses of smell and taste is common in this disease and strongly

associated with COVID-19 infection. However, smell and taste impairment is mostly temporary and improves during the recovery period.

Publication Type

Journal article.

<89>

Accession Number

20210107174

Author

Anagiotos, A.; Petrikkos, G.

Title

Otolaryngology in the COVID-19 pandemic era: the impact on our clinical practice.

Source

European Archives of Oto-Rhino-Laryngology; 2020. 278(3):629-636. 50 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Purpose: To give an overview of the current knowledge about COVID-19 pandemic and its impact on otolaryngology clinical practice. Methods: Recent findings about SARS-CoV-2 virus and the COVID-19 infection it causes are reviewed. In addition to international databases and in the absence of hard scientific data, literature search included reports published online from scientific societies and other institutions. Results: The role of anosmia as a COVID-19-related symptom is presented. Further, considerations about steroid administration in ENT-related conditions are also discussed. Due to the close work with mucosa surfaces of the upper aerodigestive tract, otolaryngologists and surrounding staff are considered high risk for coronavirus transmission. Hence, staff protection measures for ENT examinations, surgeries and other procedures during COVID-19 pandemic are recommended. Conclusion: Knowledge and evidence about the impact of COVID-19 infection on otolaryngology clinical practice are accumulating rapidly. Additionally to patient's management, safety of health care professionals should be a main goal right now by following strict safety guidelines.

Publication Type

Journal article.

<90>

Accession Number

20210107172

Author

Brar, S.; Ofo, E.; Hyde, N.; Kim Dae; Odutoye, T.; Allin, D.; Rovira, A.

Title

Outcomes of elective head and neck confirmed or suspected cancer surgery during the COVID-19 pandemic.

Source

European Archives of Oto-Rhino-Laryngology; 2020. 278(4):1277-1282. 25 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Purpose: To analyze the complication outcomes of COVID-19 negative patients undergoing elective head and neck surgery during the COVID-19 pandemic. Methods: This was a retrospective case review of all patients undergoing elective head and neck surgery for confirmed or suspected head and neck cancer. Results: There were no mortalities recorded in the cohort of patients analyzed. At 30 days, pulmonary complications had occurred in 4 patients (9%). None of these were related to COVID infection. Conclusion: With careful pre-operative screening of patients for COVID-19 and post-operative care in a COVID-19 clean ward, head and neck surgery can proceed safely during the epidemic. This data could help to minimize delay in treatment by allowing a greater number of elective head and neck cancer operations to proceed.

Publication Type

Journal article.

<91>

Accession Number

20210107171

Author

Herzog, M.; Beule, A. G.; Luers, J. C.; Guntinas-Lichius, O.; Sowerby, L. J.; Grafmans, D.

Title

Results of a national web-based survey on the SARS-CoV-2 infectious state of otorhinolaryngologists in Germany.

Source

European Archives of Oto-Rhino-Laryngology; 2021. 278(4):1247-1255. 41 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Purpose: SARS-CoV-2 is detected on the mucosa of the upper airways to a high degree. In the course of the COVID-19 pandemic, otorhinolaryngologists (ORL) are assumed to be at high risk due to close contact with the mucosa of the upper airways. No data are yet available providing evidence that ORLs have an increased risk of infection. Methods: German ORLs were invited via e-mail through the German Society of ORL, Head and Neck Surgery and the German ENT Association to participate in a web-based survey about infection with SARS-CoV-2 and development of COVID-19. Data of infections and concomitant parameters in German ORLs were collected and compared to the total number of infections in Germany. Results: Out of 6383 German ORLs, 970 (15%) participated. 54 ORLs reported testing positive for SARS-CoV-2. Compared to the total population of Germany, ORLs have a relative risk of 3.67 (95% CI 2.82; 4.79) of contracting SARS-CoV-2. Domestic quarantine was conducted in 96.3% of cases. Two individuals were admitted to hospital without intensive care. No casualties were reported. In 31 cases, the source of infection was not identifiable whereas 23 had a clear medical aetiology: infected patients: n = 5, 9.26%; medical staff: n = 13, 14.1%. 9.26% (n = 5) of the identified cases were related to contact to infected family members (n = 3), closer neighbourhood (n = 1) or general public (n = 1). There was no identified increased risk of infection due to performing surgery. Conclusion: German ORLs have an almost 3.7-fold risk of contracting SARS-CoV-2 compared to the population baseline level. Appropriate protection appears to be necessary for this occupational group.

Publication Type

Journal article.

<92>

Accession Number

20210107170

Author

Guderian, D. B.; Loth, A. G.; Weiss, R.; Diensthuber, M.; Stover, T.; Leinung, M.

Title

In vitro comparison of surgical techniques in times of the sars-cov-2 pandemic: electrocautery generates more droplets and aerosol than laser surgery or drilling.

Source

European Archives of Oto-Rhino-Laryngology; 2020. 278(4):1237-1245. 28 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Introduction: Based on current knowledge, the SARS-CoV-2 is transmitted via droplet, aerosols and smear infection. Due to a confirmed high virus load in the upper respiratory tract of COVID-19 patients, there is a potential risk of infection for health care professionals when performing surgical procedures in this area. The aim of this study was the semi-quantitative comparison of ENT-typical interventions in the head and neck area with regard to particle and aerosol generation. These data can potentially contribute to a better risk assessment of aerogenic SARS-CoV-2-transmission caused by medical procedures. **Materials and methods:** As a model, a test chamber was created to examine various typical surgical interventions on porcine soft and hard tissues. Simultaneously, particle and aerosol release were recorded and semi-quantitatively evaluated time-dependently. Five typical surgical intervention techniques (mechanical stress with a passive instrument with and without suction, CO2 laser treatment, drilling and bipolar electrocoagulation) were examined and compared regarding resulting particle release. **Results:** Neither aerosols nor particles could be detected during mechanical manipulation with and without suction. The use of laser technique showed considerable formation of aerosol. During drilling, mainly solid tissue particles were scattered into the environment (18.2 +or- 15.7 particles/cm²/min). The strongest particle release was determined during electrocoagulation (77.2 +or- 30.4 particles/cm²/min). The difference in particle release between electrocoagulation and drilling was significant ($p < 0.05$), while particle diameter was comparable. In addition, relevant amounts of aerosol were released during electrocoagulation (79.6% of the maximum flue gas emission during laser treatment). **Discussion:** Our results demonstrated clear differences comparing surgical model interventions. In contrast to sole mechanical stress with passive instruments, all active instruments (laser, drilling and electrocoagulation) released particles and aerosols. Assuming that particle and aerosol exposure is clinically correlated to the risk of SARS-CoV-2-transmission from the patient to the physician, a potential risk for health care professionals for infection cannot be excluded. Especially electrocautery is frequently used for emergency treatment, e.g., nose bleeding. The use of this technique may, therefore, be considered particularly critical in potentially infectious patients. Alternative methods may be given preference and personal protective equipment should be used consequently.

Publication Type

Journal article.

<93>

Accession Number

20210107145

Author

Myo Nyein Aung; Koyanagi, Y.; Yuasa, M.

Title

Health inequality among different economies during early phase of COVID-19 pandemic.

Source

Journal of the Egyptian Public Health Association; 2021. 96(3):(17 February 2021). 15 ref.

Publisher

SpringerOpen

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

Background: The new coronavirus outbreak originated in Wuhan, China, started in January 2020 is escalating as a pandemic across the globe in March 2020. It causes unprecedented morbidity and shocked health systems and the supply chains in new epicenters such as Italy, Spain, and the USA, claiming thousands of lives. Meanwhile, the pandemic is reaching swiftly and silently to low-income countries where international media cover less. How likely health outcomes among the countries with different economies may differ during the pandemic has not been reported yet. Methodologically, we conducted an analysis of COVID-19 deaths comparing case fatality rate (CFR) among countries with different income categories, applying COVID-19 global data from the European Centre for Disease Control including 199 countries' data as of 31 March 2020, in the early phase of the pandemic. We categorized countries into high-income countries (HIC), upper-middle-income countries (UMIC), lower-middle-income countries (LMIC), and low-income countries (LIC) according to World Bank classification by income as of 2020. Finding: Statistically, countries in different income groups are significantly different in terms of new cases identified in the last 2 weeks and the case fatality rate (MANOVA, P value < 0.001). New tests and detected case numbers shot up in HICs where CFR shot up in LMICs and LICs. The results of this analysis pointed out an important gap among countries with different economic status during the ongoing pandemic. Conclusion: In the HIC, contact tracing, testing capacity, and outbreak response, as well as clinical services, are strong. In the LICs, there is a low capacity of outbreak response which is reflected by the significantly lower number of diagnostic tests. Consequently, the reported number of COVID-19 cases in LICs may not reflect the actual burden of the pandemic. Without effective prevention, the pandemic can readily break into the weak health system and over-burden the hospitals and clinical services in poor countries. This finding is showing health inequality between the rich and the poor being amplified by the COVID-19 pandemic. Addressing such a gap through the local governance and integrated global responses will not only prevent unprecedented deaths, but also preserve the momentum towards Sustainable Development Goals (SDGs).

Publication Type

Journal article.

<94>

Accession Number

20210107093

Author

Wang ZhenZhen; Li Kun; Maskey, A. R.; Huang WeiHua; Toutov, A. A.; Yang Nan; Srivastava, K.; Geliebter, J.; Tiwari, R.; Miao MingSan; Li XiuMin

Title

A small molecule compound berberine as an orally active therapeutic candidate against COVID-19 and SARS: a computational and mechanistic study.

Source

FASEB Journal; 2021. 35(4). 182 ref.

Publisher

John Wiley and Sons, Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

The novel coronavirus disease, COVID-19, has grown into a global pandemic and a major public health threat since its breakout in December 2019. To date, no specific therapeutic drug or vaccine for treating COVID-19 and SARS has been FDA approved. Previous studies suggest that berberine, an isoquinoline alkaloid, has shown various biological activities that may help against COVID-19 and SARS, including antiviral, anti-allergy and inflammation, hepatoprotection against drug- and infection-induced liver injury, as well as reducing oxidative stress. In particular, berberine has a wide range of antiviral activities such as anti-influenza, anti-hepatitis C, anti-cytomegalovirus, and anti-alphavirus. As an ingredient recommended in guidelines issued by the China National Health Commission for COVID-19 to be combined with other therapy, berberine is a promising orally administered therapeutic candidate against SARS-CoV and SARS-CoV-2. The current study comprehensively evaluates the potential therapeutic mechanisms of berberine in preventing and treating COVID-19 and SARS using computational modeling, including target mining, gene ontology enrichment, pathway analyses, protein-protein interaction analysis, and in silico molecular docking. An orally available immunotherapeutic-berberine nanomedicine, named NIT-X, has been developed by our group and has shown significantly increased oral bioavailability of berberine, increased IFN- γ production by CD8⁺ T cells, and inhibition of mast cell histamine release in vivo, suggesting a protective immune response. We further validated the inhibition of replication of SARS-CoV-2 in lung epithelial cells line in vitro (Calu3 cells) by berberine. Moreover, the expression of targets including ACE2,

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TMPRSS2, IL-1a, IL-8, IL-6, and CCL-2 in SARS-CoV-2 infected Calu3 cells were significantly suppressed by NIT-X. By supporting protective immunity while inhibiting pro-inflammatory cytokines; inhibiting viral infection and replication; inducing apoptosis; and protecting against tissue damage, berberine is a promising candidate in preventing and treating COVID-19 and SARS. Given the high oral bioavailability and safety of berberine nanomedicine, the current study may lead to the development of berberine as an orally, active therapeutic against COVID-19 and SARS.

Publication Type

Journal article.

<95>

Accession Number

20210107092

Author

Recchiuti, A.; Patrino, S.; Mattoscio, D.; Isopi, E.; Pomilio, A.; Lamolinara, A.; Iezzi, M.; Pecce, R.; Romano, M.

Title

Resolvin D1 and D2 reduce SARS-CoV-2-induced inflammatory responses in cystic fibrosis macrophages.

Source

FASEB Journal; 2021. 35(4). 59 ref.

Publisher

John Wiley and Sons, Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

An excessive, non-resolving inflammatory response underlies severe COVID-19 that may have fatal outcomes. Therefore, the investigation of endogenous pathways leading to resolution of inflammation is of interest to uncover strategies for mitigating inflammation in people with SARS-CoV-2 infection. This becomes particularly urgent in individuals with preexisting pathologies characterized by chronic respiratory inflammation and prone to bacterial infection, such as cystic fibrosis (CF). Here, we analyzed the immune responses to SARS-CoV-2 virion spike 1 glycoprotein (S1) of macrophages (M) from volunteers with and without CF and tested the efficacy of resolvins (Rv) D1 and D2 in regulating the inflammatory and antimicrobial functions of M exposed to S1. S1 significantly increased chemokine release, including interleukin (IL)-8, in CF and non-CF M, while it enhanced IL-6 and tumor necrosis factor (TNF)-a in non-CF M, but not in CF cells. S1 also triggered the biosynthesis of RvD1 and modulated microRNAs miR-16, miR-29a, and miR-103, known to control the inflammatory responses. RvD1 and RvD2 treatment abated S1-

induced inflammatory responses in CF and non-CF M, significantly reducing the release of select chemokines and cytokines including IL-8 and TNF- α . RvD1 and RvD2 both restored the expression of miR-16 and miR-29a, while selectively increasing miR-223 and miR-125a, which are involved in NF- κ B activation and M inflammatory polarization. During *Pseudomonas aeruginosa* infection, S1 stimulated the M phagocytic activity that was further enhanced by RvD1 and RvD2. These results provide a map of molecular responses to SARS-CoV-2 in M, key determinants of COVID-19-related inflammation, unveiling some peculiarity in the response of cells from individuals with CF. They also demonstrate beneficial, regulatory actions of RvD1 and RvD2 on SARS-CoV-2-induced inflammation.

Publication Type

Journal article.

<96>

Accession Number

20210107033

Author

Stavropoulou, E.; Kantartzi, K.; Tsigalou, C.; Konstantinidis, T.; Voidarou, C.; Konstantinidis, T.; Bezirtzoglou, E.

Title

Unraveling the interconnection patterns across lung microbiome, respiratory diseases, and COVID-19.

Source

Frontiers in Cellular and Infection Microbiology; 2021. 11(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Albeit the lungs were thought to be sterile, recent scientific data reported a microbial microbiota in the lungs of healthy individuals. Apparently, new developments in technological approaches including genome sequencing methodologies contributed in the identification of the microbiota and shed light on the role of the gut and lung microbiomes in the development of respiratory diseases. Moreover, knowledge of the human microbiome in health may act as a tool for evaluating characteristic shifts in the case of disease. This review paper discusses the development of respiratory disease linked to the intestinal dysbiosis which influences the lung immunity and microbiome. The gastrointestinal-lung dialogue provides interesting aspects in the pathogenesis of the respiratory diseases. Lastly, we were further interested on the role of this interconnection in the progression and physiopathology of newly emerged COVID-19.

Publication Type

Journal article.

<97>

Accession Number

20210106962

Author

Wang Yu; Takeshita, H.; Yamamoto, K.; Huang YiBin; Wang Cheng; Nakajima, T.; Nozato, Y.; Fujimoto, T.; Yokoyama, S.; Hongyo, K.; Nakagami, F.; Akasaka, H.; Takami, Y.; Takeya, Y.; Sugimoto, K.; Rakugi, H.

Title

A pressor dose of angiotensin II has no influence on the angiotensin-converting enzyme 2 and other molecules associated with SARS-CoV-2 infection in mice.

Source

FASEB Journal; 2021. 35(3). 55 ref.

Publisher

John Wiley and Sons, Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

In the early phase of the Coronavirus disease 2019 (COVID-19) pandemic, it was postulated that the renin-angiotensin-system inhibitors (RASi) increase the infection risk. This was primarily based on numerous reports, which stated that the RASi could increase the organ Angiotensin-converting enzyme 2 (ACE2), the receptor of Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), in rodents. RASi can theoretically antagonize the potential influence of angiotensin II (Ang II) on ACE2. However, while Ang II decreases the ACE2 levels in cultured cells, there is little evidence that supports this phenomenon in living animals. In this study, we tested whether Ang II or Ang II combined with its antagonist would alter the ACE2 and other molecules associated with the infection of SARS-CoV-2. Male C57BL6/J mice were administered vehicle, Ang II (400 ng/kg/min), or Ang II with losartan (10 mg/kg/min) for 2 weeks. ACE2 knockout mice were used as a negative control for the ACE2 assay. We found that both Ang II, which elevated blood pressure by 30 mm Hg, and Ang II with losartan, had no effect on the expression or protein activity of ACE2 in the lung, left ventricle, kidney, and ileum. Likewise, these interventions had no effect on the expression of Transmembrane Protease Serine 2 (TMPRSS2) and Furin, proteases that facilitate the virus-cell fusion, and the expression or activity of Tumor Necrosis Factor α -Convertase (TACE) that cleaves cell-surface ACE2. Collectively, physiological concentrations of Ang II do not modulate the molecules associated with SARS-CoV-2 infection. These results support the recent observational studies suggesting that the use of RASi is not a risk factor for COVID-19.

Publication Type

Journal article.

<98>

Accession Number

20210106959

Author

Ramandeep Singh; Kang, A.; Luo XiangQian; Jeyanathan, M.; Gillgrass, A.; Afkhami, S.; Xing Zhou

Title

COVID-19: current knowledge in clinical features, immunological responses, and vaccine development.

Source

FASEB Journal; 2021. 35(3). 237 ref.

Publisher

John Wiley and Sons, Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

The COVID-19 pandemic has unfolded to be the most challenging global health crisis in a century. In 11 months since its first emergence, according to WHO, the causative infectious agent SARS-CoV-2 has infected more than 100 million people and claimed more than 2.15 million lives worldwide. Moreover, the world has raced to understand the virus and natural immunity and to develop vaccines. Thus, within a short 11 months a number of highly promising COVID-19 vaccines were developed at an unprecedented speed and are now being deployed via emergency use authorization for immunization. Although a considerable number of review contributions are being published, all of them attempt to capture only a specific aspect of COVID-19 or its therapeutic approaches based on ever-expanding information. Here, we provide a comprehensive overview to conceptually thread together the latest information on global epidemiology and mitigation strategies, clinical features, viral pathogenesis and immune responses, and the current state of vaccine development.

Publication Type

Journal article.

<99>

Accession Number

20210106927

Author

Benhalima, K.; Crombrugge, P. van; Moyson, C.; Verhaeghe, J.; Vandeginste, S.; Verlaenen, H.; Vercammen, C.; Maes, T.; Dufraimont, E.; Block, C. de; Jacquemyn, Y.; Mekahli, F.; Clippel, K. de; Bruel, A. van den; Loccufier, A.; Laenen, A.; Minschart, C.; Devlieger, R.; Mathieu, C.

Title

Women with mild fasting hyperglycemia in early pregnancy have more neonatal intensive care admissions.

Source

Journal of Clinical Endocrinology & Metabolism; 2020. 106(2):e836-e854.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Aims: To determine impact of mild fasting hyperglycemia in early pregnancy (fasting plasma glucose [FPG] 5.1-5.5 mmol/L) on pregnancy outcomes. **Methods:** We measured FPG at 11.9 +or- 1.8 weeks in 2006 women from a prospective cohort study. Women with FPG 5.6 mmol/L (19) received treatment and were excluded from further analyses. A total of 1838 women with FPG <5.6 mmol/L received a 75 g oral glucose tolerance test (OGTT) between 24 and 28 weeks of pregnancy. **Results:** Of all participants, 78 (4.2%) had FPG 5.1 to 5.5 mmol/L in early pregnancy, of which 49 had a normal OGTT later in pregnancy (high fasting normal glucose tolerance [NGT] group). Compared with the NGT group with FPG <5.1 mmol/L in early pregnancy (low fasting NGT group, n = 1560), the high fasting NGT group had a higher body mass index (BMI), higher insulin resistance with more impaired insulin secretion and higher FPG and 30 minute glucose levels on the OGTT. The admission rate to neonatal intensive care unit (NICU) was significantly higher in the high fasting NGT group than in the low fasting NGT group (20.4% [10] vs 9.3% [143], P = .009), with no difference in duration (7.0 +or- 8.6 vs 8.4 +or- 14.3 days, P = .849) or indication for NICU admission between both groups. The admission rate to NICU remained significantly higher (odds ratio 2.47; 95% confidence interval 1.18-5.19, P = .017) after adjustment for age, BMI, and glucose levels at the OGTT. **Conclusions:** When provision of an OGTT is limited such as in the Covid-19 pandemic, using FPG in early pregnancy could be an easy alternative to determine who is at increased risk for adverse pregnancy outcomes.

Publication Type

Journal article.

<100>

Accession Number

20210106926

Author

Khoo, B.; Tan, T.; Clarke, S. A.; Mills, E. G.; Patel, B.; Modi, M.; Phylactou, M.; Eng, P. C.; Thurston, L.; Alexander, E. C.; Meeran, K.; Comminos, A. N.; Abbara, A.; Dhillon, W. S.

Title

Thyroid function before, during, and after COVID-19.

Source

Journal of Clinical Endocrinology & Metabolism; 2020. 106(2):e803-e811. 14 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Context: The effects of COVID-19 on the thyroid axis remain uncertain. Recent evidence has been conflicting, with both thyrotoxicosis and suppression of thyroid function reported. **Background:** We aimed to detail the acute effects of COVID-19 on thyroid function and determine if these effects persisted on recovery from COVID-19. **Design:** A cohort observational study was conducted. **Participants and Setting:** Adult patients admitted to Imperial College Healthcare National Health Service Trust, London, UK, with suspected COVID-19 between March 9 to April 22, 2020, were included, excluding those with preexisting thyroid disease and those missing either free thyroxine (FT4) or thyrotropin (TSH) measurements. Of 456 patients, 334 had COVID-19 and 122 did not. **Main Outcome Measures:** TSH and FT4 measurements were recorded at admission, and where available, in 2019 and at COVID-19 follow-up. **Results:** Most patients (86.6%) presenting with COVID-19 were euthyroid, with none presenting with overt thyrotoxicosis. Patients with COVID-19 had a lower admission TSH and FT4 compared to those without COVID-19. In the COVID-19 patients with matching baseline thyroid function tests from 2019 (n = 185 for TSH and 104 for FT4), TSH and FT4 both were reduced at admission compared to baseline. In a complete case analysis of COVID-19 patients with TSH measurements at follow-up, admission, and baseline (n = 55), TSH was seen to recover to baseline at follow-up. **Conclusions:** Most patients with COVID-19 present with euthyroidism. We observed mild reductions in TSH and FT4 in keeping with a nonthyroidal illness syndrome. Furthermore, in survivors of COVID-19, thyroid function tests at follow-up returned to baseline.

Publication Type

Journal article.

<101>

Accession Number

20210106916

Author

Carosi, G.; Morelli, V.; Sindaco, G. del; Serban, A. L.; Cremaschi, A.; Frigerio, S.; Rodari, G.; Profka, E.; Indirli, R.; Mungari, R.; Resi, V.; Orsi, E.; Ferrante, E.; Dolci, A.; Giavoli, C.; Arosio, M.; Mantovani, G.

Title

Adrenal insufficiency at the time of COVID-19: a retrospective study in patients referring to a tertiary center.

Source

Journal of Clinical Endocrinology & Metabolism; 2020. 106(3):e1354-e1361. 41 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Context: Coronavirus disease 2019 (COVID-19) represents a global health emergency, and infected patients with chronic diseases often present with a severe impairment. Adrenal insufficiency (AI) is supposed to be associated with an increased infection risk, which could trigger an adrenal crisis. Background: Our primary aim was to evaluate the incidence of COVID-19 symptoms and complications in AI patients. Design and Setting: We conducted a retrospective case-control study. All patients were on active follow-up and lived in Lombardy, Italy, one of the most affected areas. Patients: We enrolled 279 patients with primary and secondary AI and 112 controls (patients with benign pituitary lesions without hormonal alterations). All AI patients had been previously trained to modify their replacement therapy on stress doses. Intervention: By administering a standardized questionnaire by phone, we collected data on COVID-19 suggestive symptoms and consequences. Results: In February through April 2020, the prevalence of symptomatic patients (complaining at least 1 symptom of viral infection) was similar between the 2 groups (24% in AI and 22.3% in controls, $P = 0.79$). Highly suggestive COVID-19 symptoms (at least 2 including fever and/or cough) also occurred equally in AI and controls (12.5% in both groups). No patient required hospitalization and no adrenal crisis was reported. Few nasopharyngeal swabs were performed ($n = 12$), as indicated by sanitary regulations, limiting conclusions: on the exact infection rate (2 positive results in AI and none in controls, $P = 0.52$). Conclusions AI patients who are adequately treated and trained seem to display the same incidence of COVID-19-suggestive symptoms and disease severity as controls.

Publication Type

Journal article.

<102>

Accession Number

20210106905

Author

Edwards, C.

Title

New horizons: does mineralocorticoid receptor activation by cortisol cause ATP release and COVID-19 complications.

Source

Journal of Clinical Endocrinology & Metabolism; 2020. 106(3):622-635. 74 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

This paper attempts to explain how the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus causes the complications that make coronavirus disease 2019 (COVID-19) a serious disease in specific patient subgroups. It suggests that cortisol-associated activation of the mineralocorticoid receptor (MR) in epithelial and endothelial cells infected with the virus stimulates the release of adenosine 5'-triphosphate (ATP), which then acts back on purinergic receptors. In the lung this could produce the nonproductive cough via purinergic P2X3 receptors on vagal afferent nerves. In endothelial cells it could stimulate exocytosis of Weibel-Palade bodies (WPBs) that contain angiotensin-2, which is important in the pathogenesis of acute respiratory distress syndrome (ARDS) by increasing capillary permeability and von Willebrand factor (VWF), which mediates platelet adhesion to the endothelium and hence clotting. Angiotensin-2 and VWF levels both are markedly elevated in COVID-19-associated ARDS. This paper offers an explanation for the sex differences in SARS-CoV-2 complications and also for why these are strongly associated with age, race, diabetes, and body mass index. It also explains why individuals with blood group A have a higher risk of severe infection than those with blood group O. Dexamethasone has been shown to be of benefit in coronavirus ARDS patients and has been thought to act as an anti-inflammatory drug. This paper suggests that a major part of its effect may be due to suppression of cortisol secretion. There is an urgent need to trial the combination of dexamethasone and an MR antagonist such as spironolactone to more effectively block the MR and hence the exocytosis of WPBs.

Publication Type

Journal article.

<103>

Accession Number

20210106903

Author

Browning, L.; Fryer, E.; Roskell, D.; White, K.; Colling, R.; Rittscher, J.; Verrill, C.

Title

Role of digital pathology in diagnostic histopathology in the response to COVID-19: results from a survey of experience in a UK tertiary referral hospital.

Source

Journal of Clinical Pathology; 2020. 74(2):129-132. 19 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

The COVID-19 pandemic has challenged our diagnostic services at a time when many histopathology departments already faced a diminishing workforce and increasing workload. Digital pathology (DP) has been hailed as a potential solution to at least some of the challenges faced. We present a survey of pathologists within a UK National Health Service cellular pathology department with access to DP, in which we ascertain the role of DP in clinical services during this current pandemic and explore challenges encountered. This survey indicates an increase in uptake of diagnostic DP during this period, with increased remote access. Half of respondents agreed that DP had facilitated maintenance of diagnostic practice. While challenges have been encountered, these are remediable, and none have impacted on the uptake of DP during this period. We conclude that in our institution, DP has demonstrated current and future potential to increase resilience in diagnostic practice and have highlighted some of the challenges that need to be considered.

Publication Type

Journal article.

<104>

Accession Number

20210106896

Author

Waters, R.; Dey, R.; Laubscher, M.; Dunn, R.; Maqungo, S.; McCollum, G.; Nortje, M.; Roche, S.; Hilton, T.; Held, M.

Title

Drastic reduction of orthopaedic services at an urban tertiary hospital in South Africa during COVID-19: lessons for the future response to the pandemic.

Source

SAMJ - South African Medical Journal; 2021. 111(3):240-244. 28 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background. The COVID-19 pandemic has impacted on the global surgery landscape. **Objectives.** To analyse and describe the initial impact of the COVID-19 pandemic on orthopaedic surgery at Groote Schuur Hospital, a tertiary academic hospital in South Africa. **Methods.** The number of orthopaedic surgical cases, emergency theatre patient waiting times, and numbers of outpatient clinic visits, ward admissions, bed occupancies and total inpatient days for January - April 2019 (pre-COVID-19) were compared with the same time frame in 2020 (COVID-19). The COVID-19 timeframe included initiation of a national 'hard lockdown' from 26 March 2020, in preparation for an increasing volume of COVID-19 cases. **Results.** April 2020, the time of the imposed hard lockdown, was the most affected month, although the number of surgical cases had started to decrease slowly during the 3 preceding months. The total number of surgeries, outpatient visits and ward admissions decreased significantly during April 2020 (55.2%, 69.1% and 60.6%, respectively) compared with April 2019 ($p < 0.05$). Trauma cases were reduced by 40% in April 2020. Overall emergency theatre patient waiting time was 30% lower for April 2020 compared with 2019. **Conclusions.** COVID-19 and the associated lockdown has heavily impacted on both orthopaedic inpatient and outpatient services. Lockdown led to a larger reduction in the orthopaedic trauma burden than in international centres, but the overall reduction in surgeries, outpatient visits and hospital admissions was less. This lesser reduction was probably due to local factors, but also to a conscious decision to avoid total collapse of our surgical services.

Publication Type

Journal article.

<105>

Accession Number

20210106895

Author

Mottay, L.; Perumal, R.; Roux, J. le; Esmail, A.; Timm, L.; Sivarasu, S.; Dheda, K.

Title

KN95 filtering facepiece respirators distributed in South Africa fail safety testing protocols.

Source

SAMJ - South African Medical Journal; 2021. 111(3):234-239. 22 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background: Given the global shortage of N95 filtering facepiece respirators (FFP2 in Europe) during the COVID-19 pandemic, KN95 masks (Chinese equivalent of the N95 and FFP2) were imported and distributed in South Africa (SA). However, there are hardly any published independent safety data on KN95 masks. **Objectives:** To evaluate the seal, fit and filtration efficiency of several brands of KN95 masks marketed for widespread use in SA healthcare facilities, using standardised testing protocols. **Methods:** The verifiability of manufacturer and technical details was first ascertained, followed by evaluation of the number of layers comprising the mask material. The testing protocol involved a directly observed positive and negative pressure user seal check, which if passed was followed by qualitative fit testing (sodium saccharin) in healthy laboratory or healthcare workers. Quantitative fit testing (3M) was used to validate the qualitative fit testing method. The filtration efficacy and integrity of the mask filter material were evaluated using a particle counter-based testing rig utilizing aerosolised saline (expressed as filtration efficacy of 0.3 m particles). Halyard FLUIDSHIELD 3 N95 and 3M 1860 N95 masks were used as controls. **Results:** Twelve KN95 mask brands (total of 36 masks) were evaluated in 7 participants. The mask type and manufacturing details were printed on only 2/12 brands (17%) as per National Institute of Occupational Safety and Health and European Union regulatory requirements. There was considerable variability in the number of KN95 mask layers (between 3 and 6 layers in the 12 brands evaluated). The seal check pass rate was significantly lower in KN95 compared with N95 masks (1/36 (3%) v. 12/12 (100%); $p < 0.0001$). Modification of the KN95 ear-loop tension using head straps or staples, or improving the facial seal using Micropore 3M tape, enhanced seal test performance in 15/36 KN95 masks evaluated (42%). However, none of these 15 passed downstream qualitative fit testing compared with the control N95 masks (0/15 v. 12/12; $p < 0.0001$). Only 4/8 (50%) of the KN95 brands tested passed the minimum filtration requirements for an N95 mask (suboptimal KN95 filtration efficacy varied from 12% to 78%, compared with 56% for a surgical mask and >99% for the N95 masks at the 0.3 m particle size). **Conclusions:** The KN95 masks tested failed the stipulated safety thresholds associated with protection of healthcare workers against airborne pathogens such as SARS-CoV-2. These preliminary data have implications for the regulation of masks and their distribution to healthcare workers and facilities in SA.

Publication Type

Journal article.

<106>

Accession Number

20210106894

Author

Chetty, T.; Ramokolo, V.; Rees, K.; Kredo, T.; Balakrishna, Y.; Mathews, C.; Siegfried, N.

Title

Rapid review of the effects of cloth and medical masks for preventing transmission of SARS-CoV-2 in community and household settings.

Source

SAMJ - South African Medical Journal; 2021. 111(3):227-233. 32 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background: Evidence on mask use in the general population is needed to inform SARS-CoV-2 responses. Objectives. To assess the effectiveness of cloth and medical masks for preventing SARS-CoV-2 transmission in community settings. Methods: Two rapid reviews were conducted searching three electronic databases (PubMed, Embase, Cochrane Library) and two clinical trials registries on 30 and 31 March 2020. Results: We screened 821 records and assessed nine full-text articles for eligibility. One and seven RCTs were included for cloth and medical mask reviews, respectively. No SARS-CoV-2-specific RCTs and no cloth mask RCTs in community settings were identified. A single hospital-based RCT provided indirect evidence that, compared with medical masks, cloth masks probably increase clinical respiratory illnesses (relative risk (RR) 1.56; 95% confidence interval (CI) 0.98 - 2.49) and laboratory-confirmed respiratory virus infections (RR 1.54; 95% CI 0.88 - 2.70). Evidence for influenza-like illnesses (ILI) was uncertain (RR 13.00; 95% CI 1.69 - 100.03). Two RCTs provide low-certainty evidence that medical masks may make little to no difference to ILI infection risk versus no masks (RR 0.98; 95% CI 0.81 - 1.19) in the community setting. Five RCTs provide low-certainty evidence that medical masks may slightly reduce infection risk v. no masks (RR 0.81; 95% CI 0.55 - 1.20) in the household setting. Conclusions: Direct evidence for cloth and medical mask efficacy and effectiveness in the community is limited. Decision-making for mask use may consider other factors such as feasibility and SARS-CoV-2 transmission dynamics; however, well-designed comparative effectiveness studies are required.

Publication Type

Journal article.

<107>

Accession Number

20210106891

Author

Dhanraj, P.; Pitere, R.; Pepper, M. S.

Title

The impact of obesity on the cellular and molecular pathophysiology of COVID-19.

Source

SAMJ - South African Medical Journal; 2021. 111(3):211-214. 80 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Emerging evidence reveals a strong association between COVID-19 and obesity in terms of disease severity, need for hospitalisation and risk of mortality. In this review, we discuss cellular and molecular mechanisms potentially contributing to the pathophysiology of COVID-19 in obese patients. Understanding the relationship between COVID-19 and obesity is pertinent for the clinical management of these patients.

Publication Type

Journal article.

<108>

Accession Number

20210106887

Author

Johnson, R.; Muller, C. J. F.; Ghoor, S.; Louw, J.; Archer, E.; Surujlal-Naicker, S.; Berkowitz, N.; Volschenk, M.; Brocker, L. H. L.; Wolfaardt, G.; Walt, M. van der; Mutshembele, A. M.; Malema, S.; Gelderblom, H. C.; Mdhuli, M.; Gray, G.; Mathee, A.; Street, R. A.

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Title

Qualitative and quantitative detection of SARS-CoV-2 RNA in untreated wastewater in Western Cape Province, South Africa.

Source

SAMJ - South African Medical Journal; 2021. 111(3):198-202. 21 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Recent studies have shown that the detection of SARS-CoV-2 genetic material in wastewater may provide the basis for a surveillance system to track the environmental dissemination of this virus in communities. An effective wastewater-based epidemiology (WBE) system may prove critical in South Africa (SA), where health systems infrastructure, testing capacity, personal protective equipment and human resource capacity are constrained. In this proof-of-concept study, we investigated the potential of SARS-CoV-2 RNA surveillance in untreated wastewater as the basis for a system to monitor COVID-19 prevalence in the population, an early warning system for increased transmission, and a monitoring system to assess the effectiveness of interventions. The laboratory confirmed the presence (qualitative analysis) and determined the RNA copy number of SARS-CoV-2 viral RNA by reverse transcription polymerase chain reaction (quantitative) analysis from 24-hour composite samples collected on 18 June 2020 from five wastewater treatment plants in Western Cape Province, SA. The study has shown that a WBE system for monitoring the status and trends of COVID-19 mass infection in SA is viable, and its development and implementation may facilitate the rapid identification of hotspots for evidence-informed interventions.

Publication Type

Journal article.

<109>

Accession Number

20210106878

Author

Pillay, S.; Pillay, D.; Pillay, R. S.

Title

The burden of hypertension in KwaZulu-Natal Province, South Africa: a 6-year perspective.

Source

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Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background: Hypertension (HPT) and its complications continue to pose a global threat and contribute to premature mortality worldwide. The adverse interactions between HPT, obesity and COVID-19 are currently being witnessed globally and represent a collision of pandemics. Understanding the burden that this non-communicable disease (NCD) poses in KwaZulu-Natal (KZN) Province, South Africa (SA), would help in developing improved public healthcare strategies. Objectives. To describe the burden of HPT in all the districts of KZN over a 6-year period. Methods: HPT data are routinely collected from all KZN public health facilities (both clinics and hospitals) as part of the District Health Information System (DHIS). In this retrospective study, we accessed HPT records from the DHIS over a period of 6 years (2014 - 2019, inclusive). Data collected included the number of patients screened, diagnosed and initiated on therapy for HPT, together with the number of obese patients. Results: The slopes for HPT screening were positive at both clinics and hospitals in KZN (considerably more at clinics than hospitals, with a difference in elevations of slopes of $p < 0.001$), with a significantly greater percentage of the population having been screened at rural clinics than at hospitals (difference in elevation of slopes $p < 0.001$). A significantly greater number of patients aged <40 years ($p < 0.001$) were being screened for HPT at clinics than at hospitals (2017/18, 2018/19, 2019/20), while hospitals screened considerably more patients aged 40 years in 2017 - 2018 ($p < 0.001$). The numbers of new hypertensives diagnosed and having treatment initiated were on an upward slope at both clinics and hospitals, with clinics having a greater elevation of slope than hospitals ($p < 0.001$), irrespective of patient age. A significantly greater number of patients aged 40 years ($p < 0.05$) were diagnosed with HPT at both clinics and hospitals in KZN (2017/18, 2018/19, 2019/20). KZN clinics remained the first port of call for known hypertensives throughout the study period. Obesity was prevalent at both clinic and hospital level, although figures were significantly higher at clinics. Over 80% of the obesity burden was carried by the rural clinics and hospitals. Conclusions: Screening, diagnosis, treatment initiation and chronic management of HPT occur mainly at rural clinic level. The SA government needs to heed these findings and redirect resources (staffing and equipment) to this level. The prevalence of obesity was highest at rural healthcare facilities (clinics more than hospitals). More needs to be done to combat the obesity pandemic if we are to win the battle against NCDs (HPT and diabetes mellitus). A significant number of patients aged <40 years are being screened for HPT, which bodes well for the province, as early diagnosis and treatment of HPT are vital to prevent complications.

Publication Type

Journal article.

<110>

Accession Number

20210106872

Author

Laas, D. J.; Farina, Z.; Bishop, D. G.

Title

Effect of COVID-19 pandemic decisions on tertiary-level surgical services in Pietermaritzburg, KwaZulu-Natal Province, South Africa.

Source

SAMJ - South African Medical Journal; 2021. 111(2):120-123. 11 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background. The COVID-19 pandemic has led to the implementation of restrictive policies on theatre procedures, with profound impacts on service delivery and theatre output. Objectives. To quantify these effects at a tertiary hospital in KwaZulu-Natal Province, South Africa. Methods. A retrospective review of morbidity and mortality data was conducted. The effects on emergency and elective caseload, intensive care unit (ICU) admissions from theatre, theatre cancellations and regional techniques were noted. Results. Theatre caseload decreased by 30% from January to April 2020 ($p=0.02$), ICU admissions remained constant, and theatre cancellations were proportionally reduced, as were the absolute number of regional techniques. Conclusions. The resulting theatre case deficit was 1 260 cases. It will take 315 days to clear this deficit if four additional surgeries are performed per day.

Publication Type

Journal article.

<111>

Accession Number

20210106871

Author

Jensen, C.; McKerrow, N. H.

Title

Child health services during a COVID-19 outbreak in KwaZulu-Natal Province, South Africa.

Source

SAMJ - South African Medical Journal; 2021. 111(2):114-119. 26 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background: Current evidence indicates that children are relatively spared from direct COVID-19-related morbidity and mortality, but that the indirect effects of the pandemic pose significant risks to their health and wellbeing. **Objectives.** To assess the impact of the local COVID-19 outbreak on routine child health services. **Methods:** The District Health Information System data set for KwaZulu-Natal (KZN) provincial health services was accessed, and monthly child health-related data were extracted for the period January 2018 - June 2020. Chronological and geographical variations in sentinel indicators for service access, service delivery and the wellbeing of children were assessed. **Results:** During April - June 2020, following the start of the COVID-19 outbreak in KZN, significant declines were seen for clinic attendance (36%; $p=0.001$) and hospital admissions (50%; $p=0.005$) of children aged <5 years, with a modest recovery in clinic attendance only. Among service delivery indicators, immunization coverage recovered most rapidly, with vitamin A supplementation, deworming and food supplementation remaining low. Changes were less pronounced for in- and out-of-hospital births and uptake rates of infant polymerase chain reaction testing for HIV at birth, albeit with wide interdistrict variations, indicating inequalities in access to and provision of maternal and neonatal care. A temporary 47% increase in neonatal facility deaths was reported in May 2020 that could potentially be attributed to COVID-19-related disruption and diversion of health resources. **Conclusions:** Multiple indicators demonstrated disruption in service access, service delivery and child wellbeing. Further studies are needed to establish the intermediate- and long-term impacts of the COVID-19 outbreak on child health, as well as strategies to mitigate these.

Publication Type

Journal article.

<112>

Accession Number

20210106870

Author

Navsaria, P. H.; Nicol, A. J.; Parry, C. D. H.; Matzopoulos, R.; Maqungo, S.; Gaudin, R.

Title

The effect of lockdown on intentional and nonintentional injury during the COVID-19 pandemic in Cape Town, South Africa: a preliminary report.

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Source

SAMJ - South African Medical Journal; 2020. 111(2):110-113. 22 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Background. In response to the coronavirus pandemic, lockdown restrictions and a ban on alcohol sales were introduced in South Africa. **Objectives.** To investigate the impact of lockdown measures on the number of patients who visited a tertiary urban trauma centre. **Methods.** The period of investigation was from 1 February to 30 June 2020 and was segmented into three intervals: pre-lockdown (February and March 2020), hard lockdown (April and May 2020) and immediately post lockdown (June 2020). The electronic HECTIS health record registry was interrogated for the total number of patients that were seen per month. These were further categorised according to mechanism of injury (stab, gunshot, blunt assault and road traffic injuries). Penetrating (stab and gunshot) and blunt assault victims were collectively grouped as violent trauma. **Results.** The mean total number of patients seen decreased by 53% during the hard lockdown period. There was a moderate reduction (15%) in patients with gunshot injuries seen during the hard lockdown phase, but there was an 80% increase in the post-lockdown period. The proportion of patients injured in road traffic collisions pre lockdown, hard lockdown and immediate post lockdown was 16.4%, 8.9% and 11.1%, respectively. Patients injured in road traffic collisions decreased by 74% during the hard lockdown period and maintained a reduction of 32% during the immediate post-lockdown period. The mean total number of patients who visited the trauma unit returned to pre-lockdown levels in June. **Conclusions.** There was an overall trend of reduced number of patients who visited the trauma unit during the hard lockdown period; however, these numbers returned to pre-lockdown levels during the immediate post-lockdown period. The number of road traffic injury admissions remained reduced during all three phases of lockdown, while the number of gunshot victims increased substantially during the post-lockdown period.

Publication Type

Journal article.

<113>

Accession Number

20210106869

Author

Goga, A.; Feucht, U.; Pillay, S.; Reubenson, G.; Jeena, P.; Madhi, S.; Mayet, N. T.; Velaphi, S.; McKerrow, N.; Mathivha, R.; Makubalo, N.; Green, R. J.; Gray, G.

Title

Parental access to hospitalized children during infectious disease pandemics such as COVID-19.

Source

SAMJ - South African Medical Journal; 2021. 111(2):100-105. 20 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The COVID-19 pandemic has resulted in many hospitals severely limiting or denying parents access to their hospitalized children. This article provides guidance for hospital managers, healthcare staff, district-level managers and provincial managers on parental access to hospitalized children during a pandemic such as COVID-19. It: (i) summarizes legal and ethical issues around parental visitation rights; (ii) highlights four guiding principles; (iii) provides 10 practical recommendations to facilitate safe parental access to hospitalized children; (iv) highlights additional considerations if the mother is COVID-19-positive; and (v) provides considerations for fathers. In summary, it is a child's right to have access to his or her parents during hospitalization, and parents should have access to their hospitalized children; during an infectious disease pandemic such as COVID-19, there is a responsibility to ensure that parental visitation is implemented in a reasonable and safe manner. Separation should only occur in exceptional circumstances, e.g. if adequate in-hospital facilities do not exist to jointly accommodate the parent/caregiver and the newborn/infant/child. Both parents should be allowed access to hospitalized children, under strict infection prevention and control (IPC) measures and with implementation of non-pharmaceutical interventions (NPIs), including handwashing/sanitization, face masks and physical distancing. Newborns/infants and their parents/caregivers have a reasonably high likelihood of having similar COVID-19 status, and should be managed as a dyad rather than as individuals. Every hospital should provide lodger/boarder facilities for mothers who are COVID-19-positive, COVID-19-negative or persons under investigation (PUI), separately, with stringent IPC measures and NPIs. If facilities are limited, breastfeeding mothers should be prioritized, in the following order: (i) COVID-19-negative; (ii) COVID-19 PUI; and (iii) COVID-19-positive. Breastfeeding, or breastmilk feeding, should be promoted, supported and protected, and skin-to-skin care of newborns with the mother/caregiver (with IPC measures) should be discussed and practiced as far as possible. Surgical masks should be provided to all parents/caregivers and replaced daily throughout the hospital stay. Parents should be referred to social services and local community resources to ensure that multidisciplinary support is provided. Hospitals should develop individual-level policies and share these with staff and parents. Additionally, hospitals should ideally track the effect of parental visitation rights on hospital-based COVID-19 outbreaks, the mental health of hospitalized children, and their rate of recovery.

Publication Type

Journal article.

<114>

Accession Number

20210106864

Author

Cui Ning; Yan RongDi; Qin ChunYuan; Zhao JingMing

Title

Clinical characteristics and immune responses of 137 deceased patients with COVID-19: a retrospective study.

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). 23 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Objective: This study aimed to evaluate the factors associated with death in patients with coronavirus disease 2019 by clarifying the clinical characteristics and immune responses. **Methods:** The clinical characteristics and laboratory findings, including cytokine and lymphocyte subsets, were obtained from the electronic medical records of patients in Wuhan Tongji Hospital. **Results:** This study included 836 patients with confirmed COVID-19. In total, 699 (83.6%) were cured and discharged, and 137 (16.4%) died. Our analysis revealed that age 65 years, male sex, malignancy, chronic obstructive pulmonary disease, dyspnea, dizziness, respiratory rate > 20 bpm, heart rate > 100 bpm, systolic blood pressure < 90 mmHg, neutrophils > 6.3x10⁹/L, lymphopenia, thrombocytopenia, D-dimer 0.5 mg/L, lactate dehydrogenase > 250 U/L, aspartate aminotransferase > 40 U/L, total bilirubin > 26 mol/L, albumin < 35 g/L, blood urea nitrogen > 9.5 mmol/L, estimated glomerular filtration rate < 90 ml/min/1.73, elevated cardiac troponin I, N-terminal pro-brain natriuretic peptide 900 pg/ml, C-reactive protein 25 mg/L, procalcitonin 0.05 ng/ml and ferritin > 400 g/L were associated with death in patients with COVID-19. The multivariate logistic regression analysis revealed that an estimated glomerular filtration rate < 90 ml/min/1.73, elevated cardiac troponin I, C-reactive protein 25 mg/L and procalcitonin 0.05 ng/ml were predictive of mortality. Regarding immune responses, IL-2R, IL-6, IL-8, IL-10, and TNF α were remarkably higher in the deceased group at admission, and the levels of IL-2R, IL-6, IL-8, IL-10, and TNF α in the deceased group showed a rapid increase; the dynamics of these cytokines were highly consistent with disease deterioration. Lymphocyte subset analysis revealed that the deceased patients showed significant decreases in lymphocyte counts, especially helper T cells, suppressor T cells and NK cells. **Conclusions:** This study identified that an estimated glomerular filtration rate < 90 ml/min/1.73, elevated cardiac troponin I, C-reactive protein 25 mg/L and procalcitonin 0.05 ng/ml were predictors of mortality in COVID-19 patients. Elevated cytokine levels and a continued increasing trend, including in IL-2R, IL-6, IL-8, IL-10 and TNF α , and a decrease in lymphocyte subsets, especially helper T cells, suppressor T cells and NK cells, were associated with a poor prognosis.

Publication Type

Journal article.

<115>

Accession Number

20210106863

Author

Zhang Jie; Li KeCheng; Zheng Ling; Zhang JianBo; Ren ZhiLin; Song TianGe; Yu Hua; Yang ZhengLin; Wang Li; Jiang Li

Title

Improving detection efficiency of SARS-CoV-2 nucleic acid testing.

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). 26 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Background: SARS-CoV-2 nucleic acid testing (NAT) has been routinely used for COVID-19 diagnosis during this pandemic; however, there have been concerns about its high false negative rate. We dissected its detection efficiency with a large COVID-19 cohort study. Methods: We analyzed SARS-CoV-2 NAT positive rates of 4,275 specimens from 532 COVID-19 patients in Sichuan Province with different disease severities, statuses, and stages, as well as different types and numbers of specimens. Results: The total positive rate of the 4,275 specimens was 37.5%. Among seven specimen types, BALF generated a 77.8% positive rate, followed by URT specimens (38.5%), sputum (39.8%), and feces/rectal swabs (34.1%). Specimens from critical cases generated a 43.4% positive rate, which was significantly higher than that of other severities. With specimens from patients at stable status, the SARS-CoV-2 positive rate was 40.6%, which was significantly higher than that of improved status (17.1%), but lower than that of aggravated status (61.5%). Notably, the positive rate of specimens from COVID-19 patients varied significantly from 85 to 95% during 3 days before and after symptom onset, to 20% at around 18 days after symptom onset. In addition, the detection rate increased from 72.1% after testing one throat swab, to 93.2% after testing three consecutive respiratory specimens from each patient. Conclusions: SARS-CoV-2 NAT detection rates vary with patient disease severity and status, specimen type, number of specimens, and especially disease progression. Sampling as close to symptom onset as possible, and consecutively collecting more than one respiratory specimen could effectively improve SARS-CoV-2 NAT detection efficiency.

Publication Type

Journal article.

<116>

Accession Number

20210106861

Author

Gomes, C. P.; Fernandes, D. E.; Casimiro, F.; Mata, G. F. da; Passos, M. T.; Varela, P.; Mastroianni-Kirsztajn, G.; Pesquero, J. B.

Title

Cathepsin L in COVID-19: from pharmacological evidences to genetics.

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The coronavirus disease 2019 (COVID-19) pandemics is a challenge without precedent for the modern science. Acute Respiratory Discomfort Syndrome (ARDS) is the most common immunopathological event in SARS-CoV-2, SARS-CoV, and MERS-CoV infections. Fast lung deterioration results of cytokine storm determined by a robust immunological response leading to ARDS and multiple organ failure. Here, we show cysteine protease Cathepsin L (CatL) involvement with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and COVID-19 from different points of view. CatL is a lysosomal enzyme that participates in numerous physiological processes, including apoptosis, antigen processing, and extracellular matrix remodeling. CatL is implicated in pathological conditions like invasion and metastasis of tumors, inflammatory status, atherosclerosis, renal disease, diabetes, bone diseases, viral infection, and other diseases. CatL expression is up-regulated during chronic inflammation and is involved in degrading extracellular matrix, an important process for SARS-CoV-2 to enter host cells. In addition, CatL is probably involved in processing SARS-CoV-2 spike protein. As its inhibition is detrimental to SARS-CoV-2 infection and possibly exit from cells during late stages of infection, CatL could have been considered a valuable therapeutic target. Therefore, we describe here some drugs already in the market with potential CatL inhibiting capacity that could be used to treat COVID-19 patients. In addition, we discuss the possible role of host genetics in the etiology and spreading of the disease.

Publication Type

Journal article.

<117>

Accession Number

20210106856

Author

Vodnar, D. C.; Mitrea, L.; Teleky, B. E.; Szabo, K.; Calinoiu, L. F.; Nemes, S. A.; Martau, G. A.

Title

Coronavirus disease (COVID-19) caused by (SARS-CoV-2) infections: a real challenge for human gut microbiota.

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The current COVID-19 pandemic is a great challenge for worldwide researchers in the human microbiota area because the mechanisms and long-term effects of the infection at the GI level are not yet deeply understood. In the current review, scientific literature including original research articles, clinical studies, epidemiological reports, and review-type articles concerning human intestinal infection with SARS-CoV-2 and the possible consequences on the microbiota were reviewed. Moreover, the following aspects pertaining to COVID-19 have also been discussed: transmission, resistance in the human body, the impact of nutritional status in relation to the intestinal microbiota, and the impact of comorbid metabolic disorders such as inflammatory bowel disease (IBS), obesity, and type two diabetes (T2D). The articles investigated show that health, age, and nutritional status are associated with specific communities of bacterial species in the gut, which could influence the clinical course of COVID-19 infection. Fecal microbiota alterations were associated with fecal concentrations of SARS-CoV-2 and COVID-19 severity. Patients suffering from metabolic and gastrointestinal (GI) disorders are thought to be at a moderate-to-high risk of infection with SARS-CoV-2, indicating the direct implication of gut dysbiosis in COVID-19 severity. However, additional efforts are required to identify the initial GI symptoms of COVID-19 for possible early intervention.

Publication Type

Journal article.

<118>

Accession Number

20210106851

Author

Muhoberac, B. B.

Title

What can cellular redox, iron, and reactive oxygen species suggest about the mechanisms and potential therapy of COVID-19?

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). 17 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Accumulating evidence suggests that there are important contributions to coronavirus disease (COVID-19) from redox imbalance and improperly coordinated iron, which cause cellular oxidative damage and stress. Cells have developed elaborate redox-dependent processes to handle and store iron, and their dysfunction leads to several serious diseases. Cellular reductants are important as reactive oxygen species (ROS) scavengers and to power enzymatic repair mechanisms, but they also may help generate toxic ROS. These complicated interrelationships are presented in terms of a cellular redox/iron/ROS triad, including ROS generation both at improperly coordinated iron and enzymatically, ROS interconvertibility, cellular signaling and damage, and reductant and iron chelator concentration-dependent effects. This perspective provides the rational necessary to strongly suggest that COVID-19 disrupts this interdependent triad, producing a substantial contribution to the ROS load, which causes direct ROS-induced protein and phospholipid damage, taxes cellular resources and repair mechanisms, and alters cellular signaling, especially in the more critical acute respiratory distress syndrome (ARDS) phase of the infection. Specific suggestions for therapeutic interventions using reductants and chelators that may help treat COVID-19 are discussed.

Publication Type

Journal article.

<119>

Accession Number

20210106849

Author

Capoor, M. N.; Ahmed, F. S.; McDowell, A.; Slaby, O.

Title

Is the "common cold" our greatest ally in the battle against SARS-CoV-2?

Source

Frontiers in Cellular and Infection Microbiology; 2020. 10(December). 25 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The discovery of T-cell responses to SARS-CoV-2 in non-infected individuals indicates cross-reactive immune memory from prior exposure to human coronaviruses (HCoV) that cause the common cold. This raises the possibility that "immunity" could exist within populations at rates that may be higher than serology studies estimate. Besides specialized research labs, however, there is limited ability to measure HCoV CD4+ and CD8+ T-cell responses to SARS-CoV-2 infection, which currently impedes interpretation of any potential correlation between COVID-19 disease pathogenesis and the calibration of pandemic control measures. Given this limited testing ability, an alternative approach would be to exploit the large cohort of currently available data from which statistically significant associations may be generated. This would necessitate the merging of several public databases including patient and contact tracing, which could be created by relevant public health organizations. Including data from both symptomatic and asymptomatic patients in SARS-CoV-2 databases and surveillance systems could provide the necessary information to allow for more informed decisions.

Publication Type

Journal article.

<120>

Accession Number

20210106713

Author

Foldi, M.; Farkas, N.; Kiss, S.; Dembrovsky, F.; Szakacs, Z.; Balasko, M.; Eross, B.; Hegyi, P.; Szentesi, A.

Title

Visceral adiposity elevates the risk of critical condition in COVID-19: a systematic review and meta-analysis.

Source

Obesity; 2021. 29(3):521-528. 32 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Objective: A higher BMI has become acknowledged as one of the important risk factors for developing critical condition in coronavirus disease 2019 (COVID-19). In addition to BMI, body composition, and particularly visceral adiposity, might be an even more accurate measure to stratify patients. Therefore, the aim of this study was to evaluate the association between the distributions of computed-tomography-quantified fat mass and critical condition of patients with COVID-19. **Methods:** A systematic search was conducted in five databases for studies published until November 17, 2020. In the meta-analysis, pooled mean difference (standardized mean difference [SMD]) of visceral fat area (VFA; in square centimeters) was calculated between patients in the intensive care unit and those in general ward and between patients with the requirement for invasive mechanical ventilation (IMV) and those without the IMV requirement. **Results:** The quantitative synthesis revealed that patients requiring intensive care had higher VFA values (SMD=0.46, 95% CI: 0.20-0.71, $P < 0.001$) compared with patients on the general ward. Similarly, patients requiring IMV had higher VFA values (SMD=0.38, 95% CI: 0.05-0.71, $P=0.026$) compared with patients without the IMV requirement. **Conclusions:** VFA values were found to be significantly higher in patients with critical condition. Therefore, abdominal adiposity seems to be a risk factor in COVID-19, and patients with central obesity might need special attention.

Publication Type

Journal article.

<121>

Accession Number

20210106672

Author

Cagno, V.; Magliocco, G.; Tapparel, C.; Daali, Y.

Title

The tyrosine kinase inhibitor nilotinib inhibits SARS-CoV-2 in vitro.

Source

Basic and Clinical Pharmacology and Toxicology; 2020. 128(4):621-624. 11 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

Since the emergence of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at the end of 2019, no vaccine has been approved to counter this infection and the available treatments are mainly directed against the immune pathology caused by the infection. The coronavirus disease 2019 (COVID-19) is currently causing a worldwide pandemic, pointing the urgent need for effective treatment. In such emergency, drug repurposing presents the best option for a rapid antiviral response. We assess here the in vitro activity of nilotinib, imatinib and dasatinib, three Abl tyrosine kinase inhibitors, against SARS-CoV-2. Although the last two compounds do not show antiviral efficacy, we observe inhibition with nilotinib in Vero-E6 cells and Calu-3 cells with EC50s of 1.44 M and 3.06 M, respectively. These values are close to the mean peak concentration of nilotinib observed at steady state in serum, making this compound a potential candidate for treatment of COVID-19 in vivo.

Publication Type

Journal article.

<122>

Accession Number

20210106626

Author

Troise, C.; O'Driscoll, A.; Tani, M.; Prisco, A.

Title

Online food delivery services and behavioural intention - a test of an integrated TAM and TPB framework.

Source

British Food Journal; 2020. 123(2):664-683.

Publisher

Emerald Publishing

Location of Publisher

Bingley

Country of Publication

UK

Abstract

Purpose: This research leverages an integrated framework that uses the technology acceptance model (TAM) and the theory of planned behaviour (TPB) to analyse the main drivers of users' intention to use food delivery apps. The purpose of this paper is to investigate the consumer's willingness to adopt online food delivery (OFD) using the models' constructs and extend them to consider food choices, convenience, trust and the effect of the perceived risks related to the coronavirus disease 2019 (COVID-19) pandemic as contextual factors. **Design/methodology/approach:** The study adopts the partial least squares approach to structural equation modelling (PLS-SEM) to examine the data. The final sample consists of 425 people in Italy. **Findings:** The authors have found that combining the TAM and the TPB provides a valid and significant model that can be used to understand OFD users' behavioural intentions. Moreover, the results show that subjective norms have a stronger effect on behavioural intentions than the personal attitude and that trustworthiness and the perception of risks related to COVID-19 have different effects. Accordingly, the authors derive several theoretical and managerial implications from these results. **Originality/value:** This research contributes to the current debate on consumer behaviour in the OFD context. Only a few studies have integrated the TAM and TPB models in this context. This paper sheds light on the factors useful in predicting people's choice to buy food via OFD. Furthermore, it highlights the key role of some contextual factors and subjective norms over more technical ones.

Publication Type

Journal article.

<123>

Accession Number

20210106613

Author

Yang XiSi

Title

Potential consequences of COVID-19 for sustainable meat consumption: the role of food safety concerns and responsibility attributions.

Source

British Food Journal; 2020. 123(2):455-474.

Publisher

Emerald Publishing

Location of Publisher

Bingley

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Country of Publication

UK

Abstract

Purpose: While coping with severe damages of the ongoing coronavirus outbreak worldwide, this study enlightens the potential effects of the pandemic on young adults' willingness to avoid game meat consumption as well as to purchase animal welfare products. **Design/methodology/approach:** In a structural equation model (N = 234), food safety concerns and perceived responsibility for a future change of individuals, marketers and the government as predictors are related to behavioral intentions. Further, two antecedents of food safety concern including risk perception and anxiety related to coronavirus disease 2019 (COVID-19) are tested. **Findings:** Using a Chinese sample, results indicated that food safety concern - triggered by risk perception and anxiety - negatively affected willingness to buy animal welfare products. Perceived responsibility of marketers' change positively relates to people's willingness to avoid game meat and to buy animal welfare products, while the latter is also positively related to perceived governmental responsibility. **Practical implications:** Consumers demand marketers to improve safety and hygiene standards as it is a necessary condition for adopting sustainable consumption behaviors. Animal welfare products have the potential to pronounce the demanded level of product safety, while the game meat market needs to be prepared for necessary adaptations for coping with the adverse effects of COVID-19. **Originality/value:** This article adds knowledge to the behavioral consequences of a viral hazard in the context of sustainable food choices while relating those to attribution theories and food safety concerns.

Publication Type

Journal article.

<124>

Accession Number

20210106488

Author

Lee JungJae; Tsang WingNga; Yang SookChing; Kwok YanYan [Kwok, Y. Y. J.]; Lou, V. W. Q.; Lau KuiKai

Title

Qualitative study of Chinese stroke caregivers' caregiving experience during the COVID-19 pandemic.

Source

Stroke; 2021. 52(4):1407-1414. 62 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Background and Purpose: The coronavirus disease 2019 (COVID-19) outbreak has led to disruptions in health care service delivery worldwide, inevitably affecting stroke survivors requiring ongoing rehabilitation and chronic illness management. To date, no published research has been found on stroke caregiving during the COVID-19 pandemic. This study aimed to explore Hong Kong stroke caregivers' caregiving experiences in the midst of this difficult time. **Methods:** Individual semistructured interviews were conducted with 25 Chinese adult primary stroke caregivers from May to June 2020 via telephone. Interviews were transcribed verbatim and analyzed using an interpretive description approach and constant comparison strategy. **Results:** Five themes of the stroke caregiving experience during the COVID-19 pandemic emerged: care service adversities, additional caregiving workload and strain, threatened relationship between caregiver and stroke survivors, threats to caregivers' physical and psychological well-being, and needs for continuing caregiving roles. Our findings suggested that caregivers have worsened physical and psychological well-being because of increases in care burden with simultaneously reduced formal and informal support. The relationship between caregiver and stroke survivor was subsequently affected, placing some survivors at heightened risk of abuse. **Conclusions:** Our study provides valuable findings about stroke caregiving experiences and needs during the pandemic. Delivery of psychological support, telemedicine, and household hygiene resources would be useful to mitigate caregivers' psychological distress during the COVID-19 pandemic.

Publication Type

Journal article.

<125>

Accession Number

20210106449

Author

Schafer, A.; Muecksch, F.; Lorenzi, J. C. C.; Leist, S. R.; Cipolla, M.; Bournazos, S.; Schmidt, F.; Maison, R. M.; Gazumyan, A.; Martinez, D. R.; Baric, R. S.; Robbiani, D. F.; Hatzioannou, T.; Ravetch, J. V.; Bieniasz, P. D.; Bowen, R. A.; Nussenzweig, M. C.; Sheahan, T. P.

Title

Antibody potency, effector function, and combinations in protection and therapy for SARS-CoV-2 infection in vivo.

Source

Journal of Experimental Medicine; 2021. 218(3). many ref.

Publisher

Rockefeller University Press

Location of Publisher

New York

Country of Publication

USA

Abstract

SARS-CoV-2, the causative agent of COVID-19, has been responsible for over 42 million infections and 1 million deaths since its emergence in December 2019. There are few therapeutic options and no approved vaccines. Here, we examine the properties of highly potent human monoclonal antibodies (hu-mAbs) in a Syrian hamster model of SARS-CoV-2 and in a mouse-adapted model of SARS-CoV-2 infection (SARS-CoV-2 MA). Antibody combinations were effective for prevention and in therapy when administered early. However, in vitro antibody neutralization potency did not uniformly correlate with in vivo protection, and some hu-mAbs were more protective in combination in vivo. Analysis of antibody Fc regions revealed that binding to activating Fc receptors contributes to optimal protection against SARS-CoV-2 MA. The data indicate that intact effector function can affect hu-mAb protective activity and that in vivo testing is required to establish optimal hu-mAb combinations for COVID-19 prevention.

Publication Type

Journal article.

<126>

Accession Number

20210106448

Author

Rodrigues, T. S.; Sa, K. S. G. de; Ishimoto, A. Y.; Becerra, A.; Oliveira, S.; Almeida, L.; Goncalves, A. V.; Perucello, D. B.; Andrade, W. A.; Castro, R.; Veras, F. P.; Toller-Kawahisa, J. E.

Title

Inflammasomes are activated in response to SARS-CoV-2 infection and are associated with COVID-19 severity in patients.

Source

Journal of Experimental Medicine; 2020. 218(3). 36 ref.

Publisher

Rockefeller University Press

Location of Publisher

New York

Country of Publication

USA

Abstract

Severe cases of COVID-19 are characterized by a strong inflammatory process that may ultimately lead to organ failure and patient death. The NLRP3 inflammasome is a molecular platform that promotes inflammation via cleavage and activation of key inflammatory molecules including active caspase-1 (Casp1p20), IL-1beta, and IL-18. Although participation of the inflammasome in COVID-19 has been highly speculated, the inflammasome activation and participation in the outcome of the disease are unknown. Here we demonstrate that the NLRP3 inflammasome is activated in response to SARS-CoV-2 infection and is active in COVID-19 patients. Studying moderate and severe COVID-19 patients, we found active NLRP3 inflammasome in PBMCs and tissues of postmortem patients upon autopsy. Inflammasome-derived products such as Casp1p20 and IL-18 in the sera correlated with the markers of COVID-19 severity, including IL-6 and LDH. Moreover, higher levels of IL-18 and Casp1p20 are associated with disease severity and poor clinical outcome. Our results suggest that inflammasomes participate in the pathophysiology of the disease, indicating that these platforms might be a marker of disease severity and a potential therapeutic target for COVID-19.

Publication Type

Journal article.

<127>

Accession Number

20210106227

Author

Oyagbemi, A. A.; Ajibade, T. O.; Aboua, Y. G.; Gbadamosi, I. T.; Adedapo, A. D. A.; Aro, A. O.; Adejumobi, O. A.; Thamahane-Katengua, E.; Omobowale, T. O.; Falayi, O. O.; Oyagbemi, T. O.; Ogunpolu, B. S.; Hassan, F. O.; Ogunmiluyi, I. O.; Ola-Davies, O. E.; Saba, A. B.; Adedapo, A. A.; Nkadameng, S. M.; McGaw, L. J.; Kayoka-Kabongo, P. N.; Oguntibeju, O. O.; Yakubu, M. A.

Title

Potential health benefits of zinc supplementation for the management of COVID-19 pandemic.

Source

Journal of Food Biochemistry; 2021. 45(2). many ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the etiological agent for the Coronavirus Disease 2019 (COVID-19). The COVID-19 pandemic has created unimaginable and

unprecedented global health crisis. Since the outbreak of COVID-19, millions of dollars have been spent, hospitalization overstretched with increasing morbidity and mortality. All these have resulted in unprecedented global economic catastrophe. Several drugs and vaccines are currently being evaluated, tested, and administered in the frantic efforts to stem the dire consequences of COVID-19 with varying degrees of successes. Zinc possesses potential health benefits against COVID-19 pandemic by improving immune response, minimizing infection and inflammation, preventing lung injury, inhibiting viral replication through the interference of the viral genome transcription, protein translation, attachment, and host infectivity. However, this review focuses on the various mechanisms of action of zinc and its supplementation as adjuvant for vaccines an effective therapeutic regimen in the management of the ravaging COVID-19 pandemic.

Publication Type

Journal article.

<128>

Accession Number

20210106122

Author

Oliveira, L. C. de; Torres-Franco, A. F.; Lopes, B. C.; Silva Santos, B. S. A. da; Costa, E. A.; Costa, M. S.; Reis, M. T. P.; Melo, M. C.; Polizzi, R. B.; Teixeira, M. M.; Mota, C. R.

Title

Viability of SARS-CoV-2 in river water and wastewater at different temperatures and solids content.

Source

Water Research (Oxford); 2021. 195. 46 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 patients can excrete viable SARS-CoV-2 virus via urine and faeces, which has raised concerns over the possibility of COVID-19 transmission via aerosolized contaminated water or via the faecal-oral route. These concerns are especially exacerbated in many low- and middle-income countries, where untreated sewage is frequently discharged to surface waters. SARS-CoV-2 RNA has been detected in river water (RW) and raw wastewater (WW) samples. However, little is known about SARS-CoV-2 viability in these environmental matrices. Determining the persistence of SARS-CoV-2 in water under different environmental conditions is of great importance for basic assumptions in quantitative microbial risk

assessment (QMRA). In this study, the persistence of SARS-CoV-2 was assessed using plaque assays following spiking of RW and WW samples with infectious SARS-CoV-2 that was previously isolated from a COVID-19 patient. These assays were carried out on autoclaved RW and WW samples, filtered (0.22 micro m) and unfiltered, at 4 degrees C and 24 degrees C. Linear and nonlinear regression models were adjusted to the data. The Weibull regression model achieved the lowest root mean square error (RMSE) and was hence chosen to estimate T90 and T99 (time required for 1 log and 2 log reductions, respectively). SARS-CoV-2 remained viable longer in filtered compared with unfiltered samples. RW and WW showed T90 values of 1.9 and 1.2 day and T99 values of 6.4 and 4.0 days, respectively. When samples were filtered through 0.22 micro m pore size membranes, T90 values increased to 3.3 and 1.5 days, and T99 increased to 8.5 and 4.5 days, for RW and WW samples, respectively. Remarkable increases in SARS-CoV-2 persistence were observed in assays at 4 degrees C, which showed T90 values of 7.7 and 5.5 days, and T99 values of 18.7 and 17.5 days for RW and WW, respectively. These results highlight the variability of SARS-CoV-2 persistence in water and wastewater matrices and can be highly relevant to efforts aimed at quantifying water-related risks, which could be valuable for understanding and controlling the pandemic.

Publication Type

Journal article.

<129>

Accession Number

20210105965

Author

Flanagan, E. W.; Beyl, R. A.; Fearnbach, S. N.; Altazan, A. D.; Martin, C. K.; Redman, L. M.

Title

The impact of COVID-19 stay-at-home orders on health behaviors in adults.

Source

Obesity; 2021. 29(2):438-445. 13 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Objective: Stay-at-home orders in response to the coronavirus disease 2019 (COVID-19) pandemic have forced abrupt changes to daily routines. This study assessed lifestyle changes across different BMI classifications in response to the global pandemic. **Methods:** The online survey targeting adults was distributed in April 2020 and collected information on dietary behaviors, physical activity, and mental

health. All questions were presented as "before" and "since" the COVID-19 pandemic. Results: In total, 7,753 participants were included; 32.2% of the sample were individuals with normal weight, 32.1% had overweight, and 34.0% had obesity. During the pandemic, overall scores for healthy eating increased ($P < 0.001$), owing to less eating out and increased cooking ($P < 0.001$). Sedentary leisure behaviors increased, while time spent in physical activity (absolute time and intensity adjusted) declined ($P < 0.001$). Anxiety scores increased 8.78 +or- 0.21 during the pandemic, and the magnitude of increase was significantly greater in people with obesity ($P 0.01$). Weight gain was reported in 27.5% of the total sample compared with 33.4% in participants with obesity. Conclusions: The COVID-19 pandemic has produced significant health effects, well beyond the virus itself. Government mandates together with fear of contracting the virus have significantly impacted lifestyle behaviors alongside declines in mental health. These deleterious impacts have disproportionately affected individuals with obesity.

Publication Type

Journal article.

<130>

Accession Number

20210105952

Author

Mousavi-Asl, B.; Firouzifar, M.; Noury, L.; Khamushian, P.; Mousavi-Asl, D.; Mail, F. H.

Title

Burnout among health care providers during COVID-19 outbreak: burnout among COVID-19 outbreak.

Source

Acta Medica Iranica; 2021. 59(2):108-112. 19 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background: COVID-19, which quickly became a global problem, in addition to its effects on public health, is very important in terms of the effect on mental health and anxiety in health care providers. Job burnout should be considered during such health crises. Study design: The study design is a cross-sectional study Methods: A total of 87 health care providers (nurses and physicians) were included in the study. Their general information such as age, gender, years of experience and hours working in COVID-19 were asked. They all filled Maslach burnout inventory, a questionnaire measuring job burnout with three dimensions: Emotional exhaustion (EE), Depersonalization (DP) and personal accomplishment (PA). Results: We found

that in physicians, EE (r: 0.54, p value<0.001) and DP were correlated with hours working in COVID-19 ward but no such correlation was found in nurses. Physicians had higher DP score (mean 12.66 vs. 8.28, p value<0.001) and lower PA score (mean 22.71 vs. 25.62, p value: 0.004) both of them represent higher burnout level in physicians. Conclusion: comparing our results with previous studies show that during the COVID-19 breakout higher level of job burnout could be find in health care workers, especially in physicians. Hours working in COVID-19 special wards can increase level of burnout.

Publication Type

Journal article.

<131>

Accession Number

20210105934

Author

Umnuaypornlert, A.; Kanchanasurakit, S.; Lucero-Prisno, D. E., III; Saokaew, S.

Title

Smoking and risk of negative outcomes among COVID-19 patients: a systematic review and meta-analysis.

Source

Tobacco Induced Diseases; 2021. 19(February). 74 ref.

Publisher

EUEP European Publishing

Location of Publisher

Heraklion

Country of Publication

Greece

Abstract

Introduction: COVID-19 has major effects on the clinical, humanistic and economic outcomes among patients, producing severe symptoms and death. Smoking has been reported as one of the factors that increases severity and mortality rate among COVID-19 patients. However, the effect of smoking on such medical outcomes is still controversial. This study conducted a comprehensive systematic review and meta-analysis (SR/MA) on the association between smoking and negative outcomes among COVID-19 patients. Methods: Electronic databases, including PubMed, EMBASE, Cochrane Library, Science Direct, Google Scholar, were systematically searched from the initiation of the database until 12 December 2020. All relevant studies about smoking and COVID-19 were screened using a set of inclusion and exclusion criteria. The Newcastle-Ottawa Scale was used to assess the methodological quality of eligible articles. Random meta-analyses were conducted to estimate odds ratios (ORs) with 95% confidence interval (CIs). Publication bias was assessed using the funnel plot, Begg's test and Egger's test. Results: A total of 1248 studies were retrieved and reviewed. A total of 40 studies were finally included for meta-analysis. Both current smoking

and former smoking significantly increase the risk of disease severity (OR=1.58; 95% CI: 1.16-2.15, p=0.004; and OR=2.48; 95% CI: 1.64- 3.77, p<0.001; respectively) with moderate appearance of heterogeneity. Similarly, current smoking and former smoking also significantly increase the risk of death (OR=1.35; 95% CI: 1.12-1.62, p=0.002; and OR=2.58; 95% CI: 2.15-3.09, p<0.001; respectively) with moderate appearance of heterogeneity. There was no evidence of publication bias, which was tested by the funnel plot, Begg's test and Egger's test. Conclusions: Smoking, even current smoking or former smoking, significantly increases the risk of COVID-19 severity and death. Further causal studies on this association and ascertaining the underlying mechanisms of this relation is warranted.

Publication Type

Journal article.

<132>

Accession Number

20210105898

Author

Kumar, S. A.; Cheng, W.

Title

A hypothesis: bitter taste receptors as a therapeutic target for the clinical symptoms of SARS-CoV-2.

Source

Pharmazie; 2021. 76(2/3):43-54. many ref.

Publisher

Avoxa - Mediengruppe Deutscher Apotheker GmbH

Location of Publisher

Eschborn

Country of Publication

Germany

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has paralysed the livelihood of the global population by inflicting higher mortality among the affected patients. Nearly the entire human physiological system can get disrupted by the virulence of SARS-CoV-2, which exemplifies the significance of discovering a potential drug target. Similar to angiotensin-converting enzyme 2 (ACE2), bitter taste receptors (T2Rs) unequivocally expressed on all vital human organs, particularly on nasal/oral respiratory tract, gastrointestinal organs, innate immune cells, heart, brain and urogenital cells are susceptible to SARS-CoV-2 virulence. Activation of T2Rs by bitter agonists restores vital functions to these organs via activation of large conductance, Ca²⁺-dependent potassium (K⁺) channels (BKca), and inducible nitric oxide synthase. T2R activation in the gustatory system can act as the first defence mechanism, primarily preventing or mitigating SARS-CoV-2 entry to the respiratory tract. Moreover, T2R activation is crucial for the improved

vasodilation accompanied by the attenuation of systemic inflammation; hyper-innate immune responses; gastrointestinal disorders; defective neurological functions; acute kidney injury; and impotency witnessed in severe SARS-CoV-2 cases. This review discusses the potential for bitter taste receptors to act as drug targets for SARS-CoV-2 symptoms and the use of existing bitter agonists to restore T2R function.

Publication Type

Journal article.

<133>

Accession Number

20210105886

Author

Sormani, M. P.; Rossi, N. de; Schiavetti, I.; Carmisciano, L.; Cordioli, C.; Moiola, L.; Radaelli, M.; Immovilli, P.; Capobianco, M.; Trojano, M.; Zaratini, P.; Tedeschi, G.; Comi, G.; Battaglia, M. A.; Patti, F.; Salvetti, M.

Title

Disease-modifying therapies and coronavirus disease 2019 severity in multiple sclerosis.

Source

Annals of Neurology; 2021. 89(4):780-789. 35 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Objective: This study was undertaken to assess the impact of immunosuppressive and immunomodulatory therapies on the severity of coronavirus disease 2019 (COVID-19) in people with multiple sclerosis (PwMS). **Methods:** We retrospectively collected data of PwMS with suspected or confirmed COVID-19. All the patients had complete follow-up to death or recovery. Severe COVID-19 was defined by a 3-level variable: mild disease not requiring hospitalization versus pneumonia or hospitalization versus intensive care unit (ICU) admission or death. We evaluated baseline characteristics and MS therapies associated with severe COVID-19 by multivariate and propensity score (PS)-weighted ordinal logistic models. Sensitivity analyses were run to confirm the results. **Results:** Of 844 PwMS with suspected (n = 565) or confirmed (n = 279) COVID-19, 13 (1.54%) died; 11 of them were in a progressive MS phase, and 8 were without any therapy. Thirty-eight (4.5%) were admitted to an ICU; 99 (11.7%) had radiologically documented pneumonia; 96 (11.4%) were hospitalized. After adjusting for region, age, sex, progressive MS course, Expanded Disability Status Scale, disease duration, body mass index, comorbidities, and recent methylprednisolone use, therapy with an anti-CD20 agent (ocrelizumab or rituximab) was significantly associated (odds ratio [OR] =

2.37, 95% confidence interval [CI] = 1.18-4.74, p = 0.015) with increased risk of severe COVID-19. Recent use (<1 month) of methylprednisolone was also associated with a worse outcome (OR = 5.24, 95% CI = 2.20-12.53, p = 0.001). Results were confirmed by the PS-weighted analysis and by all the sensitivity analyses. Interpretation: This study showed an acceptable level of safety of therapies with a broad array of mechanisms of action. However, some specific elements of risk emerged. These will need to be considered while the COVID-19 pandemic persists. ANN NEUROL 2021;89:780-789.

Publication Type

Journal article.

<134>

Accession Number

20210105873

Author

Mehrpouri, M.

Title

Hematological abnormalities in patients with COVID-19: an emerging approach to differentiate between severe COVID-19; Compared with non-severe forms of the disease.

Source

Acta Medica Iranica; 2021. 59(3):126-132. 53 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

The 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has emerged as a pandemic threat from December 2019. Coronavirus can cause varying degrees of illness that range from mild to severe or fatal disease. The exact mechanism on hematopoiesis induced by this coronavirus is not yet well understood, but scientific evidence indicates that COVID-19 can cause hematological changes in infected patients. The present study summarized pieces of literature regarding hematologic findings of COVID-19 and their correlation with disease severity. Finally, we offered some laboratory abnormalities which help to differentiate severe COVID-19 from non-severe forms of the disease. Among hematological parameters, decreased hemoglobin rather than anemia, leukocytosis, lymphopenia, neutrophilia, and thrombocytopenia have been observed in conducted studies in some patients with COVID-19. Furthermore, as the disease progresses to severe COVID-19, hemoglobin decline, leukocytosis, lymphopenia, neutrophilia, and thrombocytopenia continue to exacerbate. In addition, the

neutrophil-to-lymphocyte ratio is also considered as an independent risk factor for severe infection in COVID-19 patients.

Publication Type

Journal article.

<135>

Accession Number

20210105860

Author

Meskarpour-Amiri, M.; Mehdizadeh, P.; Yaghoubi, M.; Shokouh, S. M. H.; Nasiri, T.; Hassanlouei, B.; Amini, H.

Title

Evaluating the effect of macro-level health policies on novel coronavirus (COVID-19) epidemic control in Iran.

Source

Acta Medica Iranica; 2021. 59(1):44-49. 37 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

This study aimed to evaluate the effect of macro-level health policies on COVID-19 outbreak control in Iran. This was a descriptive-analytical study of the applied time series performed on April 19, 2020. The effect of four macro-health interventions, including reducing overcrowding, social distancing, limitation of high-risk economic activities, and active case detection, was examined. The Vector auto-regression (VAR) was used to investigate the effect of the interventions. The augmented Dickey-Fuller test (ADF) was used to ensure the time stability of the time series and the existence of a unit-root. To analyzing data and estimation VAR models, STATA software was used. P of less than 0.1 was considered significant. The increase in the number of cases with two days' lag had a positive and significant effect on increasing the number of new cases of the COVID-19 ($C=0.176$, $P=0.097$). Adopting an overcrowding reduction policy with both 2-day lags ($c=0.095$, $P=0.066$) and 4-day lags ($c=0.314$, $P=0.000$) had a negative and significant effect on increasing the number of new cases of the COVID-19. Our study showed that overcrowding reduction and new COVID-19 case detection could play an effective role in controlling the epidemic of COVID-19 in Iran. It seems that the best advice is to stay home and use strategies to identify more patients.

Publication Type

Journal article.

<136>

Accession Number

20210105858

Author

Mohamadi, M.; Fattahi, N.; Mail, A. G.; Alizadeh-Khoei, M.; Miri, S.; Hekmat, H.; Bodaghabadi, M.; Nikkhah, F.

Title

A comprehensive review on COVID-19 infection and comorbidities of various organs.

Source

Acta Medica Iranica; 2021. 59(1):4-14. 83 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

In the Coronavirus disease 2019 (COVID-19) pandemic, underlying diseases such as cardiovascular disease, respiratory illness, liver and kidney disease or malignancies, have a critical prognostic role for these patients. Due to the increased risk of mortality in patients with established or new-onset comorbidities, we decided to conduct a study to further investigate the possible comorbidities and treatment recommendations of COVID-19. All articles published by March 25, 2020, on the new coronavirus infection were reviewed and for cutaneous manifestation as a new emerging concern, by April 25, 2020. ScienceDirect, Google Scholar, Scopus, PubMed databases were searched, and keywords such as "COVID-19", "2019-nCoV", "Coronavirus2019", "SARS-CoV-2", and "comorbidity" have been used. The most important comorbidity in elderly patients with confirmed COVID-19 was cardiovascular disease, followed by diabetes and chronic respiratory disease, respectively, and on the other hand, COVID-19 itself could cause acute heart, lung, liver, kidney, and skin disease. Also, the prevalence of underlying diseases in dead patients or patients with severe COVID-19 is higher than the others. Considering treatment, drug interactions, and careful drug adjustment based on hepatic and renal metabolism are essential. The results of this study showed that the mortality rate and ICU admission in people with the underlying disease is higher than in other people. Also, we must pay attention to the possible multi-organ damages and comorbidities for the protection and successful treatment of COVID-19. There are some comorbidities like primary cutaneous manifestations that may have diagnostic or prognostic values in the COVID-19 course.

Publication Type

Journal article.

<137>

Accession Number

20210105857

Author

Askary, E.; Poordast, T.; Shiravani, Z.; Ashraf, M. A.; Hashemi, A.; Naseri, R.; Moradialamdarloo, S.; Karimi, Z.; Izanloo, E.; Najib, F. S.

Title

Coronavirus disease 2019 (COVID-19) manifestations during pregnancy in all three trimesters: a case series.

Source

International Journal of Reproductive BioMedicine; 2021. 19(2):191-204. 33 ref.

Publisher

Shahid Sadoughi University of Medical Sciences - Research and Clinical Center for Infertility

Location of Publisher

Yazd

Country of Publication

Iran

Abstract

Background: Coronavirus disease 2019 (COVID-19) pandemic has raised concerns about the susceptibility amongst different groups of the population. Pregnant women are one such group. This study was conducted to investigate the effect of COVID-19 on pregnancy and maternal/neonatal outcomes. Case presentation: This case series was conducted on 16 pregnant women with COVID-19 from March 21 to May 11, 2020. Clinical characteristics, pregnancy complications, medication used, maternal/neonatal outcomes, and fatality rate were investigated through this study. The mean age of the patients was 30.06 yrs. Patients from all three trimesters were included (1 in first, 5 in second, and 10 in the third trimesters). The most common clinical symptoms were shortness of breath (n = 10), dry cough (n = 10), myalgia (n = 8), and chills (n = 7). Also, three cases had papulosquamous skin lesions with fissuring. The most common laboratory results were leukocytosis (n = 8), increased liver enzymes (n = 6), elevated CRP (n = 5), and thrombocytopenia (n = 4). There was one case of maternal mortality, five of premature labor pain (PLP), two of preeclampsia, and two of placenta accreta. Twelve pregnancies were terminated (nine cesarean sections, three vaginal deliveries). Among neonates, we had 6 cases of preterm labor. All neonates had negative PCR results. Conclusion: Clinical manifestations and paraclinical results were similar to non-pregnant patients. There was no evidence of vertical transmission. PLP and premature rupture of membranes (PROM) were the most common complications in the second and third trimesters of pregnant

COVID-19 women, which can lead to rupture of the uterus. Termination and delivery should be planned individually.

Publication Type

Journal article.

<138>

Accession Number

20210105853

Author

Ng, T. S. B.; Leblanc, K.; Yeung, D. F.; Tsang, T. S. M.

Title

Medication use during COVID-19.

Source

Canadian Family Physician; 2021. 67(3):171-179. 99 ref.

Publisher

College of Family Physicians of Canada

Location of Publisher

Mississauga

Country of Publication

Canada

Abstract

Objective: To keep health care providers, in response to the ongoing coronavirus disease 2019 (COVID-19) pandemic, informed about the medications that have been proposed to treat the disease and the evidence supporting their use. Quality of evidence: A narrative review of medications most widely used to treat COVID-19 was conducted, outlining the best available evidence for each pharmacologic treatment to date. Searches were performed in PubMed, EMBASE, and MEDLINE using key words COVID-19 and treatment, as well as related terms. Relevant research studies conducted in human populations and cases specific to patients with COVID-19 were included, as were relevant hand-searched papers and reviews. Only articles in English and Chinese were included. Main message: While current management of patients with COVID-19 largely involves supportive care, without a widely available vaccine, practitioners have also resorted to repurposing medications used for other indications. This has caused considerable controversy, as many of these treatments have limited clinical evidence supporting their use and therefore pose implications for patient safety, drug access, and public health. For instance, medications such as hydroxychloroquine and chloroquine, lopinavir-ritonavir, nonsteroidal anti-inflammatory drugs, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers gained widespread media attention owing to hype, misinformation, or misinterpretation of research evidence. Conclusion: Given the severity of the pandemic and the potential broad effects of implementing safe and effective treatment, this article provides a

narrative review of the current evidence behind the most widely used medications to treat COVID-19 in order to enable health care practitioners to make informed decisions in the care of patients with this life-threatening disease.

Publication Type

Journal article.

<139>

Accession Number

20210105831

Author

Thakur, N.; Conceicao, C.; Isaacs, A.; Human, S.; Modhiran, N.; McLean, R. K.; Pedrera, M.; Tan TiongKit; Rijal, P.; Townsend, A.; Taylor, G.; Young, P. R.; Watterson, D.; Chappell, K. J.; Graham, S. P.; Bailey, D.

Title

Micro-fusion inhibition tests: quantifying antibody neutralization of virus-mediated cell-cell fusion.

Source

Journal of General Virology; 2021. 102(1). 56 ref.

Publisher

Microbiology Society

Location of Publisher

London

Country of Publication

UK

Abstract

Although enveloped viruses canonically mediate particle entry through virus-cell fusion, certain viruses can spread by cell-cell fusion, brought about by receptor engagement and triggering of membrane-bound, viral-encoded fusion proteins on the surface of cells. The formation of pathogenic syncytia or multinucleated cells is seen in vivo, but their contribution to viral pathogenesis is poorly understood. For the negative-strand paramyxoviruses respiratory syncytial virus (RSV) and Nipah virus (NiV), cell-cell spread is highly efficient because their oligomeric fusion protein complexes are active at neutral pH. The recently emerged severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has also been reported to induce syncytia formation in infected cells, with the spike protein initiating cell-cell fusion. Whilst it is well established that fusion protein-specific antibodies can block particle attachment and/or entry into the cell (canonical virus neutralization), their capacity to inhibit cell-cell fusion and the consequences of this neutralization for the control of infection are not well characterized, in part because of the lack of specific tools to assay and quantify this activity. Using an adapted bimolecular fluorescence complementation assay, based on a split GFP-Renilla luciferase reporter, we have established a micro-fusion inhibition test (mFIT) that allows the identification and quantification of these neutralizing antibodies. This assay has been

optimized for high-throughput use and its applicability has been demonstrated by screening monoclonal antibody (mAb)-mediated inhibition of RSV and NiV fusion and, separately, the development of fusion-inhibitory antibodies following NiV vaccine immunization in pigs. In light of the recent emergence of coronavirus disease 2019 (COVID-19), a similar assay was developed for SARS-CoV-2 and used to screen mAbs and convalescent patient plasma for fusion-inhibitory antibodies. Using mFITs to assess antibody responses following natural infection or vaccination is favourable, as this assay can be performed entirely at low biocontainment, without the need for live virus. In addition, the repertoire of antibodies that inhibit cell-cell fusion may be different to those that inhibit particle entry, shedding light on the mechanisms underpinning antibody-mediated neutralization of viral spread.

Publication Type

Journal article.

<140>

Accession Number

20210105789

Author

Kondili, L. A.; Craxi, A.; Aghemo, A.

Title

Absolute targets for HCV elimination and national health policy paradigms: foreseeing future requirements.

Source

Liver International; 2020. 41(4):649-655. 30 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

The World Health Organization (WHO) targets for eliminating HCV by 2030 may be overambitious for many high-income countries. Recent analyses (ie, data from 2017 to 2019) show that only 11 countries are on track for meeting WHO's elimination targets. For a country to be truly on track, it is important that the majority of infected individuals be identified and treated. There is still a need for country and population-specific evaluations within the different HCV screening and treatment strategies available, in order to assess their cost-effectiveness and sustainability and support an evidence-based policy for HCV elimination. Any health policy model is affected by the diversity and quality of the available data and by gaps in data. Given the differences among countries, comparing progress based on fixed global targets will not

necessarily be suitable in the same measure for each country. In a recent document, the European Collaborators of Polaris Observatory provide insight into the limitations of the current WHO targets. The absolute targets identified by each country in accordance with the measures set by WHO would be essential in reaching the HCV elimination. All analytic models to assess the progress towards HCV elimination are based on projections to 2030 not including the impact of the COVID-19 pandemic on hepatitis-related services. With specific regard to the achievement of WHO hepatitis elimination goals, all measures that will be put in place during and after COVID-19 pandemic could be transferred in increasing diagnosis and linkage to care of people with hepatitis.

Publication Type

Journal article.

<141>

Accession Number

20210105768

Author

Green, M. S.; Abdullah, R.; Vered, S.; Nitzan, D.

Title

A study of ethnic, gender and educational differences in attitudes toward COVID-19 vaccines in Israel - implications for vaccination implementation policies.

Source

Israel Journal of Health Policy Research; 2021. 10(26):(19 March 2021). 36 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Vaccines for COVID-19 are currently available for the public in Israel. The compliance with vaccination has differed between sectors in Israel and the uptake has been substantially lower in the Arab compared with the Jewish population. Aim: To assess ethnic and socio-demographic factors in Israel associated with attitudes towards COVID-19 vaccines prior to their introduction. Methods: A national cross-sectional survey was carried out in Israel during October 2020 using an internet panel of around 100,000 people, supplemented by snowball sampling. A sample of 957 adults aged 30 and over were recruited of whom 606 were Jews (49% males) and 351 were Arabs (38% males). Results: The sample of Arabs was younger than for the Jewish respondents. Among the men, 27.3% of the Jewish and 23.1% of the Arab respondents wanted to be vaccinated immediately, compared with only 13.6% of Jewish women and 12.0%

of Arab women. An affirmative answer to the question as to whether they would refuse the vaccine at any stage was given by 7.7% of Jewish men and 29.9% of Arab men, and 17.2% of Jewish women and 41.0% of Arab women. Higher education was associated with less vaccine hesitancy. In multiple logistic regression analysis, the ethnic and gender differences persisted after controlling for age and education. Other factors associated with vaccine hesitancy were the belief that the government restrictions were too lenient and the frequency of socializing prior to the pandemic. Conclusions: The study revealed a relatively high percentage reported would be reluctant to get vaccinated, prior to the introduction of the vaccine. This was more marked so for Arabs than Jews, and more so for women within the ethnic groups. While this was not a true random sample, the findings are consistent with the large ethnic differences in compliance with the vaccine, currently encountered and reinforce the policy implications for developing effective communication to increase vaccine adherence. Government policies directed at controlling the pandemic should include sector-specific information campaigns, which are tailored to ensure community engagement, using targeted messages to the suspected vaccine hesitant groups. Government ministries, health service providers and local authorities should join hands with civil society organizations to promote vaccine promotion campaigns.

Publication Type

Journal article.

<142>

Accession Number

20210105686

Author

Lammi, C.; Arnoldi, A.

Title

Food-derived antioxidants and COVID-19.

Source

Journal of Food Biochemistry; 2020. 45(1). many ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

SARS-CoV-2 (previously 2019-nCoV), the pathogenic agent of COVID-19 disease, started to expand from Wuhan, China, on December 2019 and in 2 months, it spread worldwide giving origin to a pandemic. COVID-19 has a stronger transmission capacity by inhalation of infectious aerosols and after an incubation

time of 3-14 days, it may be responsible for diseases ranging from the asymptomatic to fatal consequences. COVID-19 has emerged as a multifaceted, multisystem, multi-organ disorder, which produces its pathogenic effects through a quite ubiquitous target at the level of multiple organs and in which oxidative stress and inflammatory process play relevant roles. Thus, besides the development of a pharmacological therapy, in the field of alternative and coadjuvant therapeutic, the use of dietary supplements or nutraceuticals for the prevention or treatment of SARS-CoV-2 infection may be a useful strategy. Herein, we specifically comment on some literature evidences, which link the food-derived antioxidants and metal-chelating agents with treatment and prevention of oxidative stress and inflammation that play a key role in the progression of COVID-19.

Publication Type

Journal article.

<143>

Accession Number

20210105632

Author

Anu Gupta; Vishnu, V. Y.; Singh, M. B.; Rohit Bhatia; Roopa Rajan; Deepti Vibha; Arunmozhimaran Elavarasi; Divya Radhakrishnan; Ayush Agarwal; Bhargavi Ramanujam; Animesh Das; Singh, R. K.; Pandit, A. K.; Achal Srivastava; Manjari Tripathi; Kameshwar Prasad; Srivastava, M. V. P.

Title

Managing non-COVID acute neurology amidst the pandemic: challenges and work in progress.

Source

Annals of Indian Academy of Neurology; 2021. 24(1):11-14. 5 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The ongoing COVID-19 pandemic has precipitated a global health crisis. Non-COVID diseases across specialties have been significantly compromised. The greatest challenge has been to continue providing care to non-COVID cases with minimum transmission risk to health care workers, patients, and caregivers. In this specter, better described as a medical holocaust, we present our experiences of dealing with acute neurological patients who could access our facility. We attempted to work on three key areas - initial screening using a more inclusive, dynamic checklist for COVID suspicion over and above the emergency triage, a mandatory initial holding on a separate floor of our inpatient service equipped with infection

control strategies similar to a COVID-designated area, and daily screening of health care workers and caregivers for symptoms and possible exposures. It was a steep learning curve, a couple of close shaves, and many more lessons that went into the development of an algorithm that seems to be working well.

Publication Type

Journal article.

<144>

Accession Number

20210105433

Author

Davies, B.; Priti Kenia; Prasad Nagakumar; Atul Gupta

Title

Paediatric and adolescent asthma: a narrative review of telemedicine and emerging technologies for the post-COVID-19 era.

Source

Clinical and Experimental Allergy; 2021. 51(3):393-401. 28 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Children and young people with asthma need regular monitoring to maintain good asthma control, prevent asthma attacks and manage comorbidities. The COVID-19 pandemic has resulted in healthcare professionals making fundamental changes to the way healthcare is delivered and for patients and families adapting to these changes. Comprehensive remotely delivered, technology-based healthcare, closer to the patients home (reducing hospital footfall and possibly reducing carbon footprint) is likely to be one of the important collateral effects of the pandemic. Telemedicine is anticipated to impact everyone involved in healthcare-providers and patients alike. It is going to bring changes to organization, work areas and work culture in healthcare. Healthcare providers, policymakers and those accessing healthcare services will experience the impact of technology-based healthcare delivery. Telemedicine can play an exciting role in the management of childhood asthma by delivering high-quality care closer to the child's home. However, unlike adults, children still need to be accompanied by their carers for virtual care. Policymakers will need to take into account potential additional costs as well as the legal, ethical and cultural implications of large scale use of telemedicine. In this narrative review, we review evidence regarding the role of telemedicine and related emerging technologies in paediatric and adolescent asthma. Although there are gaps in the

current knowledge, there is evidence demonstrating the important role of telemedicine in management of childhood and adolescent asthma. However, there is an urgent need for healthcare researchers and policymakers to focus on improving the technologies and address the disparities in accessing novel technology-based management strategies to improve asthma care.

Publication Type

Journal article.

<145>

Accession Number

20210104927

Author

Alkhateeb, B. F.

Title

Public health and epidemiology education in Saudi Arabia: changes required to be made following COVID-19 pandemic-an opinion of public health expert.

Source

Journal of Health Informatics in Developing Countries; 2020. 14(2). 14 ref.

Publisher

King Saud Bin Abdulaziz University for Health Science

Location of Publisher

Riyadh

Country of Publication

Saudi Arabia

Abstract

The COVID - 19 global health pandemic has not only affected the economies and education system in the short run, but it will have detrimental effects in the long run for which organizations mainly academia might not be thinking of currently . This is even more imperative for countries where there is a dearth of academic institutions such as countries like Saudi Arabia. Since Saudi Arabia is one of the countries with the scarcity of Public Health Institutions, therefore it is crucial to envisage at the moment how this COVID - 19 pandemic will affect the Public Health Institutions in Saudi Arabia. Hence, in this opinion article, I review and appraise the existing situation of Public Health Institutions in Saudi Arabia and provide my opinion how this era of COVID - 19 will affect the Public Health Institutions from different perspectives in Saudi Arabia and what changes required to be made following COVID - 19 Pandemic in Public Health and Epidemiology Academic Institutions in Saudi Arabia following COVID - 19. It is very evident, that COVID - 19 has increased the demand of Public Health professionals, which has increased the need of experts in various public health fields to plan suitable programs. Numerous National Institutions can come forward and collaborate to portray their leadership roles in improving and standardizing the Public Health curricula . T he uniformity

and standardization of the curriculum also require a National level collaboration to develop a standard and unified National Public Health Competency framework. Following COVID - 19 era, there is a gigantic need to include important courses in the medical curriculum being taught in a bachelor's program such as Epidemiology, Infectious illnesses, and surveillance courses. Lastly, public health faculty members and people in academia need to revisit the curriculum of both Bachelors and Postgraduate study program to harmonize these in important aspects to achieve common goals of public health teaching.

Publication Type

Journal article.

<146>

Accession Number

20210104924

Author

Al-Qumaizi, K. I.

Title

Improving the clinical teaching and training for health college students during COVID-19.

Source

Journal of Health Informatics in Developing Countries; 2020. 14(2). 40 ref.

Publisher

King Saud Bin Abdulaziz University for Health Science

Location of Publisher

Riyadh

Country of Publication

Saudi Arabia

Abstract

The adverse effects of COVID-19 have altered the teaching and learning opportunities across many disciplines, especially medicine. Although control measures for COVID-19 may have short-term benefits for medical students or health college students, they may prove harmful in the long run. This opinion article aims to provide an overview of how COVID-19 has affected medical education and how to improve clinical teaching and the learning environment in order to keep educating the physicians of the future. Different articles relevant to the topic were obtained from Google Scholar and PubMed. This study undertook a review of several full-text research articles that were published in the English language both in developed and developing countries, with a specific focus on teaching and learning in medical or health colleges during the COVID-19 outbreak. Research articles were evaluated, and their references were reviewed to avoid missing any article relevant to the topic of interest. Social distancing due to COVID-19 has prevented medical and health college students from gathering in large classrooms, auditoriums, and even in clinical settings such as wards. Moreover, most of the countries in the developing world shut down colleges and

universities, which resulted in a gap in learning and education. Therefore, innovative and smart approaches and strategies need to be adapted in the field of medicine to overcome the challenges of gaps in learning and teaching. Online approaches such as Zoom and Skype could be adapted by the colleges with breakout sessions and simulation exercises to maintain the optimum learning environment in the health colleges, with maximum support from their IT departments. During the COVID-19 crisis, it is essential that medical or health colleges and universities revise the old pedagogies and approaches to teaching and instead devise new ones. In addition, the lecturers and professors working at these universities must prioritize scholarly and innovative approaches in order to implement more practical and sustainable solutions. At this time, it is vital to reap the maximum benefits of technology in order to develop and implement novel modes of online education.

Publication Type

Journal article.

<147>

Accession Number

20210104913

Author

Verma, A. A.; Hora, T.; Jung HaeYoung; Fralick, M.; Malecki, S. L.; Lapointe-Shaw, L.; Weinerman, A.; Tang, T.; Kwan, J. L.; Liu, J. J.; Rawal, S.; Chan, T. C. Y.; Cheung, A. M.; Rosella, L. C.; Ghassemi, M.; Herridge, M.; Mamdani, M.; Razak, F.

Title

Characteristics and outcomes of hospital admissions for COVID-19 and influenza in the Toronto area.

Source

Canadian Medical Association Journal; 2021. 193(12):E410-E418. 57 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

BACKGROUND: Patient characteristics, clinical care, resource use and outcomes associated with admission to hospital for coronavirus disease 2019 (COVID-19) in Canada are not well described. **METHODS:** We described all adults with COVID-19 or influenza discharged from inpatient medical services and medical-surgical intensive care units (ICUs) between Nov. 1, 2019, and June 30, 2020, at 7 hospitals in Toronto and Mississauga, Ontario. We compared patient outcomes using multivariable regression models, controlling for patient sociodemographic factors and comorbidity level. We validated the accuracy of 7 externally

developed risk scores to predict mortality among patients with COVID-19. RESULTS: There were 1027 hospital admissions with COVID-19 (median age 65 yr, 59.1% male) and 783 with influenza (median age 68 yr, 50.8% male). Patients younger than 50 years accounted for 21.2% of all admissions for COVID-19 and 24.0% of ICU admissions. Compared with influenza, patients with COVID-19 had significantly greater in-hospital mortality (unadjusted 19.9% v. 6.1%, adjusted relative risk [RR] 3.46, 95% confidence interval [CI] 2.56-4.68), ICU use (unadjusted 26.4% v. 18.0%, adjusted RR 1.50, 95% CI 1.25-1.80) and hospital length of stay (unadjusted median 8.7 d v. 4.8 d, adjusted rate ratio 1.45, 95% CI 1.25-1.69). Thirty-day readmission was not significantly different (unadjusted 9.3% v. 9.6%, adjusted RR 0.98, 95% CI 0.70-1.39). Three points-based risk scores for predicting in-hospital mortality showed good discrimination (area under the receiver operating characteristic curve [AUC] ranging from 0.72 to 0.81) and calibration. INTERPRETATION: During the first wave of the pandemic, admission to hospital for COVID-19 was associated with significantly greater mortality, ICU use and hospital length of stay than influenza. Simple risk scores can predict in-hospital mortality in patients with COVID-19 with good accuracy.

Publication Type

Journal article.

<148>

Accession Number

20210104886

Author

Berner, R.; Huebner, J.; Simon, A.; Walger, P.; Huppertz, H. I.

Title

Children with acute respiratory tract infections in pediatric hospitals in autumn/winter 2020/2021. (Kinderanasthesie.) [German]

Source

Monatsschrift Kinderheilkunde; 2020. 168(12):1138-1141.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

Due to the shortage of pediatric hospital beds in general and due to the large annual burden of hospital admissions for common respiratory tract infections, such as influenza or RSV [respiratory syncytial virus] in particular, it can be expected that hospitalization of children with suspected or confirmed SARS-CoV-2 infections will face hospitals with an even more tense situation than usual in the winter 2020/2021. This

tenuous shortage may touch various aspects but in the first place it will affect isolation and cohorting. In addition, this shortage will not only apply to acutely ill children with viral respiratory tract infections but all children with need for hospital care, either chronically ill or e.g. being premature babies or newborns. Therefore, approaches are required which on the one hand are based on pragmatic grounds but on the other hand fulfill the basics of hygiene and infection control. The recommendations proposed in this statement are intended to give assistance to hospitals for the management of testing, isolation and cohorting of pediatric patients with suspected or confirmed SARS-CoV-2 infections. The most important factor navigating the essential measures is the cumulative incidence of newly diagnosed infections per 100,000 over the last 7 days, which is given by the RKI or the local public health authorities. In the situation of low (less than 25/100,000) or medium (25-50/100,000) incidence the respective diagnostic measures and hospital admission can be performed under standard hygiene precautions and the children will be cohorted according to their clinical presentation until the results of SARS-CoV-2 test (or RSV [respiratory syncytial virus] or influenza test) are available. In the situation of high (>50/100,000) incidence the respective diagnostic measures and the admission have to be performed under SARS-CoV-2 precautions as specified by the RKI, and the children have to be isolated until the results of SARS-CoV-2 test are available. The assessment of the incidence figures and the respective measures may be adapted by the local public health authorities on an individual basis. In case of shortfalls in admission capacities, the requirement of acute emergency care may necessitate that isolation and cohorting in the hospital will have to be performed temporarily in a less restrictive way than recommended here for standard.

Publication Type

Journal article.

<149>

Accession Number

20210104676

Author

Lecouturier, J.; Kelly, M. P.; Graham, F.; Meyer, C.; Tang MeiYee; Goffe, L.; Bonell, C.; Michie, S.; Sniehotta, F. F.

Title

Public understanding of COVID-19 antibody testing and test results: a qualitative study conducted in the U.K. early in the pandemic.

Source

Social Science & Medicine; 2021. 273. 30 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

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UK

Abstract

Background: During the COVID-19 pandemic, antibody testing was proposed by several countries as a surveillance tool to monitor the spread of the virus and potentially to ease restrictions. In the UK, antibody testing originally formed the third pillar of the UK Government's COVID-19 testing programme and was thought to offer hope that those with a positive antibody test result could return to normal life. However, at that time scientists and the public had little understanding of the longevity of COVID-19 antibodies, and whether they provided immunity to reinfection or transmission of the virus. Background: This paper explores the UK public's understanding of COVID-19 testing, perceived test accuracy, the meaning of a positive test result, willingness to adhere to restrictive measures in response to an antibody test result and how they expect other people to respond. Methods: On-line synchronous focus groups were conducted in April/May 2020 during the first wave of the pandemic and the most stringent period of the COVID-19 restrictive measures. Data were analysed thematically. Results: There was confusion in responses as to whether those with a positive or negative test should return to work and which restrictive measures would apply to them or their household members. Participants raised concerns about the wider public response to positive antibody test results and the adverse behavioural effects. There were worries that antibody tests could create a divided society particularly if those with a positive test result were given greater freedoms or chose to disregard the restrictive measures. Conclusion: Should these tests be offered more widely, information should be developed in consultation with the public to ensure clarity and address uncertainty about test results and subsequent behaviours.

Publication Type

Journal article.

<150>

Accession Number

20210104671

Author

Pereira, R. H. M.; Braga, C. K. V.; Servo, L. M.; Serra, B.; Amaral, P.; Gouveia, N.; Paez, A.

Title

Geographic access to COVID-19 healthcare in Brazil using a balanced float catchment area approach.

Source

Social Science & Medicine; 2021. 273. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The rapid spread of COVID-19 across the world has raised concerns about the responsiveness of cities and healthcare systems during pandemics. Recent studies try to model how the number of COVID-19 infections will likely grow and impact the demand for hospitalization services at national and regional levels. However, less attention has been paid to the geographic access to COVID-19 healthcare services and to hospitals' response capacity at the local level, particularly in urban areas in the Global South. This paper shows how transport accessibility analysis can provide actionable information to help improve healthcare coverage and responsiveness. It analyzes accessibility to COVID-19 healthcare at high spatial resolution in the 20 largest cities of Brazil. Using network-distance metrics, we estimate the vulnerable population living in areas with poor access to healthcare facilities that could either screen or hospitalize COVID-19 patients. We then use a new balanced floating catchment area (BFCA) indicator to estimate spatial, income, and racial inequalities in access to hospitals with intensive care unit (ICU) beds and mechanical ventilators while taking into account congestion effects. Based on this analysis, we identify substantial social and spatial inequalities in access to health services during the pandemic. The availability of ICU equipment varies considerably between cities, and it is substantially lower among black and poor communities. The study maps territorial inequalities in healthcare access and reflects on different policy lessons that can be learned for other countries based on the Brazilian case.

Publication Type

Journal article.

<151>

Accession Number

20210104647

Author

Luo Xia; Liao Qing; Shen Ying; Li HuiJun; Cheng LiMing

Title

Vitamin D deficiency is associated with COVID-19 incidence and disease severity in Chinese people.

Source

Journal of Nutrition; 2020. 151(1):98-103. 30 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Background: Vitamin D might have beneficial potential in influencing the natural history of the coronavirus disease 2019 (COVID-19) due to its immunomodulatory and anti-inflammatory properties. Background: The aim was to investigate whether vitamin D deficiency is associated with COVID-19 incidence and disease severity in Chinese people. Methods: In a cross-sectional study we retrospectively analyzed 335 COVID-19 patients (median: 56.0; IQR: 43.0-64.0 y) who were admitted to the Wuhan Tongji Hospital between 27 February and 21 March 2020. We also included an age- and sex-matched population of 560 individuals (median: 55; IQR: 49.0-60.0 y) who underwent the physical examination program. Their serum 25-hydroxyvitamin D [25(OH)D] concentrations were measured during the same period from 2018-2019. Serum 25(OH)D concentrations were measured for all COVID-19 patients on admission. Severity of COVID-19 was determined based on the level of respiratory involvement. A general linear model with adjustment for covariates was used to compare 25(OH)D concentrations between the COVID-19 and 2018-2019 control groups. Adjusted ORs with 95% CIs for associations between vitamin D status and COVID-19 severity were estimated via multivariable logistic regression. Results: In the general linear model adjusted for age, sex, comorbidities, and BMI, serum 25(OH)D concentrations were significantly lower among COVID-19 patients than the 2018-2019 controls [ln transformed values of 3.32 +or- 0.04 vs. 3.46 +or- 0.022 ln (nmol/L), P = 0.014]. Multivariable logistic regression showed that male sex (OR: 2.26; 95% CI: 1.06, 4.82), advanced age (65 y) (OR: 4.93; 95% CI: 1.44, 16.9), and vitamin D deficiency (<30 nmol/L) (OR: 2.72; 95% CI: 1.23, 6.01) were significantly associated with COVID-19 severity (all P < 0.05). Conclusions: These findings suggested that vitamin D deficiency impacts COVID-19 hospitalization and severity in the Chinese population.

Publication Type

Journal article.

<152>

Accession Number

20210104478

Author

Kain, M. P.; Childs, M. L.; Becker, A. D.; Mordecai, E. A.

Title

Chopping the tail: how preventing superspreading can help to maintain COVID-19 control.

Source

Epidemics; 2021. 34. many ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

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Abstract

Disease transmission is notoriously heterogeneous, and SARS-CoV-2 is no exception. A skewed distribution where few individuals or events are responsible for the majority of transmission can result in explosive, superspreading events, which produce rapid and volatile epidemic dynamics, especially early or late in epidemics. Anticipating and preventing superspreading events can produce large reductions in overall transmission rates. Here, we present a stochastic compartmental (SEIR) epidemiological model framework for estimating transmission parameters from multiple imperfectly observed data streams, including reported cases, deaths, and mobile phone-based mobility that incorporates individual-level heterogeneity in transmission using previous estimates for SARS-CoV-1 and SARS-CoV-2. We parameterize the model for COVID-19 epidemic dynamics by estimating a time-varying transmission rate that incorporates the impact of non-pharmaceutical intervention strategies that change over time, in five epidemiologically distinct settings—Los Angeles and Santa Clara Counties, California; Seattle (King County), Washington; Atlanta (DeKalb and Fulton Counties), Georgia; and Miami (Miami-Dade County), Florida. We find that the effective reproduction number (RE) dropped below 1 rapidly in all five locations following social distancing orders in mid-March, 2020, but that gradually increasing mobility starting around mid-April led to an RE once again above 1 in late May (Los Angeles, Miami, and Atlanta) or early June (Santa Clara County and Seattle). However, we find that increased social distancing starting in mid-July in response to epidemic resurgence once again dropped RE below 1 in all locations by August 14. We next used the fitted model to ask: how does truncating the individual-level transmission rate distribution (which removes periods of time with especially high individual transmission rates and thus models superspreading events) affect epidemic dynamics and control? We find that interventions that truncate the transmission rate distribution while partially relaxing social distancing are broadly effective, with impacts on epidemic growth on par with the strongest population-wide social distancing observed in April, 2020. Given that social distancing interventions will be needed to maintain epidemic control until a vaccine becomes widely available, "chopping off the tail" to reduce the probability of superspreading events presents a promising option to alleviate the need for extreme general social distancing.

Publication Type

Journal article.

<153>

Accession Number

20210104475

Author

Aronna, M. S.; Guglielmi, R.; Moschen, L. M.

Title

A model for COVID-19 with isolation, quarantine and testing as control measures.

Source

Epidemics; 2021. 34. many ref.

Publisher

Elsevier B.V.

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Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In this article we propose a compartmental model for the dynamics of Coronavirus Disease 2019 (COVID-19). We take into account the presence of asymptomatic infections and the main policies that have been adopted so far to contain the epidemic: social distancing, isolation of a portion of the population, quarantine for confirmed cases and testing. We refer to quarantine as strict isolation, and it is applied to confirmed infected cases. In the proposed model, the proportion of people in isolation, the level of contact reduction and the testing rate are control parameters that can vary in time, representing policies that evolve in different stages. We obtain an explicit expression for the basic reproduction number R_0 in terms of the parameters of the disease and of the control policies. In this way we can quantify the effect that isolation and testing have in the evolution of the epidemic. We present a series of simulations to illustrate different realistic scenarios. From the expression of R_0 and the simulations we conclude that isolation (social distancing) and testing among asymptomatic cases are fundamental actions to control the epidemic, and the stricter these measures are and the sooner they are implemented, the more effective they are in flattening the curve of infections. Additionally, we show that people that remain in isolation significantly reduce their probability of contagion, so risk groups should be recommended to maintain a low contact rate during the course of the epidemic.

Publication Type

Journal article.

<154>

Accession Number

20210104386

Author

Tian Jie; Wang QiYuan; Zhang Yong; Yan MengYuan; Liu HuiKun; Zhang NingNing; Ran WeiKang; Cao JunJi

Title

Impacts of primary emissions and secondary aerosol formation on air pollution in an urban area of China during the COVID-19 lockdown.

Source

Environment International; 2021. 150. many ref.

Publisher

Pergamon Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Restrictions on human activities were implemented in China to cope with the outbreak of the Coronavirus Disease 2019 (COVID-19), providing an opportunity to investigate the impacts of anthropogenic emissions on air quality. Intensive real-time measurements were made to compare primary emissions and secondary aerosol formation in Xi'an, China before and during the COVID-19 lockdown. Decreases in mass concentrations of particulate matter (PM) and its components were observed during the lockdown with reductions of 32-51%. The dominant contributor of PM was organic aerosol (OA), and results of a hybrid environmental receptor model indicated OA was composed of four primary OA (POA) factors (hydrocarbon-like OA (HOA), cooking OA (COA), biomass burning OA (BBOA), and coal combustion OA (CCOA)) and two oxygenated OA (OOA) factors (less-oxidized OOA (LO-OOA) and more-oxidized OOA (MO-OOA)). The mass concentrations of OA factors decreased from before to during the lockdown over a range of 17% to 58%, and they were affected by control measures and secondary processes. Correlations of secondary aerosols/CO with Ox (NO₂ + O₃) and aerosol liquid water content indicated that photochemical oxidation had a greater effect on the formation of nitrate and two OOAs than sulfate; however, aqueous-phase reaction presented a more complex effect on secondary aerosols formation at different relative humidity condition. The formation efficiencies of secondary aerosols were enhanced during the lockdown as the increase of atmospheric oxidation capacity. Analyses of pollution episodes highlighted the importance of OA, especially the LO-OOA, for air pollution during the lockdown.

Publication Type

Journal article.

<155>

Accession Number

20210104294

Author

Soorya Suresh; Atul Tiwari; Roshan Mathew; Jyothiswaroop Bhaskararayani; Sahu, A. K.; Praveen Aggarwal; Murmu, L. R.; Sanjeev Bhoi; Jamshed Nayer; Meera Ekka; Akshay Kumar; Prakash Mishra; Sinha, T. P.

Title

Predictors of mortality and the need of mechanical ventilation in confirmed COVID-19 patients presenting to the emergency department in north India.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):542-549. 15 ref.

Publisher

Medknow Publications

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Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background and Objectives: As the number of COVID-19 cases keeps on rising, a better awareness of the nature and severity of the disease will aid in clinical decision-making and management. Hence, this study was conducted to find the predictors of mortality and the need for mechanical ventilation in COVID-19 patients. **Methods:** This was a single centre, prospective observational study conducted in a tertiary care centre in north India. We included patients with influenza like illness who tested positive for COVID-19. Information regarding patient demography, symptoms, and vital signs on presentation, laboratory values, chest imaging findings, and disease severity was collected by the emergency physician. QSOFA score and National early warning score (NEWS) score were calculated using initial vital signs. Each patient was followed up till discharge or death. **Results:** We included 116 COVID-19 patients with 33 patients having mild, 46 patients with severe and 37 patients with critical disease. The median age of our patients was 47 years (39-59) with 63% males. About 58% of patients had at least one comorbidity and shortness of breath was the most common presenting feature. The patients with severe and critical disease had a significantly higher respiratory rate and heart rate as compared to mild disease ($p < 0.05$). SpO₂ of those with critical disease was significantly lower as compared to those with mild disease. Mechanical ventilation was required in around 36% of patients which included 67% of patients with critical disease. The overall mortality was 51% with 90% among critical disease. Lower SpO₂ and GCS were the only parameters that showed a significant association with mortality and need for mechanical ventilation. The receiver operating characteristics analysis showed NEWS score as a better predictor of mortality and need for mechanical ventilation as compared to qSOFA score. **Conclusion:** NEWS and qSOFA scores are useful tools in predicting fatal outcomes in COVID patients with NEWS score being a better score than qSOFA.

Publication Type

Journal article.

<156>

Accession Number

20210104291

Author

Reshma Rajan Sudha; Chintha Sujatha; Soumya Gopakumar; Libu, G. K.; Indu, P. S.; Suresh, R. O.; Divya Sadasivan; Preetha, P. P.

Title

Institutional quarantine centres as a strategy in control of COVID-19 outbreak: an evolving model from Kerala, India.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):527-532. 23 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: Institutional quarantine centres were set up in all districts in Kerala as a novel strategy in the fight against novel COVID-19 virus. These were meant for returnees from affected areas, for whom home quarantine was not possible due to lack of facilities. This research aims to evaluate facilities and services of Institutional quarantine centres in Thiruvananthapuram district, Kerala state and to study profile of persons under quarantine in these centres. **Methods:** A cross-sectional study was conducted to evaluate institutional quarantine centres established in Thiruvananthapuram district of Kerala in April 2020. Evaluation was done using a checklist based on standard operating procedures for functioning of centres issued by Health department. Inspection of facilities and registers was done. Details of a subset of inmates were collected by telephonic interviews using a semi-structured questionnaire. **Results:** Two (0.41%) inmates in the centre turned positive on testing while in quarantine. Both of them were foreign returnees and were asymptomatic. There was not a single case of transmission of infection between inmates or to staff and volunteers. The adherence to infection control practices was satisfactory in all centres. One third of inmates were from listed highly affected countries and were mandatorily quarantined. **Conclusion:** Institutional quarantine centres were functioning effectively to provide quarantine facilities for high-risk individuals and thereby controlling the spread of COVID-19. Selection of facilities, staffing pattern and day to day functioning of these centres is a model which can be replicated at other COVID-19 affected areas.

Publication Type

Journal article.

<157>

Accession Number

20210104288

Author

Singh, A. K.; Jain, P. K.; Singh, N. P.; Sandip Kumar; Bajpai, P. K.; Soni Singh; Mohan Jha

Title

Impact of COVID-19 pandemic on maternal and child health services in Uttar Pradesh, India.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):509-513. 20 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: In the wake of the Covid-19 Pandemic, parts of the public health system at increased risk of reduced efficiency include healthcare services for women and children. This in turn could reverse all the progress achieved over the years in reducing maternal and child mortality. In this study, an attempt has been made to assess the indirect effect of the pandemic on maternal and child health services in public health facilities. Methods: Data pertaining to maternal and child health services being provided under specific Government programmes, were collected from public health facilities of District Sant Kabir Nagar in Uttar Pradesh, India. Comparative analysis of the data from the pandemic phase with data from the year 2019 was done to determine the impact on services. Results: Reduced coverage across all maternal and child health interventions was observed in the study. There was an overall decrease of 2.26% in number of institutional deliveries. Antenatal care services were the worst affected with 22.91% decline. Immunization services were also dramatically decreased by more than 20%. Conclusion: The response of the public healthcare delivery system to the Covid-19 Pandemic is negatively affecting both the provision and utilization of maternal and child healthcare services. It is deterrent to the progress achieved in maternal and child health parameters over the years. Better response strategies should be put in place to minimize lag in service delivery.

Publication Type

Journal article.

<158>

Accession Number

20210104282

Author

Ansari, A. A. Z.; Desai, H. D.; Kamal Sharma; Jadeja, D. M.; Rahul Patel; Yesha Patel; Desai, H. M.

Title

Prevalence and cross states comparison of case fatality rate and recovery rate of COVID 19/SARS-CoV-2 in India.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):475-480. 29 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background and aim: CFR and RR are important indicator of disease pandemic. As of now no data is available about cross-states analysis of these. We aimed to evaluate CFR and RR of COVID-19 across majorly affected States in India. Method: We observed and compared data of confirmed COVID-19 cases, number of deaths, number of recovered/discharged cases and calculated CFR and RR across majorly affected States/UT in India from official database of Government of India, State Government official bulletin, accurate database worldometer. Results: The data showed that Gujarat, Madhya Pradesh, West Bengal reported highest CFR on 8th April, 22nd April, 6th May, 1st June 2020 (95% CI 4.91 - 6.99). Kerala showed encouraging recovery rates 24.32%, 70.31%, 93.24%, 45.81% on 8th and 22nd April, 6th May and 1st June 2020 respectively. India had an average estimated weekly Recovery rate of newly discharged/recovered cases was 32.68% from 19th March to 1st June 2020. (95% CI 20- 45.4%). (The Recovery rate across India was 80.83% as on 22nd September 2020.). Conclusion: The CFR of a disease varies greatly in different regions of the same Country and is influenced by numerous factors such as health control policies, medical standards, and detection efficiency and protocols apart from number of screening tests done. This comparison discusses need of evaluating policies with optimal reporting of medical history of affected persons when comparing COVID-19 case and fatality rates in different regions of the Country.

Publication Type

Journal article.

<159>

Accession Number

20210104279

Author

Neeraj Singla; Rudresh Gowda; Ritin Mohindra; Vikas Suri; Dhibar, D. P.; Navneet Sharma

Title

Clinical spectrum and outcome of patients visiting coronavirus screening centre in North India and clinical predictors for COVID-19.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):454-461. 28 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Aim: The aim of this study is to elucidate the demographics, symptoms and outcome of sick persons visiting coronavirus (COVID) screening OPD of a tertiary institute in North India. **Study Design:** The present descriptive, prospective study was done on 1030 patients and information about presenting symptoms, demographics (age, sex, nationality, residence), contact and travel history, comorbidities etc., were recorded. On the basis of criteria given by Indian Council of Medical Research, patients were divided into suspected (SARS-CoV-2) and non-suspected group. Of the suspected patients, with RT-PCR test positive were classified as confirmed COVID-19 case and negative RT-PCR symptomatic individual were defined as negative COVID-19 case. **Results:** Out of the total patients, 65.6% were male and 34.4% were females. The mean age was 37.04 years. Fever 49.3%, cough 57.1% and sore throat 43.5% were the main symptoms. Comorbidities were seen in 8.5% patients with hypertension (3.5%) and diabetes mellitus (3.4%). Forty patients were positive. Highly significant correlation ($P < 0.01$) was found between COVID-19 positive status and in patients without any symptoms, between COVID-19 and cough and sore throat, between COVID-19 and comorbidity (diabetes mellitus), between COVID-19 and high-risk exposures (resident of hot spot and history of contact with confirmed case). Our study also found COVID-19 positive status, shortness of breath and tachycardia as independent predictors of mortality ($P < 0.05$). **Conclusions:** Most of the patients were young adults and males were mainly affected. Main presentation was cough followed by fever. Infectivity was higher in patients who had underlying comorbid diseases, especially diabetes and chronic kidney disease. Critical patients with decreased oxygen saturation, tachypnoea and tachycardia had strong predictability for COVID-19 positivity. COVID-19 positive status, shortness of breath and tachycardia are important predictors of mortality.

Publication Type

Journal article.

<160>

Accession Number

20210104239

Author

Mukul Preetam; Aditya Anurag

Title

MuLBSTA score in COVID-19 pneumonia and prediction of 14.day mortality risk: a study in an Indian cohort.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):223-227. 15 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: The infectious agent which has caused the COVID-19 pandemic is a coronavirus named SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). On one end of the spectrum, a patient suffering from COVID-19 may be asymptomatic or have mild symptoms, while on the other end of the spectrum, a patient may develop numerous life-threatening complications. The way a host responds to infection by SARS-CoV-2 depends on various host factors like hypertension, old age, etc., The MuLBSTA scoring system takes into account various clinical and laboratory parameters and tries to predict the mortality risk for a patient. Besides, the validation of MuLBSTA score for mortality because of COVID-19 has not been extensively studied in an Indian set-up. This study is aimed at finding the association between the MuLBSTA score and the 14-day mortality risk because of COVID-19 in Indian population. **Materials and Methods:** This study included 122 patients who were receiving treatment for SARS-CoV-2 infection at a tertiary hospital in Ranchi, Jharkhand. The disease severity (as per the ICMR guidelines), the MuLBSTA score, and the disease outcome of all patients were noted and analyzed in this study. **Results:** A strong association was seen between a MuLBSTA score of 12 and the 14-day mortality risk in COVID-19 patients. **Conclusion:** The MuLBSTA scoring system is an easy to calculate model, which predicts the 14-day mortality risk because of SARS-CoV-2 infection. This may help the primary care physicians in stratifying and referring the patients who have a higher chance of developing severe complications.

Publication Type

Journal article.

<161>

Accession Number

20210104221

Author

Abhishek Royal; Mali, M. A.; Vaibhav Kumar; Wagh, I. A.; Shashi Bhushan; Mokal, A. N.; Kedar Mehta; Sudip Bhattacharya

Title

Harnessing the potential of the primary healthcare facilities in India to respond COVID-19 pandemic: a scoping evidence-based research synthesis.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):116-121. 35 ref.

Publisher

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Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 has resulted in an unprecedented loss of human lives and sufferings across the world. It has resulted in the collapse of public health systems and economy across the globe. As most of the national health systems lack organized surveillance infrastructure, resources, and expertise to respond to a pandemic, most of the countries failed to mount an effective response to contain the spread of this virus initially. As primary healthcare (PHC) has better access to the community, the settings where PHC services are inadequate or weak, hospitals are overwhelmed with patients, thus overburdening, and wasting meager specialist resources. PHC interventions can manage mild to moderate cases (>80% of total cases) and their contacts, along with addressing the needs of general population while only severe cases may require specialized hospital care. As PHC interventions have huge potential to tackle this pandemic, strengthening and inclusion of PHC in pandemic response could play a significant role in relieving the workload on secondary and tertiary healthcare facilities and minimizing loss of lives and its short and long term socioeconomic consequences. This article explores the scope and importance of strengthening PHC in breaking the chain of the transmission of this infectious disease, building an adequate response to minimize its disastrous consequences and prevent future emerging and reemerging disease outbreaks, if any.

Publication Type

Journal article.

<162>

Accession Number

20210104219

Author

Gaurav Singh; Harsh Priya; Deepika Mishra; Hemant Kumar; Nitika Monga; Kiran Kumari

Title

Oral manifestations and dental practice recommendations during COVID-19 pandemic.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):102-109. 43 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

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Country of Publication

India

Abstract

Oral health is a pivotal sign of overall health, well-being, and quality of life. With the emergence of COVID-19 pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), insights into the relationship between SARS-CoV-2 and oral diseases are urgently needed to elucidate the oral manifestations of SARS-CoV-2. The current review aims at analyzing various reports available on oral symptoms along with possible causation, their relationship to the time of occurrence of clinical symptoms, and to shape guidelines for dental practices that could help in combating this global pandemic. The common symptoms that patients report to the dental office even at the presymptomatic stage are ageusia (loss of taste), non-specific anosmia (loss of smell-not associated with rhinitis), and hyposalivation. Few studies also report unexplained ulcers in the oral cavity, desquamative gingivitis, herpetiform ulcers on attached gingiva, blisters/irregular ulcers on the tongue's dorsal surface enlargement of submandibular glands, and cervical lymph node enlargement. Dental surgeons should abide by the prevalent precautionary guidelines. They are at very high risk due to their close contact with patients and exposure to saliva and blood during treatment.

Publication Type

Journal article.

<163>

Accession Number

20210104217

Author

Garg, R. K.; Singh, G. P.; Rajiv Garg; Neeraj Kumar; Anit Parihar

Title

Severe COVID-19: a distinct entity.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):84-92. 62 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Severe coronavirus disease-2019 (COVID-19) is a distinct entity that rapidly evolves and may abruptly culminate in to a critical illness. As per Chinese experience, approximately, 15% of patients of COVID-19 progress to severe disease and 5% become critically ill. The incidence of severe and critical illness is higher among men, patients older than 65 years of age and in persons with other medical comorbidities. Cytokine storm cause pronounced lung damage and multiorgan failure. Coagulopathy is a key component of severe COVID-19. Critically ill patients are generally predisposed to a high risk of thromboembolism as well. Lymphopenia predisposes to severe disease. None of the antiviral or immunomodulators has proven efficacy in severe COVID-19. Supplemental oxygen need be administered in patients with hypoxemia. Excessive breathing effort, acute respiratory distress syndrome (ARDS), encephalopathy, and multiorgan failure are indications for mechanical ventilation. In a large number of patients, the overall outcome is poor. Health care workers in intensive care units are exposed to the enormous risk of acquiring hospital acquired SARS-COV-2 infection.

Publication Type

Journal article.

<164>

Accession Number

20210104215

Author

Chetanya Malik; Shilpa Khanna; Yogesh Jain; Rachna Jain

Title

Geriatric population in India: demography, vulnerabilities, and healthcare challenges.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):72-76. 21 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Global pandemic due to corona virus disease (COVID-19) has exposed vulnerabilities of the geriatric population all over the world. India has been adding progressively increasing number of elderly to its population. This is happening with increasing life expectancy and decreasing mortality. In comparison to children, the population as well as deaths in elderly are rising with changing demography. The elderly population has its own vulnerabilities based on education, socioeconomic condition, gender, place of residence etc. They are affected by various non-communicable diseases which form predominant cause of

morbidity and mortality like cardiovascular diseases, stroke, cancer, respiratory illnesses etc. The elderly also contribute to various kinds of disabilities like movement, vision, hearing and in many cases multiple disabilities. They are also more vulnerable to mental health problems and cognitive impairment. The article also suggests a way forward in dealing with rising geriatric age group and its associated problems. The programs supporting this population are largely scattered which needs to be consolidated to include social security, pension and food security along with health benefits. The approach to health care of the elderly needs a comprehensive strategy instead of the present fragmented approach where different disease based programs for non-communicable diseases, cancer and mental health cater to specific health issues of the elderly. Greater awareness, training and skill building in geriatric health for primary care physicians need focus and energy. Prioritizing training and research in this field including the need for more geriatricians has been highlighted.

Publication Type

Journal article.

<165>

Accession Number

20210104211

Author

Omna Shaki; Gupta, T. P.; Rai, S. K.

Title

COVID-19 pandemic - environmental perspective of COVID-19 and a primer for all of us.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):48-55. 45 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Coronavirus Disease (COVID-19) spread worldwide has created a global pandemic. To reduce the transmission of the virus, the Indian government had imposed a countrywide lockdown on 24 Mar 2020 by suspending all public transport and industries temporarily resulting in loss of jobs in multiple sectors and looming threats to the nation economy. Lockdown on the opposite hand has removed pollutants from the air and thus improved air quality in many cities across the globe. The near-total shutdown of all economic activities except related to essential commodities like medicine and food was only allowed which resulted in the lowering of carbon emission and improvement in global warming and air pollution. This review article

indented to bring important features of how the COVID-19 pandemic affects human civilization and the global environment. However, its epidemiology, symptom, possible prevention, and management will briefly describe. Authors have collected data from, PubMed, Embase, Scopus, WHO, and CDC (USA). Severe Acute Respiratory Syndrome is a result of COVID-19 infection. This virus is transmitted through close contact by respiratory droplets from one person to another. The majority of symptoms of COVID-19 are very much similar to any viral upper respiratory tract infection (Common Coryza). Any person with the slightest suspicion or has respiratory symptoms related to COVID-19 infection should wear a facemask, keep safe social distancing, observe cough/sneeze etiquettes. The COVID-19 pandemic has taught us a lesson to introspect the way humans are destroying the environment for their benefit. Whatever be the origin or cause, the occurrence of COVID-19 has made a foreground for us to improve the symbiotic relationship between humans, wildlife, and nature.

Publication Type

Journal article.

<166>

Accession Number

20210104209

Author

Gayathri Kuppuswamy; Uma Warriar

Title

COVID-19 and violence against doctors - why a law is needed?

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):35-40. 23 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Today, when India is reeling under the COVID-19 epidemic, a new epidemic disease (Amendment) Ordinance has been brought out with regard to protection of the health care staff, which is a big welcome step to the medical fraternity. A much-needed step. The assaults on doctors have been happening in hospitals in India for a long time. This review article traces the journey of the Prevention of the Doctors Violence Act and suggests a way forward with regard to violence on the doctors and why there must be a permanent solution for the same. Methodology is based on a detailed study across a range of published literature in journals, articles, and other online sources. An extensive review has been undertaken of these

articles based on an explanatory approach. The review provided insight into the current status of violence against doctors. Most of the initiatives on prevention of violence against doctors mentioned in the studies are mainly directed towards patient-doctor relationship, lack of infrastructure, strenuous working environment, and societal obligations. Study findings revealed that there was less emphasis on the current legal measures available and its implementation. This article highlights the critical aspect of protection of the health care workforce and also shares recommendations to enhance the protection of doctors at their workplace by sharing the current state-level legal measures available and advocates the impelling need for central legislation. These recommendations have been suggested as a combined effort of the medical fraternity, media, and the academic community.

Publication Type

Journal article.

<167>

Accession Number

20210104206

Author

Chandy, S. J.; Jaya Ranjalkar; Chandy, S. S.

Title

Collateral effects and ethical challenges in healthcare due to COVID-19 - a dire need to support healthcare workers and systems.

Source

Journal of Family Medicine and Primary Care; 2021. 10(1):22-26. 20 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 has affected the daily activities of people across the globe. The effects of the pandemic have not just been medical, but also societal and economical. The responses of government and the public have varied in different countries. Measures have ranged from improving hygiene, information dissemination, and social distancing to more radical measures such as social isolation, quarantine and lockdown. The disease and human responses have had consequences on the way we live, work, eat and rest. Life and livelihoods have been affected. This article highlights how the response to the pandemic has affected various aspects of healthcare and ethical dilemmas this has raised. As the pandemic progresses, awareness and evaluation of the unintended consequences of the pandemic and responses on our health and

healthcare systems are needed. Discussing these points and being aware of the ethical issues may help countries and policy makers plan suitable strategies to mitigate these collateral effects, especially as the pandemic continues. It is hoped that this article will support healthcare workers, especially those in primary and secondary healthcare, as they overcome various challenges to treat patients with existing and prior diseases, and encourage them to advocate for robust and sustainable healthcare systems for public health. This would then help effectively combat future epidemics. Most importantly, it can mitigate the adverse collateral effects on healthcare that the public are experiencing and the treatment dilemmas that family and primary care physicians are facing.

Publication Type

Journal article.

<168>

Accession Number

20210104107

Author

Cao Kai; Kline, B.; Han Ying; Ying GuiShuang; Wang NingLi

Title

Current evidence of 2019 Novel Coronavirus Disease (COVID-19) ocular transmission: a systematic review and meta-analysis.

Source

BioMed Research International; 2020. 2020(7605453). 30 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Objective. To estimate the prevalence rate of ocular symptoms and the positive rate of conjunctival swab samples of patients diagnosed with 2019 Novel Coronavirus Disease (COVID-19). **Methods.** We performed a systematic review and meta-analysis. A comprehensive literature search was done based on PubMed, Embase, MedRxiv, and the Cochrane Library. The primary outcomes are the prevalence rate of conjunctivitis/conjunctival congestion and the positive rate of conjunctival swab samples. Rates were expressed as proportions with 95% confidence intervals (CIs). **Results.** A total of 12 studies with 1930 participants were included for meta-analysis. The pooled prevalence rate of conjunctivitis/conjunctival congestion was 8% (95% CI: 5%-12%). 1% (95% CI: 1%-4%) of COVID-19 patients were diagnosed with conjunctivitis/conjunctival congestion as the initial symptom. The pooled positive rate of conjunctival swab

samples was 3% (95% CI: 2%-5%). We also assessed other ocular symptoms reported in the 12 studies, including foreign body sensation, increased secretion, and eye itching. The pooled prevalence rates were 6% (95% CI: 3%-10%), 10% (95% CI: 8%-12%), and 9% (95% CI: 7%-10%), respectively. Conclusions. The evidence on the positive rate of conjunctival swab samples and the prevalence rates of ocular symptoms indicated that COVID-19 ocular transmission was possible but less likely.

Publication Type

Journal article.

<169>

Accession Number

20210104100

Author

Yuan Hai; Cao XiaoGuang; Ji XiaoQj; Du FangBing; He JiaWei; Zhou Xuan; Xie YangHu; Zhu Yu

Title

An updated understanding of the current emerging respiratory infection: COVID-19.

Source

BioMed Research International; 2020. 2020(6870512). 125 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

According to the World Health Organization (WHO), the COVID-19 pandemic has been declared as a priority disease. Some patients with COVID-19 had symptoms of multiple organ failure and death. The published articles on COVID-19 infection were reviewed. The origin of SARS-CoV-2 is still not completely established. Person-to-person transmission via droplets, probable aerosols, or close contact is considered as the main mode of transmission. With increased mortality due to SARS-CoV-2, valuable clinical indicators or treatments should be further identified and summarized. CT scanning plays an important role in the diagnosis and evaluation of COVID-19 in asymptomatic patients or those with initially negative RT-PCR results. No specific antiviral therapy is recommended, except the main supportive treatments, and effective measures should be taken into consideration to protect important organs and prevent the development of acute respiratory distress syndrome (ARDS) in patients with severe infection.

Publication Type

Journal article.

<170>

Accession Number

20210104082

Author

Chebli, J. M. F.; Queiroz, N. S. F.; Damiao, A. O. M. C.; Chebli, L. A.; Costa, M. H. de M.; Parra, R. S.

Title

How to manage inflammatory bowel disease during the COVID-19 pandemic: a guide for the practicing clinician.

Source

World Journal of Gastroenterology; 2021. 27(11):1022-1042. 103 ref.

Publisher

Beijing Baishideng BioMed Scientific Co., Ltd.

Location of Publisher

Beijing

Country of Publication

China

Abstract

Managing inflammatory bowel disease (IBD) during the coronavirus disease 2019 (COVID-19) pandemic has been a challenge faced by clinicians and their patients, especially concerning whether to proceed with biologics and immunosuppressive agents in the background of a global outbreak of a highly contagious new coronavirus (severe acute respiratory syndrome coronavirus 2, SARS-CoV-2). The knowledge about the impact of this virus on patients with IBD, although it is still scarce, is rapidly evolving. In particular, concerns surrounding medications' impact for IBD on the risk of acquiring SARS-CoV-2 infection or developing COVID-19, and potentially exacerbate viral replication and the COVID-19 course, are a current thinking of both practicing clinicians and providers caring for patients with IBD. Managing patients with IBD infected with SARS-CoV-2 depends on both the clinical activity of the IBD and the occasional development and severity of COVID-19. In this review, we summarize the current data regarding gastrointestinal involvement by SARS-CoV-2 and pharmacologic and surgical management for IBD concerning this infection, and the COVID-19 impact on both the patient's psychological functioning and endoscopy services, and we concisely summarize the telemedicine roles during the COVID-19 pandemic.

Publication Type

Journal article.

<171>

Accession Number

20210104070

Author

Byrne, D.; O'Neill, S. B.; Muller, N. L.; Muller, C. I. S.; Walsh, J. P.; Jalal, S.; Parker, W.; Bilawich, A. M.; Nicolaou, S.

Title

RSNA expert consensus statement on reporting chest CT findings related to COVID-19: interobserver agreement between chest radiologists. (Special Issue: Artificial intelligence.)

Source

Canadian Association of Radiologists Journal; 2021. 72(1):159-166. 27 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

Purpose: To assess the interobserver variability between chest radiologists in the interpretation of the Radiological Society of North America (RSNA) expert consensus statement reporting guidelines in patients with suspected coronavirus disease 2019 (COVID-19) pneumonia in a setting with limited reverse transcription polymerase chain reaction testing availability. **Methods:** Chest computed tomography (CT) studies in 303 consecutive patients with suspected COVID-19 were reviewed by 3 fellowship-trained chest radiologists. Cases were assigned an impression of typical, indeterminate, atypical, or negative for COVID-19 pneumonia according to the RSNA expert consensus statement reporting guidelines, and interobserver analysis was performed. Objective CT features associated with COVID-19 pneumonia and distribution of findings were recorded. **Results:** The Fleiss kappa for all observers was almost perfect for typical (0.815), atypical (0.806), and negative (0.962) COVID-19 appearances ($P < .0001$) and substantial (0.636) for indeterminate COVID-19 appearance ($P < .0001$). Using Cramer V analysis, there were very strong correlations between all radiologists' interpretations, statistically significant for all (typical, indeterminate, atypical, and negative) COVID-19 appearances ($P < .001$). Objective CT imaging findings were recorded in similar percentages of typical cases by all observers. **Conclusion:** The RSNA expert consensus statement on reporting chest CT findings related to COVID-19 demonstrates substantial to almost perfect interobserver agreement among chest radiologists in a relatively large cohort of patients with clinically suspected COVID-19. It therefore serves as a reliable reference framework for radiologists to accurately communicate their level of suspicion based on the presence of evidence-based objective findings.

Publication Type

Journal article.

<172>

Accession Number

20210104007

Author

Scarano, A.; Inchingolo, F.; Lorusso, F.

Title

Environmental disinfection of a dental clinic during the COVID-19 pandemic: a narrative insight.

Source

BioMed Research International; 2020. 2020(8896812). 104 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Background. The control of biological hazard risk in health care and dental clinic environments represents a critical point in relation to the Covid-19 infection outbreak and international public health emergency. The purpose of the present review was to evaluate the scientific literature on the no-touch disinfection procedures in dental clinics aiming to limit transmission via airborne particles or fomites using no-touch procedures for environmental decontamination of dental clinics. **Methods.** An electronic database literature search was performed to retrieve research papers about Covid-19 and no-touch disinfection topics including full-length articles, editorials, commentaries, and outbreak studies. A total of 86 papers were retrieved by the electronic research. **Results.** No clinical article about the decontamination of a dental clinic during the Covid-19 pandemic was detected. About the topic of hospital decontamination, we found different no-touch disinfection procedures used in hospital against highly resistant organisms, but no data were found in the search for such procedures with respect to SARS-CoV-2: (1) aerosolized hydrogen peroxide, (2) H₂O₂ vapor, (3) ultraviolet C light, (4) pulsed xenon, and (5) gaseous ozone. One paper was retrieved concerning SARS-CoV-2; 32 documents focused on SARS and MERS. The cleaning and disinfection protocol of health care and dental clinic environment surfaces are essential elements of infection prevention programs, especially during the SARS-CoV-2 pandemic. **Conclusion.** The decontamination technique that best suits the needs of the dental clinic is peroxide and hypochlorous which can be sprayed via a device at high turbine speed with the ability of producing small aerosol particles, recommendable also for their low cost.

Publication Type

Journal article.

<173>

Accession Number

20210103996

Author

Nogueira-De-Almeida, C. A.; Ciampo, L. A. del; Ferraz, I. S.; Ciampo, I. R. L. del; Contini, A. A.; Ued, F. da V.

Title

COVID-19 and obesity in childhood and adolescence: a clinical review.

Source

Jornal de Pediatria; 2020. 96(5):546-558. 150 ref.

Publisher

Brazilian Society of Pediatrics

Location of Publisher

Porto Alegre

Country of Publication

Brazil

Abstract

Objective: To identify factors that contribute to the increased susceptibility and severity of COVID-19 in obese children and adolescents, and its health consequences. **Sources:** Studies published between 2000 and 2020 in the PubMed, MEDLINE, Scopus, SciELO, and Cochrane databases. **Summary of findings:** Obesity is a highly prevalent comorbidity in severe cases of COVID-19 in children and adolescents; social isolation may lead to increase fat accumulation. Excessive adipose tissue, deficit in lean mass, insulin resistance, dyslipidemia, hypertension, high levels of proinflammatory cytokines, and low intake of essential nutrients are factors that compromise the functioning of organs and systems in obese individuals. These factors are associated with damage to immune, cardiovascular, respiratory, and urinary systems, along with modification of the intestinal microbiota (dysbiosis). In severe acute respiratory syndrome coronavirus 2 infection, these organic changes from obesity may increase the need for ventilatory assistance, risk of thromboembolism, reduced glomerular filtration rate, changes in the innate and adaptive immune response, and perpetuation of the chronic inflammatory response. **Conclusions:** The need for social isolation can have the effect of causing or worsening obesity and its comorbidities, and pediatricians need to be aware of this issue. Facing children with suspected or confirmed COVID-19, health professionals should 1. diagnose excess weight; 2. advise on health care in times of isolation; 3. screen for comorbidities, ensuring that treatment.

Publication Type

Journal article.

<174>

Accession Number

20210103871

Author

Lafaurie, M.; Martin-Blondel, G.; Delobel, P.; Kamar, N.; Charpentier, S.; Sommet, A.; Moulis, G.

Title

Impact of previous exposure to systemic corticosteroids on unfavorable outcome in patients hospitalized for COVID-19.

Source

BMC Pharmacology and Toxicology; 2021. 22(14):(11 March 2021). 13 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The impact of prior exposure to systemic corticosteroids on COVID-19 severity in patients hospitalized for a SARS-CoV-2 pneumonia is not known. The present study was designed to answer to this question. **Methods:** The population study was the Covid-Clinic-Toul cohort which records data about all hospitalized patients with a positive reverse transcriptase polymerase chain reaction for a SARS-CoV-2 infection at Toulouse University hospital, France. Exposure to systemic corticosteroids was assessed at hospital admission. A propensity score (PS) according to corticosteroid exposure was calculated including comorbidities, clinical, radiological and biological variables that impact COVID-19 severity. The primary outcome was composite, including admission to intensive care unit, need of mechanical ventilation and death occurring during the 14 days after hospital admission. Logistic regression models adjusted for the PS (overlap weighting) provided odds ratios (ORs) and their 95% confidence intervals (95% CIs). **Results:** Overall, 253 patients were included in the study. Median age was 64 years, 140 patients (59.6%) were men and 218 (86.2%) had at least one comorbidity. Seventeen patients (6.7%) were exposed to corticosteroids before hospital admission. Chronic inflammatory disease (n = 8) was the most frequent indication. One hundred and twenty patients (47.4%) met the composite outcome. In the crude model, the OR of previous exposure to systemic corticosteroids was 1.64; 95% CI: 0.60-4.44. In the adjusted model, it was 1.09 (95% CI: 0.65-1.83). **Conclusion:** Overall, this study provide some evidences for an absence of an increased risk of unfavorable outcome with previous exposure to corticosteroids in the general setting of patients hospitalized for COVID-19.

Publication Type

Journal article.

<175>

Accession Number

20210103834

Author

Kobashi, Y.; Shimazu, Y.; Nishikawa, Y.; Kawamura, T.; Kodama, T.; Obara, D.; Tsubokura, M.

Title

The difference between IgM and IgG antibody prevalence in different serological assays for COVID-19; lessons from the examination of healthcare workers.

Source

International Immunopharmacology; 2021. 92. 15 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objectives: The objective of this study was to investigate the differences between the results of two serology assays for detection of COVID-19 among medical staff, who are at higher risks of infection. **Methods:** The immunochromatography (ICG) rapid test kit and the chemiluminescence immunoassay (CLIA) quantitative antibody test were performed. The differences in IgM and IgG antibody prevalence in different serological assays were descriptively analyzed. **Results:** A total of 637 participants were included in this research. Two staff were IgM positive in the CLIA quantitative antibody test (cutoff value: 10 AU/ml) of 51 staff who were IgM positive in the rapid test kit. Six staff were IgG positive in the CLIA quantitative antibody test of 56 staff who were IgG positive in the rapid test kit. The proportion of antibody positive staff differed greatly between the rapid test kit and the CLIA quantitative antibody test. **Conclusions:** There was a vast difference in the proportions of IgG and IgM antibody positive staff in the rapid test kit and the CLIA quantitative antibody test results. The results from the only rapid test kit might have to be interpreted with caution. Further studies to evaluate antibody testing accuracy are required to promote the understanding of each assay's characteristics and determine their purposes in each community.

Publication Type

Journal article.

<176>

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Accession Number

20210103820

Author

Tendal, B.; Vogel, J. P.; McDonald, S.; Norris, S.; Cumpston, M.; White, H.; Leder, K.; Navarro, D. F.; Cheyne, S.; Samantha Chakraborty; Murano, M.; Millard, T.; Callesen, H. E.; Islam, R. M.; Elliott, J.; Turner, T.

Title

Weekly updates of national living evidence-based guidelines: methods for the Australian living guidelines for care of people with COVID-19.

Source

Journal of Clinical Epidemiology; 2021. 131:11-21. 38 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Background and Objectives: The Australian National COVID-19 Clinical Evidence Taskforce is a consortium of 31 Australian health professional organisations developing living, evidence-based guidelines for care of people with COVID-19, which are updated weekly. This article describes the methods used to develop and maintain the guidelines. **Methods:** The guidelines use the GRADE methods and are designed to meet Australian NHMRC standards. Each week, new evidence is reviewed, current recommendations are revised, and new recommendations made. These are published in MAGIC and disseminated through traditional and social media. Relevant new questions to be addressed are continually sought from stakeholders and practitioners. For prioritized questions, the evidence is actively monitored and updated. Evidence surveillance combines horizon scans and targeted searches. An evidence team appraises and synthesizes evidence and prepares evidence-to-decision frameworks to inform development of recommendations. A guidelines leadership group oversees the development of recommendations by multidisciplinary guidelines panels and is advised by a consumer panel. **Results:** The Taskforce formed in March 2020, and the first recommendations were published 2 weeks later. The guidelines have been revised and republished on a weekly basis for 24 weeks, and as of October 2020, contain over 90 treatment recommendations, suggesting that living methods are feasible in this context. **Conclusions:** The Australian guidelines for care of people with COVID-19 provide an example of the feasibility of living guidelines and an opportunity to test and improve living evidence methods.

Publication Type

Journal article.

<177>

Accession Number

20210103806

Author

Niknezhad, B.; Saeidi, P.; Far, A. A.

Title

Assessing the status of behavioral-psychological tendencies of people related to child services during the outbreak of COVID-19 virus. [Persian]

Source

Razi Journal of Medical Sciences; 2020. 27(9):79-87. 23 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background and Aims: Today, customers are the most important assets of any organization and organizations that strive to have committed and loyal customers have taken a big step towards success (3). In the meantime, paying attention to important aspects of customer orientation can have positive and desirable effects on their decisions and behaviors and also subject customers' behaviors to fundamental changes (4). In this regard, one of the important functions of customer orientation and customer attention in industries and companies is to influence the behavioral tendencies of customers (5). Behavioral tendencies influence the behavior of influential people and increase the likelihood of performing a behavior and improve their loyalty, as well as the likelihood of customers buying (6, 7). Improving customer behavioral tendencies and adapting it to industry policies has been one of the constant concerns of managers. In an effort to align customer behavioral tendencies with the services provided by companies and organizations (8). The outbreak of Covid-19 virus has disrupted people's lives due to economic, social, occupational and psychological problems. Due to the lack of vaccines, non-pharmacological interventions are the only way to prevent the disease, which significantly affects the daily habits of the body, mental conditions, social and economic status (12). Meanwhile, the criteria of social distance, school closures and work environments challenge people and lead to many psychological problems that will have long-term effects (13). Coronary heart disease is now a pandemic. While this pandemic is spreading rapidly around the world, it has caused fear and anxiety among the general public (14). Also, the spread of this virus while involving industries has caused the world to face major challenges from an economic, political, social and cultural perspective (15). Understanding the behavioral tendencies of customers in some markets, including the opening of child services in the event of a Quid-19 virus outbreak, can help to determine the current state of customer tendencies in these markets. This issue undoubtedly raises the necessary concern to respond to the above situation in order to improve the behavior and psychology of customers in the child service market. Therefore, the researcher is trying to answer the question, what is the state of behavioral and psychological tendencies of these people at the time of the outbreak of Quid-19 virus? Methods: The present study was a descriptive-survey and applied research that was conducted in the field. The statistical population of this study consisted of all people related to child services in Gorgan, but unfortunately accurate statistics were not available. Based on the Cochran sample size formula in the uncertainty of the community, 384 people were identified as the research sample. To identify the research samples, we first referred to some stores active in the field of child services market in Gorgan. In selecting these stores, we tried to consider the geographical areas of Gorgan. After obtaining the necessary licenses to obtain initial

information from some customers of these stores, the contact information of some of these customers was received and through the information system of the stores, the link of the research questionnaire was sent for research samples. Due to the possibility of a large drop in research samples, 400 text messages were sent to customers of the child services market in Gorgan. After distributing and collecting research questionnaires, 327 questionnaires were collected and analyzed. Data collection tools included the standard questionnaire of Bayrak et al. (2016) and the researcher-made psychological inclination questionnaire. Finally, descriptive statistics, Smirnov clomograph test, one-sample t-test, independent t-test, one-way analysis of variance and Tukey's follow-up were used to compare the behavioral tendencies of the research samples. The whole process of data analysis was performed in SPSS software version 20. Results: The results showed that there is a significant difference between the levels of behavioral and psychological tendencies and also the post hoc test between all groups in all components. Table 2 shows the results of the independent t-test on the status of behavioral and psychological tendencies at the time of the outbreak of Quid-19 virus according to gender characteristics. The results showed that there was a significant difference between the behavioral and psychological tendencies of male and female samples of child service market customers during the outbreak of Quid-19 virus. It was also found that the average behavioral and psychological tendencies of the research samples at the time of the outbreak of Quaid-19 virus were lower than 0.05, which indicates the undesirable behavioral and psychological tendencies of customers. Conclusion: The present study showed that the level of behavioral and psychological tendencies of customers in the child services market at the time of the outbreak of Quid-19 virus among the research samples is significantly lower than the desired level (number 3). Low visibility of this disease not only threatens the physical health of people, but also affects the mental health of people, especially in terms of emotions and cognition. Prolonged negative emotions reduce a person's immune function and upset the balance of their normal physiological mechanisms. People may overreact to any illness, leading to avoidant behaviors. Uncertainty about the future also causes cognitive inconsistencies and insecurity, and people behave conservatively and cautiously when they feel threatened by illness (21). These cases may be the reason for the undesirable behavioral and psychological tendencies of customers.

Publication Type

Journal article.

<178>

Accession Number

20210103782

Author

Corm, M.; Boxall, A. M.; Hullick, C.; Booth, M.; Gruen, R. L.

Title

A purple patch for evidence-based health policy?

Source

Australian Health Review; 2021. 45(1):74-76. 12 ref.

Publisher

CSIRO

Location of Publisher

Collingwood

Country of Publication

Australia

Abstract

The global focus on nation states' responses to the COVID-19 pandemic has rightly highlighted the importance of science and evidence as the basis for policy action. Those with a lifelong passion for evidence-based policy (EBP) have lauded Australia's and other nations' policy responses to COVID-19 as a breakthrough moment for the cause. This article reflects on the complexity of the public policy process, the perspectives of its various actors, and draws on Alford's work on the Blue, Red and Purple zones to propose a more nuanced approach to advocacy for EBP in health. We contend that the pathway for translation of research evidence into routine clinical practice is relatively linear, in contrast to the more complex course for translation of evidence to public policy - much to the frustration of health researchers and EBP advocates. Cairney's description of the characteristics of successful policy entrepreneurs offers useful guidance to advance EBP and we conclude with proposing some practical mechanisms to support it. Finally, we recommend that researchers and policy makers spend more time in the Purple zone to enable a deeper understanding of, and mutual respect for, the unique contributions made by research, policy and political actors to sound public policy.

Publication Type

Journal article.

<179>

Accession Number

20210103758

Author

Venkatraman Radhakrishnan; Ovet, J.; Aruna Rajendran; Saikrishna Kolluru; Vishwajeeth Pai; Vijay Gnanaguru; Manikandan Dhanushkodi; Kalaiyarasi, J. P.; Nikita Mehra; Gangothri Selvarajan; Rajan, A. K.; Parathan Karunakaran; Sivasree Kesana; Tenali Sagar

Title

COVID19 in children with cancer in low- and middle-income countries: experience from a cancer center in Chennai, India.

Source

Pediatric Hematology and Oncology; 2021. 38(2):161-167. 20 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Crowded outpatient clinics and common wards in many hospitals in low and middle-income countries predispose children, caregivers, and health care workers to infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). We report on the clinical features and outcomes of 15 children with cancer at our center who tested positive for SARS-CoV-2. Five out of 15 patients were symptomatic, and one patient required intensive care and respiratory support. All the patients in the study have recovered from the SARS-CoV-2 infection without any sequelae and have resumed their cancer treatment.

Publication Type

Journal article.

<180>

Accession Number

20210103753

Author

Surmelioglu, N.; Yalcin, N.; Kuscü, F.; Candevir, A.; Inal, A. S.; Komur, S.; Kurtaran, B.; Demirkan, K.; Tasova, Y.

Title

Physicians' knowledge of potential COVID-19 drug-drug interactions: an online survey in Turkey.

Source

Postgraduate Medicine; 2021. 133(2):237-241. 23 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Objectives: Given the many medications used to treat novel coronavirus disease (COVID-19) and its comorbidities and complications, the risk of drug-drug interactions (DDIs) and resulting patient harm is concerning. This study aimed to shed light on physicians' knowledge of potential DDIs related to COVID-19 treatment, to determine the effect of an information brief about these DDIs on their correct response rates, and to identify factors associated with higher levels of knowledge about these DDIs. **Methods:** The

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knowledge of physicians regarding the clinical significance and intervention of 7 common potential DDIs during COVID-19 treatment was evaluated via an online survey. Using a pretest-posttest design, the physicians completed a multiple-choice questionnaire first using their existing knowledge, then received an information brief about the DDIs and completed the same questionnaire again. Pretest and posttest scores were evaluated and factors affecting correct response rates were determined using correlation, regression, and post-hoc analyzes. Results: A total of 244 physicians participated in the survey, 147 (60.2%) of whom were involved in the treatment of COVID-19 patients. After the information brief, there were significant increases in the number of correct responses for both clinical significance and interventions ($p < 0.0001$). In comparisons of pretest knowledge, physicians involved in the treatment of COVID-19 patients showed significantly higher correct response rate for interventions compared to physicians who had not treated COVID-19 patients ($p = 0.003$). Post-hoc analysis to compare pretest correct intervention responses among all medical specialties revealed significant differences between infectious diseases and family practice (mean difference: 1.059; $p = 0.005$) and between internal medicine and family practice (mean difference: 1.771; $p < 0.0001$). Conclusion: Physicians involved in the treatment of COVID-19 patients had more knowledge regarding clinical significance and appropriate management of potential DDIs than those not involved. Therefore, it may be beneficial to organize trainings and issue guidelines about potential DDIs for physicians during the COVID-19 pandemic.

Publication Type

Journal article.

<181>

Accession Number

20210103752

Author

Arslan, H. N.; Karabekiroglu, A.; Terzi, O.; Dundar, C.

Title

The effects of the COVID-19 outbreak on physicians' psychological resilience levels.

Source

Postgraduate Medicine; 2021. 133(2):223-230. 53 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Background: Health-care workers exposed to coronavirus19 disease could be psychologically stressed. The objective of this study is to assess the anxiety, depression levels, and psychological resilience of physicians working during the Covid-19 outbreak and to evaluate the related factors that are associated with their psychological resilience. Methods: The sample of this descriptive study was composed of medical doctors and dentists. The data were obtained online between April 13-23, 2020 through a survey prepared by the researchers. In addition, a questionnaire about the participants' sociodemographic characteristics, the Psychological Resilience Scale and Hospital Anxiety Depression Scale (HAD-A/HAD-D) was given. Results: The average age of the 671 participants was 44.0 +or- 9.0 years. Psychological resilience scores were significantly higher in those who had children, who had worked for 15 years or more, and who had received training about COVID-19 ($p < 0.05$). Depression scores were higher among women and in those who reported having a chronic disease, whose workload increased after the outbreak, and who had physical contact with COVID-positive patients. The anxiety scores were also higher among women and in those whose workload had increased and who had contact with COVID-positive patients ($p < 0.05$). The physicians with scores below the cutoff point on the HAD-D/HAD-A had significantly higher scores on the Psychological Resilience Scale ($p < 0.05$). Discussion: Depression and anxiety levels were found to be significantly lower in physicians with greater psychological resilience. Psychological and social support of all health-care workers, especially physicians, is important in the struggle with the pandemic. It is thought that determining the variables related to psychological resilience in health-care workers will be a guide for psychosocial services.

Publication Type

Journal article.

<182>

Accession Number

20210103722

Author

Dar, M.; Swamy, L.; Gavin, D.; Theodore, A.

Title

Mechanical-ventilation supply and options for the COVID-19 pandemic.

Source

Annals of the American Thoracic Society; 2021. 18(3):408-416. 86 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

The novel coronavirus disease (COVID-19) has exposed critical supply shortages both in the United States and worldwide, including those in intensive care unit (ICU) and hospital bed supply, hospital staff, and mechanical ventilators. Many of those who are critically ill have required days to weeks of supportive invasive mechanical ventilation (IMV) as part of their treatment. Previous estimates set the U.S. availability of mechanical ventilators at approximately 62,000 full-featured ventilators, with 98,000 non-full-featured devices (including noninvasive devices). Given the limited availability of this resource both in the United States and in low- and middle-income countries, we provide a framework to approach the shortage of IMV resources. Here we discuss evidence and possibilities to reduce overall IMV needs, discuss strategies to maximize the availability of IMV devices designed for invasive ventilation, discuss the underlying methods in the literature to create and fashion new sources of potential ventilation that are available to hospitals and front-line providers, and discuss the staffing needs necessary to support IMV efforts. The pandemic has already pushed cities like New York and Boston well beyond previous ICU capacity in its first wave. As hot spots continue to develop around the country and the globe, it is evident that issues may arise ahead regarding the efficient and equitable use of resources. This unique challenge may continue to stretch resources and require care beyond previously set capacities and boundaries. The approaches presented here provide a review of the known evidence and strategies for those at the front line who are facing this challenge.

Publication Type

Journal article.

<183>

Accession Number

20210103721

Author

Hopkins, S. R.; Dominelli, P. B.; Davis, C. K.; Guenette, J. A.; Luks, A. M.; Molgat-Seon, Y.; Sa, R. C.; Sheel, A. W.; Swenson, E. R.; Stickland, M. K.

Title

Face masks and the cardiorespiratory response to physical activity in health and disease.

Source

Annals of the American Thoracic Society; 2021. 18(3):399-407. 77 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

To minimize transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the novel coronavirus responsible for coronavirus disease (COVID-19), the U.S. Centers for Disease Control and Prevention and the World Health Organization recommend wearing face masks in public. Some have expressed concern that these may affect the cardiopulmonary system by increasing the work of breathing, altering pulmonary gas exchange and increasing dyspnea, especially during physical activity. These concerns have been derived largely from studies evaluating devices intentionally designed to severely affect respiratory mechanics and gas exchange. We review the literature on the effects of various face masks and respirators on the respiratory system during physical activity using data from several models: cloth face coverings and surgical masks, N95 respirators, industrial respirators, and applied highly resistive or high-dead space respiratory loads. Overall, the available data suggest that although dyspnea may be increased and alter perceived effort with activity, the effects on work of breathing, blood gases, and other physiological parameters imposed by face masks during physical activity are small, often too small to be detected, even during very heavy exercise. There is no current evidence to support sex-based or age-based differences in the physiological responses to exercise while wearing a face mask. Although the available data suggest that negative effects of using cloth or surgical face masks during physical activity in healthy individuals are negligible and unlikely to impact exercise tolerance significantly, for some individuals with severe cardiopulmonary disease, any added resistance and/or minor changes in blood gases may evoke considerably more dyspnea and, thus, affect exercise capacity.

Publication Type

Journal article.

<184>

Accession Number

20210103714

Author

Li, Y.; Duche, A.; Sayer, M. R.; Roosan, D.; Khalafalla, F. G.; Ostrom, R. S.; Totonchy, J.; Roosan, M. R.

Title

SARS-CoV-2 early infection signature identified potential key infection mechanisms and drug targets.

Source

BMC Genomics; 2021. 22(125):(18 February 2021). 78 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The ongoing COVID-19 outbreak has caused devastating mortality and posed a significant threat to public health worldwide. Despite the severity of this illness and 2.3 million worldwide deaths, the disease mechanism is mostly unknown. Previous studies that characterized differential gene expression due to SARS-CoV-2 infection lacked robust validation. Although vaccines are now available, effective treatment options are still out of reach. Results: To characterize the transcriptional activity of SARS-CoV-2 infection, a gene signature consisting of 25 genes was generated using a publicly available RNA-Sequencing (RNA-Seq) dataset of cultured cells infected with SARS-CoV-2. The signature estimated infection level accurately in bronchoalveolar lavage fluid (BALF) cells and peripheral blood mononuclear cells (PBMCs) from healthy and infected patients (mean 0.001 vs. 0.958; $P < 0.0001$). These signature genes were investigated in their ability to distinguish the severity of SARS-CoV-2 infection in a single-cell RNA-Sequencing dataset. TNFAIP3, PPP1R15A, NFKBIA, and IFIT2 had shown bimodal gene expression in various immune cells from severely infected patients compared to healthy or moderate infection cases. Finally, this signature was assessed using the publicly available ConnectivityMap database to identify potential disease mechanisms and drug repurposing candidates. Pharmacological classes of tricyclic antidepressants, SRC-inhibitors, HDAC inhibitors, MEK inhibitors, and drugs such as atorvastatin, ibuprofen, and ketoconazole showed strong negative associations (connectivity score < -90), highlighting the need for further evaluation of these candidates for their efficacy in treating SARS-CoV-2 infection. Conclusions: Thus, using the 25-gene SARS-CoV-2 infection signature, the SARS-CoV-2 infection status was captured in BALF cells, PBMCs and postmortem lung biopsies. In addition, candidate SARS-CoV-2 therapies with known safety profiles were identified. The signature genes could potentially also be used to characterize the COVID-19 disease severity in patients' expression profiles of BALF cells.

Publication Type

Journal article.

<185>

Accession Number

20210103703

Author

Mehak Agarwal; Prithvi Ravi; Chitra Ramesh; Neslin, J.

Title

Impact of the COVID-19 pandemic on the mental health and lifestyle of health care workers in southern India.

Source

National Journal of Community Medicine; 2021. 12(1):1-7. 14 ref.

Publisher

Department of Community Medicine, Surat Municipal Institute of Medical Education and Research

Location of Publisher

Surat

Country of Publication

India

Abstract

Introduction: The Covid-19, just like any other Pandemic has been an extremely difficult time for people all over the world; however it has been the most challenging time for the frontline staff such as health care workers. It has not just led to changes in their work environment, but has also affected their lifestyle and mental health. **Background:** We conducted this survey to analyse the impact of the covid-19 pandemic on the lifestyle and mental health of health care workers. **Methodology:** A cross-sectional study was conducted with the help of a questionnaire. A questionnaire was created and circulated via social media to various health care professionals. Response from participants was analysed using SPSS 16 version software and MS excel sheet. **Result:** The survey reported the impact on physical and mental health. It was studied that most health care Professionals, especially the ones working in a covid environment, experienced sleep disturbances, diet and weight change, change in the level of physical activity, bowel disturbances, smoking and alcohol habit changes, mood swings, anxiety, fear, inability to concentrate, fatigue/burnout from work. **Conclusion:** These changes affecting the lives of health care workers should be addressed as they can have permanent effects. Mental and physical health of medical professionals is essential, and attention should be extended to help them cope with their difficulties.

Publication Type

Journal article.

<186>

Accession Number

20210103702

Author

Yapar, N.; Ucan, E. S.; Bayraktar, F.; Gokmen, N.; Sayiner, A.; Kuruuzum, Z.; Bayram, B.; Cavus, S. A.; Kilinc, O.; Oguz, V. A.; Savran, Y.; Kucukguclu, S.; Celiloglu, M.

Title

COVID-19 pandemic action plan of a university hospital.

Source

Turkish Thoracic Journal; 2021. 22(1):95-98. 6 ref.

Publisher

AVES Publishing

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

In December 2019, in Wuhan, China, scientists observed a sudden and sharp increase in the number of cases of pneumonia and acute respiratory distress syndrome of an unknown origin. By the end of January 2020, the outbreak had spread to Asia, Europe, America, and Australia. In this article, we have outlined the pandemic action plan of our university hospital.

Publication Type

Journal article.

<187>

Accession Number

20210103684

Author

Guven, A. T.

Title

Persisting COVID-19 symptoms causing anxiety and inappropriate healthcare admissions.

Source

Turkiye Klinikleri tip Bilimleri Dergisi; 2021. 41(1):107-108.

Publisher

Ortadogu Reklam Tanitum Yayincilik Turizm

Location of Publisher

Balgat

Country of Publication

Turkey

Abstract

Coronavirus disease-2019 (COVID-19) infection has a variable disease course among patients. Although majority have either no or mild symptoms, symptomatic patients suffer persistence of mild symptoms, such as fatigue, headache or cough. It has been shown that less than 1 out of 7 patients is asymptomatic after 2 months of diagnose. These symptomatic patients seek healthcare assistance repeatedly and anxiously for their mild prolonged symptoms. Simple reassurance can be pursued instead of detailed investigation in these anxious symptomatic patients. Patients can be informed about the disease course. Media can be effectively used to promote information about the disease course to reduce unnecessary healthcare admissions. Healthcare providers can implement measures to guidelines for healthcare professionals. Further studies should be conducted to bring solutions to issues mentioned in this observation.

Publication Type

Journal article.

<188>

Accession Number

20210103627

Author

Khader, Y. S.; Shattnawi, K. K.; Al-Sheyab, N.; Alyahya, M.; Batieha, A.

Title

The usability of Jordan stillbirths and neonatal deaths surveillance (JSANDS) system: results of focus group discussions.

Source

Archives of Public Health; 2021. 79(29):(07 March 2021). 22 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Jordan Stillbirths and Neonatal Deaths Surveillance system (JSANDS) is a newly developed system and is currently implemented in five large hospitals in Jordan. This study aimed at exploring the healthcare professionals' perception about the usability of JSANDS. Methods: A descriptive qualitative approach, using focus group discussions, was adopted. A total of 5 focus groups including 23 focal points were conducted in five participating hospitals in Jordan. Results: Data analysis identified nine main issues related to the JSANDS system: the system usefulness, the system performance, data quality, the system limitations, human rights, female empowerment, nurses' competencies strengthened, the sustainability of the JSANDS, and COVID-19 impact on the system. Users reported that JSANDS data were useful, the system was simple and easy to use, and the data were accurate and complete. However, some users reported that some technical issues need to be enhanced. Conclusions: JSANDS was perceived positively by the current users. According to them, it provides a formative and comprehensive data on stillbirths and neonatal deaths and their causes, and therefore, was recommended to be adopted by its users and scaled up.

Publication Type

Journal article.

<189>

Accession Number

20210103613

Author

Kohli, M.; Maschio, M.; Becker, D.; Weinstein, M. C.

Title

The potential public health and economic value of a hypothetical COVID-19 vaccine in the United States: use of cost-effectiveness modeling to inform vaccination prioritization.

Source

Vaccine; 2021. 39(7):1157-1164. 35 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Researchers are working at unprecedented speed to develop a SARS-CoV-2 vaccine. We aimed to assess the value of a hypothetical vaccine and its potential public health impact when prioritization is required due to supply constraints. Methods: A Markov cohort model was used to estimate COVID-19 related direct medical costs and deaths in the United States (US), with and without implementation of a 60% efficacious vaccine. To prioritize the vaccine under constrained supply, the population was divided into tiers based on age; risk and age; and occupation and age; and outcomes were compared across one year under various supply assumptions. The incremental cost per quality-adjusted life-year (QALY) gained versus no vaccine was calculated for the entire adult population and for each tier in the three prioritization schemes. Results: The incremental cost per QALY gained for the US adult population was \$8,200 versus no vaccination. For the tiers at highest risk of complications from COVID-19, such as those ages 65 years and older, vaccination was cost-saving compared to no vaccination. The cost per QALY gained increased to over \$94,000 for those with a low risk of hospitalization and death following infection. Results were most sensitive to infection incidence, vaccine price, the cost of treating COVID-19, and vaccine efficacy. Under the most optimistic supply scenario, the hypothetical vaccine may prevent 31% of expected deaths. As supply becomes more constrained, only 23% of deaths may be prevented. In lower supply scenarios, prioritization becomes more important to maximize the number of deaths prevented. Conclusions: A COVID-19 vaccine is predicted to be good value for money (cost per QALY gained <\$50,000). The speed at which an effective vaccine can be made available will determine how much morbidity and mortality may be prevented in the US.

Publication Type

Journal article.

<190>

Accession Number

20210103612

Author

Wong, M. C. S.; Wong, E. L. Y.; Huang JunJie; Cheung, A. W. L.; Law, K.; Chong, M. K. C.; Ng, R. W. Y.; Lai, C. K. C.; Boon, S. S.; Lau, J. T. F.; Chen ZiGui; Chan, P. K. S.

Title

Acceptance of the COVID-19 vaccine based on the health belief model: a population-based survey in Hong Kong.

Source

Vaccine; 2021. 39(7):1148-1156. 37 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Vaccines for COVID-19 are anticipated to be available by 2021. Vaccine uptake rate is a crucial determinant for herd immunity. We examined factors associated with acceptance of vaccine based on (1). constructs of the Health Belief Model (HBM), (2). trust in the healthcare system, new vaccine platforms and manufacturers, and (3). self-reported health outcomes. Methods: A population-based, random telephone survey was performed during the peak of the third wave of COVID-19 outbreak (27/07/2020 to 27/08/2020) in Hong Kong. All adults aged 18 years were eligible. The survey included sociodemographic details; self-report health conditions; trust scales; and self-reported health outcomes. Multivariable regression analyses were applied to examine independent associations. The primary outcome is the acceptance of the COVID-19 vaccine. Results: We conducted 1200 successful telephone interviews (response rate 55%). The overall vaccine acceptance rate after adjustment for population distribution was 37.2% (95% C.I. 34.5-39.9%). The projected acceptance rates exhibited a "J-shaped" pattern with age, with higher rates among young adults (18-24 years), then increased linearly with age. Multivariable regression analyses revealed that perceived severity, perceived benefits of the vaccine, cues to action, self-reported health outcomes, and trust in healthcare system or vaccine manufacturers were positive correlates of acceptance; whilst perceived access barriers and harm were negative correlates. Remarkably, perceived susceptibility to infection carried no significant association, whereas recommendation from Government (aOR=10.2, 95% C.I. 6.54 to 15.9, $p < 0.001$) was as the strongest driving factor for acceptance. Other key obstacles of acceptance included lack of confidence on newer vaccine platforms (43.4%) and manufacturers without track record (52.2%), which are of particular relevance to the current context. Conclusions: Governmental recommendation is an important driver, whereas perceived susceptibility is not associated with acceptance of COVID-19 vaccine. These HBM constructs and independent predictors inform evidence-based formulation and implementation of vaccination strategies.

Publication Type

Journal article.

<191>

Accession Number

20210103598

Author

Middeldorp, M.; Lier, A. van; Maas, N. van der; Veldhuijzen, I.; Freudenburg, W.; Sorge, N. M. van; Sanders, E. A. M.; Knol, M. J.; Melker, H. E. de

Title

Short term impact of the COVID-19 pandemic on incidence of vaccine preventable diseases and participation in routine infant vaccinations in the Netherlands in the period March-September 2020.

Source

Vaccine; 2021. 39(7):1039-1043. 22 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

We aimed to assess the impact of the COVID-19 pandemic on the incidence of vaccine-preventable diseases (VPDs) and participation in the routine infant vaccination programme in the Netherlands. The incidence of various VPDs initially decreased by 75-97% after the implementation of the Dutch COVID-19 response measures. The participation in the first measles-mumps-rubella vaccination among children scheduled for vaccination in March-September 2020 initially dropped by 6-14% compared with the previous year. After catch-up vaccination, a difference in MMR1 participation of -1% to -2% still remained. Thus, the pandemic has reduced the incidence of several VPDs and has had a limited impact on the routine infant vaccination programme.

Publication Type

Journal article.

<192>

Accession Number

20210103542

Author

Rohit Kumar; Bisakh Bhattacharya; Meena, V. P.; Anivita Aggarwal; Manasi Tripathi; Manish Soneja; Ankit Mittal; Komal Singh; Nishkarsh Gupta; Garg, R. K.; Ratre, B. K.; Balbir Kumar; Shweta Arun Bhopale; Pavan Tiwari; Ankit Verma; Sushma Bhatnagar; Anant Mohan; Naveet Wig; Randeep Guleria

Title

Characteristics and outcomes of 231 COVID-19 cases admitted at a tertiary facility in India: an observational cohort study.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6267-6272. 29 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: Ongoing pandemic because of COVID-19 has spread across countries, with varied clinical features and severity. Awareness of clinical course among asymptomatic and symptomatology in symptomatic cases is essential for patients' management as well as optimal utilization of health services (in resource limited settings) based on clinical status and risk factors. This study aimed to describe the clinical characteristics and outcomes of patients admitted with COVID-19 illness in the initial phase of the pandemic in India. Methods: It was an observational study. Patients aged 18 years or more, with confirmed SARS-CoV-2 infection, asymptomatic or mildly ill, were included. Patients with moderate-severe disease at admission or incomplete clinical symptomatology records were excluded. Data regarding demography, comorbidities, clinical features and course, treatment, results of SARS-CoV-2 RT-PCR, chest radiographs, and laboratory parameters were obtained retrospectively from hospital records. The outcome was noted in terms of course, patients discharged, still admitted (at the time of the study), or death. Results: Out of 231 cases, most were males (78.3%) with a mean age of 39.8 years. Comorbidities were present in 21.2% of patients, diabetes mellitus and hypertension being the most common. The most common symptoms were dry cough (81, 35%), fever (64, 27.7%), sore throat (36, 15.6%); asymptomatic infection noted in 108 (46.8%) patients. The presence of comorbidities was an independent predictor of symptomatic disease (OR-2.66; 95%CI 1.08-6.53, P = 0.03). None of the patients progressed to moderate-severe COVID-19, and there were no deaths. Conclusions: A large proportion of patients remained asymptomatic whereas those with comorbidities were more likely to be symptomatic. Most with mild disease had a stable disease course, barring few complication in those with comorbidities. The pandemic continues to grow as large number of asymptomatic cases may go undiagnosed.

Publication Type

Journal article.

<193>

Accession Number

20210103541

Author

Sherwal, B. L.; Namrata Makkar; Ajeet Jain; Vikas Dogra; Shaleen Prasad; Ashish Sachan; Ragi Jain; Aarti Gupta; Smita Gulati; Sonali Bhattar; Mona Bargotya

Title

Trends and clinico-epidemiological profile of COVID-19 patients at a designated COVID-19 hospital in Delhi, North India.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6261-6266. 22 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: The coronavirus disease (COVID-19) presents across a spectrum of signs and symptoms and shows clinico-epidemiological predilections (elderly, those with comorbidities). Delhi is among the highest burden states in India. Objectives: To report the case detection trends and clinico-epidemiological profile of patients tested positive at a designated COVID-19 hospital in Delhi in Northern India. Methods: Using an observational (descriptive design) we analyzed data from the electronic medical records of the hospital. All individuals testing positive for SARS-CoV-2 RNA using reverse transcription polymerase chain reaction (RT-PCR) between 17th March and 07th May 2020 (both dates inclusive) were included. Case detection trend (7-day moving averages) was plotted. Clinico-epidemiological profile of patients was summarized statistically. Results: Total 308 positive cases were enrolled in this study. The median age of participants was 48 years (09-95 years) men (47.9 +or- 16.4 years) and women (43.5 +or- 14.0 years). Men to women ratio was 3.4:1 with a statistically significant difference ($P < 0.001$). During the study timeframe, 166 (54.0%) patients had an outcome: 11 (6.6%; 95% CI: 3.4-11.6) expired and 155 recovered (recovery rate: 93.4%; 95% CI: 88.5-96.7). Chance of death was significantly associated with the higher age group ($P = 0.005$). The commonest clinical symptoms noted were fever (38.9%) and cough (38.6%). Majority (56.6%) had mild to moderate symptoms, 12.6% had severe symptoms and the remaining were asymptomatic (30.8%). 31 patients (26.05%) needed ICU care. Total 119 patients (38.6%) had various preexisting comorbidities, most commonly diabetes mellitus (35.0%) and hypertension (34.0%). However, the comorbidities were not associated with age ($P = 1.000$). Conclusion: Triangulation of data and careful analysis of trends in designated COVID-19 hospitals and other institutional settings may help inform surge preparedness and care provisioning. Stringent containment strategies must continue as the pandemic is intensifying.

Publication Type

Journal article.

<194>

Accession Number

20210103533

Author

Hussein, N. R.; Daniel, S.; Mirkhan, S. A.; Saleem, Z. S. M.; Musa, D. H.; Ibrahim, N.; Naqid, I. A.

Title

Impact of the COVID-19 pandemic on the elimination of hepatitis C virus in Duhok, Kurdistan, Iraq: a retrospective cross-sectional study.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6213-6216. 15 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background and Aim: Infection with hepatitis C virus (HCV) is a public health threat worldwide. The World Health Organization aims to eliminate HCV. However, the coronavirus disease (COVID-19) pandemic has led to a severe compromise in health services, and this has halted efforts to eliminate HCV. Herein, we report our experience with the initiative of HCV elimination in Duhok city, Kurdistan Region of Iraq, with a focus on the effect of the COVID-19 pandemic on the HCV elimination plan. **Materials and Methods:** An anti-HCV antibody test was used to screen subjects. All positive results were then confirmed by reverse-transcription polymerase chain reaction (RT-PCR) testing. All patients with current HCV infection were treated with direct-acting antiviral regimens. **Results:** During the study period, 459,015 subjects were tested for anti-HCV antibody positivity, with a monthly average of 9,562 tests for HCV. This number dropped to zero during the lockdown period between 1March and 31May 2020. Among the tested samples, 0.29% (1350/459015) tested positive for anti-HCV antibodies. RT-PCR testing of all positive samples revealed that 0.020% (93/459015) were positive. Of the 93 recruited subjects, 3 patients did not complete the treatment course due to the lockdown. All patients who finished the treatment course were cured as determined by sustained virologic response 12 (SVR12) weeks after finishing the treatment course. **Conclusion:** During the COVID-19 pandemic, reductions in health facility utilisation led to a significant decrease in services offered for HCV screening and treatment. Such a decrease in services has had a negative impact on HCV elimination. An urgent plan is needed to resume the services, and strict follow-up is needed for patients whose treatment was interrupted.

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Publication Type

Journal article.

<195>

Accession Number

20210103530

Author

Jha, R. R.; Verma, R. K.; Anupam Kishore; Rana, R. K.; Barnwal, R. K.; Singh, H. K.; Dewesh Kumar

Title

Mapping fear among doctors manning screening clinics for COVID19. results from cloud based survey in eastern parts of India.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6194-6200. 33 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: As the number of cases of COVID19 from novel corona virus 2019 rises so are the number of deaths ensuing from it. Doctors have been in front in these calamitous times across the world. India has less number of doctors so doctors are overwhelmed with more number of patients to cater. Thereby they are also fearing that they will be exposed much as they often work in limited resource settings. Methods: An on line survey was to include doctors from eastern states in India for measuring the reasons of their fear and suggest possible solutions based on the results achieved thus. After IEC clearance a semi-structured anonymous questionnaire was sent on google forms as links on known to doctors, working in screening OPDs or flu clinics especially for COVID-19. Results: Out of 59 Doctors majority were provided with sanitizers for practicing hand hygiene. Gloves were provided everywhere but masks particularly N95 and Triple Layer surgical masks were not there for all. Training was not given universally. Fear was dependent on age in our sample. Conclusion: Training and strict adherence to infection control measures along with resources can help in removing the fear.

Publication Type

Journal article.

<196>

Accession Number

20210103513

Author

Swati Thangariyal; Aayushi Rastogi; Arvind Tomar; Bhadoria, A. S.; Sukriti Baweja

Title

Impact of temperature and sunshine duration on daily new cases and death due to COVID-19.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6091-6101. 16 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Context: Control of COVID-19 has now become a critical issue for public health. Many ecological factors are proven to influence the transmission and survival of the virus. However, the association between different climatic factors and spread and mortality due to COVID-19 is unknown. Aim: To determine the association of different climatic factors with the spread and mortality due to COVID-19 during January 2020 to May 2020. Methods and Material: The climatic indicators included in the study were duration of sunshine, average minimum temperature, and average maximum temperature, with cumulative confirmed cases, deceased, and recovered cases. The data was performed for 138 different countries of the world, from January 2020 to May 2020. Statistical analysis used: Spearman's correlation analysis was used to assess the correlation between temperature and the spread and mortality of COVID-19 cases. Both univariate and multivariate analysis was performed for cumulative and month-wise analysis, using SPSS software. Results: Average maximum temperature and sunshine duration were significantly associated with COVID-19 confirmed cases, deceased, and recovered. For every 1 degrees increase in average temperature, the confirmed, deceased, and recovered cases decreased by 2047 (P=0.03), 157 (P=0.016), and 743 (P=0.005) individuals. The association remained significant even after adjusting for environmental as well as non-environmental variables. Average sunshine duration was inversely correlated with an increase in daily new cases ($r=-.2261$) and deaths ($r=-0.2985$). Conclusion: Higher average temperature and longer sunshine duration are strongly associated with COVID-19 cases and deaths in 138 countries.

Publication Type

Journal article.

<197>

Accession Number

20210103512

Author

Ruqia Quansar; Dhkar, S. A.; Saleem, S. M.; Khan, S. M. S.

Title

Attitude and practices related to coronavirus disease (COVID-19) pandemic among pregnant women attending family welfare clinic amid phase-2 lock down.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6085-6090. 15 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: The antenatal period is an important landmark where the services provided to mothers through antenatal care (ANC) checkups also act as a way for additional interventions influencing maternal and child health. This study aimed to know about the perception and practice among the patients of ANC checkups (ANCs) regarding COVID-19 and what are the implications of it on their routine check-ups. **Methods:** We conducted this study from 15 April, 2020 to 03 May, 2020, Phase 2 {Country wide lockdown in India}, which was imposed for over 19 days. The sample size was kept open and we used convenient type of sampling and included all those pregnant women who attended the clinic for ANC checkup amid the countrywide lock down. Each patient of ANC checkup was interviewed by the treating doctor using a predesigned structured questionnaire containing questions based on demographic information and the perception and practices regarding corona virus infection. **Results:** The majority, 66 (79.5%) were in the age group of 26-35 years, 63 (75.9%) were in the second and third trimester of their pregnancy, 72 (86.7%) were from urban areas, 26 (31.3%) and 17 (20.5%) were having education level of bachelor's and higher, respectively. The majority 39 (47%) reported that they are worried that someone they know may have the coronavirus infection and they are unaware about it, 57 (68.7%) feel the nature of the disease as fatal, all ANCs reported that their families are taking initiatives to prevent corona virus infection and they should take extra precautions for corona virus infection, 6 (7.2%) reported that any member of their family has been quarantined during the period, 81 (97.6%) feel that primary precautions like hand washing, social distancing, wearing a face mask, and isolation and quarantine will help in the reduction of infection, 69 (83.1%) choose to report to hospital if any of their close relatives are down with symptoms of corona virus. **Conclusion:** Our study showed that the respondents had a good attitude, perception, and were following sensible positive practices regarding COVID-19 prevention.

Publication Type

Journal article.

<198>

Accession Number

20210103502

Author

Balaji Gummidi; Oommen John; Vivekanand Jha

Title

Continuum of care for non-communicable diseases during COVID-19 pandemic in rural India: a mixed methods study.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):6012-6017. 9 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: COVID-19 pandemic has resulted in disruption to routine health services delivery as strict lockdowns were implemented in India and health workforce redeployed for COVID-19 focused responses. We assess the perceptions about COVID-19, the impact of the lockdown on access to health services and continuum of care for Non-communicable diseases (NCDs) among a cohort of adults in rural India. Methodology: Since 2018, we have been following up a cohort of persons with non-communicable diseases in a high NCD burden region in Srikakulam District of Andhra Pradesh under the STOP CKDu study. We conducted this mixed methods study, administered through a structured telephonic questionnaire and interview to determine the awareness, perceptions and their compliance to ongoing treatment schedules. Results: Overall, 68% of the participants exhibited adequate knowledge of symptoms of COVID-19, while 43% were not aware of the mode of transmission of the virus. In all, 822 (36.1%) participants reported at least one NCD condition. Among them, 115 (14%) missed their follow-up visit, 110 (13.4%) reported facing challenges in medication procurement and 11.6% either developed new complaints or experienced worsening of pre-existing symptoms. A total of 233 (28.5%) used a telemedicine facility and took telephonic advice from (private) physicians. As the access to medicines was restricted due to the lockdown, majority of the respondents were depending on rural medical practitioners (RMPs) for the procurement of medication. Conclusion: Our finding implies the need for the future guidelines on adaptation of telehealth approaches within health systems to maintain the continuum of care, digital health tools to facilitate the patient's appointments including virtual follow-up visits for those with NCDs coupled with regular engagement by frontline healthcare workers at the local levels, evidence informed public health messaging taking into consideration the social and behavioural aspect and uninterrupted essential primary healthcare services.

Publication Type

Journal article.

<199>

Accession Number

20210103487

Author

Rachna Raj; Soujanya Koyalada; Amit Kumar; Stuti Kumari; Pooja Pani; Nishant; Singh, K. K.

Title

Psychological impact of the COVID-19 pandemic on healthcare workers in India: an observational study.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5921-5926. 28 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: The World Health Organization (WHO) in January 2020 declared outbreak of novel coronavirus disease, COVID-19, an international public health emergency. It was stated that there was high COVID-19 spread risk to various other countries across world. According to WHO in March 2020, COVID-19 was characterized as pandemic. However, this sudden crisis is generating great deal of stress, anxiety, and depression throughout the world. Aim: The aim of this study was to assess the psychological impact and various associated factors during the developing COVID-19 situation among both the healthcare and non-healthcare working professionals in India. Materials and Methods: This was an observation-based cross-sectional study conducted during the lockdown period and following the lifting of the lockdown for a total of 3 months duration. A structured questionnaire was send via the (email) electronic mail system to a target population of 350 people. Out of which 300 responded. The questionnaire was comprised of study variables: (a) Gender; (b) age-group range which was categorized into-.(i) Between 30 snf 50 years and (ii) More than 50 years; (c) Presence of any comorbid medical condition; psychological symptoms of-.(d) insomnia; (e) anxiety; and (f) depression. Statistical analysis was performed using the Chi-square test for determining significance. Results: Mean +or- SD values for age were found to be 35.54 +or- 6.09; 33.84 +or- 7.87; 32.16 +or- 5.89 and 55.76 +or- 8.98 for physicians, nurses, technical staff, and non-healthcare professionals while the percentages of male study participants was found to be 37.2%, 15%, 57%, and 65% and female study participants was 62.8%, 85%, 43%, and 35% for the physicians, nursing staff, technicians, and non-healthcare professionals. Depression, insomnia, and anxiety between healthcare and non-

healthcare professional workers, demonstrated significant P values of 0.05, 0.03, and 0.02, respectively. Conclusion: The present study has shown a significant psychological impact arising from this crisis.

Publication Type

Journal article.

<200>

Accession Number

20210103482

Author

Deepak Juyal; Adarsh Kumar; Shekhar Pal; Shweta Thaledi; Shalabh Jauhari; Vijay Thawani

Title

Medical certification of cause of death during COVID-19 pandemic - a challenging scenario.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5896-5898. 10 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Death certificate data is used to monitor local, regional and national mortality trend and is helpful in improving public health as well as public safety. Accurate and reliable information about the cause of death in a population is useful for understanding disease burden estimation and trends in the health of populations; moreover, the information provided by such data is vital in terms of public health planning as well. With the continuous upsurge in mortality due to coronavirus disease 19 (COVID-19), mortality analysis could be valuable in addressing the current pandemic and implementing the epidemic control strategies effectively and efficiently. Given that COVID-19 death certification substantially affects the local and national responses towards disease prevention and transmission, the importance of the accuracy and quality of information in these certificates cannot be understated. Hence, accurate death certification related to COVID-19 is vital to understand the extent and progression of the current pandemic.

Publication Type

Journal article.

<201>

Accession Number

20210103481

Author

Rajesh Kumar; Nita Bharti; Saurabh Kumar; Gian Prakash

Title

Multidimensional impact of COVID-19 pandemic in India-challenges and future direction.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5892-5895. 11 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Direct impact of COVID-19 pandemic on lives is almost well known to the world with gradual reporting of its various systemic effects from almost every country. But this disease doesn't have direct impacts only, it causes collateral damage along with some hidden effects which may or may not be reported now and many will be come in future. India, a developing country, also got affected during this pandemic and now ranks under five in relation to the number of cases being reported till now. Here in this manuscript, various hidden aspects of COVID-19 has been discussed like issues related to healthcare infrastructure, food insecurities, domestic issues, mental and physical health, effect on education, screen time, and its challenges because of new trend of distant education, human resources, effects on labor class, material management, monetary issues, economic and industrial downfall, etc., along with challenges on both side for the Government as well as general public faced during this pandemic. Manuscript has been structured on the basis of concept and design of authors and various information put here on the basis of practical scenario being seen in the community and from various data published on Government sites, published articles from journal as well as media report.

Publication Type

Journal article.

<202>

Accession Number

20210103480

Author

Pooja Jorwal; Swati Bharadwaj; Pankaj Jorwal

Title

One health approach and COVID-19: a perspective.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5888-5891. 12 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

One Health is a well-recognized concept; however, it has been at the fringe of most operational health policies rather than being the central theme. Although, global experts and policy makers have agreed on this theory, the transition from a vision to practical application is inconspicuous. COVID-19 pandemic has caused massive damage to the world economy and continues to peril human lives everywhere. Ignorance of the principles of One Health approach in the current health care system has proved to be the Achilles heel of our health policy. Social distancing, lockdown, and hand hygiene are short-term preventive measures imposed by nations worldwide but are difficult to sustain in the long run. Thus, it is long overdue that we change our unidimensional approach regarding the control and prevention of diseases. A rational practice of the One Health strategy should be our utmost priority to control the ongoing grave situation. The purpose of this article is to bring the attention of healthcare professionals and researchers toward the One Health paradigm for the betterment of public health while combating COVID-19 and to prepare for future emergence of infectious diseases. Our assessment for this review is based on the philosophy and views shared by recent publications on the One Health approach which emphasizes an integrated, multisectoral, and holistic concept (animal health-human health-environmental factors) and promotes a transdisciplinary-integrated tactic for disease prevention and control.

Publication Type

Journal article.

<203>

Accession Number

20210103479

Author

Upadhyay, M. K.; Maroof, K. A.

Title

Understanding the emerging and reemerging terminologies amid the COVID-19 pandemic.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5881-5887. 26 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Coronavirus disease (COVID-19) has been declared as a Public Health Emergency of International Concern by the World Health Organization (WHO). During this phase of the health crisis posed by the COVID-19 pandemic, news in print, electronic as well as the social media is abuzz with several emerging and reemerging terminologies. Some of them, such as "social distancing," "infodemic," "flattening the curve," "quarantine," "cluster containment," and others were not in routine use but have suddenly reemerged and become the key toward understanding the disease and its prevention. Many of these terms have been a part of public health strategies used for centuries for containment of the spread of infectious diseases. These terms span across social, epidemiological, and administrative contexts concerning the COVID-19 pandemic. Our article aims to present a better understanding of the meaning and origin of these terms and their application in the context of the current pandemic based on a review of the available literature such as chapters from textbooks, published guidelines of the WHO and Centre for Disease Control and Prevention (CDC) and published articles in journals and newspapers through a comprehensive search of the electronic database in English.

Publication Type

Journal article.

<204>

Accession Number

20210103478

Author

Chandrakant Lahariya

Title

Access, utilization, perceived quality, and satisfaction with health services at Mohalla (community) clinics of Delhi, India.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5872-5880. 41 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The first Mohalla or Community clinic was set up in July 2015 in Delhi, India. Four hundred and eighty such clinics were set up in Delhi, since then. This review was conducted to synthesize evidence on access, utilization, functioning, and performance of Mohalla clinics. A desk review of secondary data from published research papers and reports was conducted initially from February-May 2020 and updated in August 2020. Eleven studies were included in the final analysis. Studies have documented that more than half to two-third of beneficiaries at these clinics were women, elderly, poor, and with school education up to primary level. One-third to two-third of all beneficiaries had come to the government primary care facility for the first time. A majority who attended clinics lived within 10 min of walking distances. There was high rate of satisfaction (around 90%) with overall services, doctor-patient interaction time and the people were willing to return for future health needs. Most beneficiaries received consultations, medicines, and diagnostics at no cost. A few challenges such as dispensing of medicines for shorter duration, lack of awareness about the exact location of the clinics, and services available among target beneficiaries, and the incomplete records maintenance and reporting system at facilities were identified. Mohalla Clinics of Delhi ensured continuity of primary care and laboratory services during COVID-19 pandemic in 2020. In summary, Mohalla Clinics have made primary care accessible and affordable to under-served population (thus, addressed inequities) and brought attention of policy makers on strengthening and investing on health services. The external evaluations and assessments on the performance of these clinics, with robust methodology are needed. The services through these clinics should be expanded to deliver comprehensive package of primary healthcare with inclusion of preventive, promotive, community outreach, and other public health services.

Publication Type

Journal article.

<205>

Accession Number

20210103476

Author

Badr Al-Khateeb

Title

Primary health care and family physicians provide frontline care to the dermatology patients during the era of COVID-19: recommendations and future directions.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5862-5866. 33 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 has affected those disciplines where close contact is required and where there is no need for urgent care such as the field of dermatology. Due to the contagious nature of the virus, front line health care workers such as family health care physicians and primary health care doctors are using personal protective measures (PPE), which might result in skin disorders. In addition, social distancing has also resulted in the compromise of teaching and learning mainly bedside teaching in the dermatology wards. Moreover, there is also uncertainty about the guidelines different to be followed by primary health care and family physicians while assessing patients of dermatology. We aim to provide an overview of how COVID-19 has affected the primary health care workers and physicians. We have highlighted the challenges faced by the family health care physicians from the perspective of dermatology along with recommendations and future directions for family health care physicians. Results reveal that wearing PPE measures might be challenging for primary health care workers and family physicians as it can cause facial inflammatory papules, acne rosacea, seborrheic dermatitis, and facial itching. They cannot escape encounter with the patients, and they need to be careful by undertaking some precautionary measures while taking care of the patients in general with a specific focus on COVID-19. COVID-19 has also affected all teaching and learning in the field of dermatology. However, academic institutions can use digital tools such as zoom or skype to continue learning dermatology during the crisis of COVID-19.

Publication Type

Journal article.

<206>

Accession Number

20210103475

Author

Charu Sharma; Pratibha Singh; Shashank Shekhar; Manisha Jhirwal; Ghuman, N. K.; Meenakshi Gothwal; Garima Yadav; Priyanka Kathuria

Title

'How COVID 19 imposed a new normal outlook in reproductive health care of patients, research, teaching and assessment'- perspective of a gynecologist.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5858-5861. 8 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

With the frequently changing guidelines on Pregnancy care, management of obstetric patients remains a major challenge during COVID-19 Pandemic. The department of Obstetrics and Gynecology had a huge responsibility to provide respectable maternity care to all women irrespective of their virologic status and at the same time protect the frontline warriors dealing with patient care during the COVID-19 pandemic. We would like to share our perspective regarding the challenges faced and the solutions sought for, in both patient care and teaching and research.

Publication Type

Journal article.

<207>

Accession Number

20210103474

Author

Suneela Garg; Nidhi Bhatnagar; Singh, M. M.; Amod Borle; Raina, S. K.; Raman Kumar; Sagar Galwankar

Title

Strengthening public healthcare systems in India; learning lessons in COVID-19 pandemic.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5853-5857. 27 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 pandemic has involved nations and incapacitated the health systems globally. The pandemic preparedness has been tested with immense losses. Universal health coverage is needed more than ever to recuperate from the effects of the current pandemic. Post pandemic, many lessons need to be learnt especially for developing economies like India where public healthcare system is grossly inadequate to take care of health needs of citizens. World Health Organization's framework of six health system building blocks was utilized to study the lessons learnt and actionable points in the post pandemic period. Participation in Global Health Security Alliance has to be stepped up with involvement in Joint external evaluation and development of epidemiological core capacities. National Health Security Action Plan needs to be drafted and available for health emergencies. Ayushman Bharat scheme should incorporate elements to address surge capacity at the time of health emergencies and measures to deliver care at the time of pandemic. Technology through telemedicine, m-health, and digital platforms or apps should contribute to trainings, supervision, and facilitation of healthcare delivery at remote locations. Open data sharing policies should be developed for the practice of evidence-based public health. Public healthcare system and health manpower trained in epidemiology should be given a boost to have system readiness to respond in case of future pandemics.

Publication Type

Journal article.

<208>

Accession Number

20210103473

Author

Mrinal Barua; Subodh Kumar; Vivek Mishra; Aroop Mohanty; Joshi, H. S.

Title

Unmasking N95 for COVID-19 health-care workers in India.

Source

Journal of Family Medicine and Primary Care; 2020. 9(12):5850-5852. 10 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

A general term N95 Mask has been widely used by all including the health care personnel. It has been use incorrectly by all and it should be replaced with the term filtering facepiece respirator. There are two types of respirators being used in the world. One is the industrial type whereas the other one is the medical surgical one. The medical surgical masks are an intermediate product between the industrial and the triple layer medical mask. Many other equivalent products like KN95 masks are also available in the market. There is an urgent need of certification because this is the only way quality face masks can be provided to the public in these difficult times of COVID-19. This is essential because of the entry of many counterfeit and uncertified respirators have entered the market.

Publication Type

Journal article.

<209>

Accession Number

20210103425

Author

Abhishek Gupta; Alka Rani; Nisha Sogan; Sharma, R. S.; Bindu Sharma

Title

Epidemiology and control strategies of novel coronavirus disease in the context of India.

Source

Journal of Applied and Natural Science; 2021. 13(1):210-219. 71 ref.

Publisher

Applied and Natural Science Foundation

Location of Publisher

Haridwar

Country of Publication

India

Abstract

An outbreak of coronavirus disease (COVID-19) occurred for the first time in Wuhan, China which spread as a pandemic to various countries of the world, resulting in high morbidity and mortality. Death toll in India on 8th February 2021 was 1,55,080. India had implemented steps such as lockdown and advised social distancing, washing of hands, and wearing masks to reduce the burden of Covid-19. This review discusses

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the epidemiological features, the population at risk and control strategies of novel coronavirus disease in India. The data was collected from various sources on individual details of Covid-19 cases, population density and affluence percentage from the literature studied. The data was used to analyse the susceptibility of the population to this disease. It was found that Indian males, age group 20 to 40 (based on morbidity) and above 60 (based on mortality) were at high risk. The authors compiled epidemiology, management and control strategies of covid-19 in India. Therefore, because of various early implementations, India has managed the disease well earlier, but in the current scenario (30 Nov 2020) morbidity and mortality have been at peak. Immunization of frontline workers started on 16th January 2021. Initially, 7,017,411 doses of Covishield and Covaxin vaccines have been given by 10th February 2021. Thus, the existing strategies like proper diagnosis, treatment, and successful implementation of vaccine inoculation will reduce covid-19 burden and may lead to normalcy.

Publication Type

Journal article.

<210>

Accession Number

20210103402

Author

Klaiman, T.; Silvestri, J. A.; Srinivasan, T.; Szymanski, S.; Tran, T.; Oredoko, F.; Sjoding, M. W.; Fuchs, B. D.; Maillie, S.; Jablonski, J.; Lane-Fall, M. B.; Kerlin, M. P.

Title

Improving prone positioning for severe acute respiratory distress syndrome during the COVID-19 pandemic. An implementation-mapping approach.

Source

Annals of the American Thoracic Society; 2021. 18(2):300-307. 34 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

Rationale: Prone positioning reduces mortality in patients with severe acute respiratory distress syndrome (ARDS), a feature of severe coronavirus disease 2019 (COVID-19). Despite this, most patients with ARDS do not receive this lifesaving therapy. Objectives: To identify determinants of prone-positioning use, to develop specific implementation strategies, and to incorporate strategies into an overarching response to the COVID-19 crisis. Methods: We used an implementation-mapping approach guided by implementation-

science frameworks. We conducted semistructured interviews with 30 intensive care unit (ICU) clinicians who staffed 12 ICUs within the Penn Medicine Health System and the University of Michigan Medical Center. We performed thematic analysis using the Consolidated Framework for Implementation Research. We then conducted three focus groups with a task force of ICU leaders to develop an implementation menu, using the Expert Recommendations for Implementing Change framework. The implementation strategies were adapted as part of the Penn Medicine COVID-19 pandemic response. Results: We identified five broad themes of determinants of prone positioning, including knowledge, resources, alternative therapies, team culture, and patient factors, which collectively spanned all five Consolidated Framework for Implementation Research domains. The task force developed five specific implementation strategies, including educational outreach, learning collaborative, clinical protocol, prone-positioning team, and automated alerting, elements of which were rapidly implemented at Penn Medicine. Conclusions: We identified five broad themes of determinants of evidence-based use of prone positioning for severe ARDS and several specific strategies to address these themes. These strategies may be feasible for rapid implementation to increase use of prone positioning for severe ARDS with COVID-19.

Publication Type

Journal article.

<211>

Accession Number

20210103302

Author

Brito, L. M. S.; Lima, V. A. de; Mascarenhas, L. P.; Mota, J.; Leite, N.

Title

Physical activity, eating habits and sleep during social isolation: from young adult to elderly.

Source

Revista Brasileira de Medicina do Esporte; 2021. 27(1):21-25. 25 ref.

Publisher

Sociedade Brasileira de Medicina do Esporte

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

Introduction: Social isolation is one of the strategies used to prevent the contagion and transmission of the coronavirus (COVID-19), but it impacts on the daily routines and lifestyle of the population. **Background:** Therefore, the aim of this study was to analyze the physical activity, sleep and eating habits of adults and the elderly during the COVID-19 pandemic. **Method:** A cross-sectional study with a sample

comprising 135 participants, divided by age group. First, the whole group was divided into age groups with a 10-year cut-off. They were then characterized by sex, type of home, eating habits, sleep, and physical activity. For the second analysis, the participants were organized into three groups: young adults (18-40 years), middle-aged adults (41-60 years) and elderly (> 60 years). An online questionnaire was sent to all the participants, with 26 questions focusing on eating habits, sleep, protective behaviors against COVID-19, and physical activity. Results: The participants were mainly women (85.9%), external community (71.1%), students' families (17.1%), teachers and staff (11.8%). Of the total participants, 40% were dedicated to home care activities and 21.1% had started working from home. The remainder (38.9%) were engaged in activities such as studying or caring for dependents. The younger age group (18-40 years old) reported spending more time in sedentary activities during the day, and 34.2% did not perform physical activity and ate lower quality food during social isolation ($p < 0.01$). All groups, with the exception of the 30-40 age group ($p < 0.01$) highlighted the importance of having the presence of a teacher responsible for guiding physical activities during isolation. Conclusion: We conclude that, social isolation has more negative impact on the habits of the younger group.

Publication Type

Journal article.

<212>

Accession Number

20210103301

Author

Castro, B. M. de; Trindade, T. B.; Augusto, P. V. S.; Medeiros, M. A. de; Moraes, W. M. A. M. de; Prestes, J.

Title

The impact of quarantine on body image and lifestyle habits in resistance training practitioners.

Source

Revista Brasileira de Medicina do Esporte; 2021. 27(1):16-20. 30 ref.

Publisher

Sociedade Brasileira de Medicina do Esporte

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

Introduction: In order to curb the abrupt advance of "Coronavirus Disease 2019" (COVID-19) and prevent the collapse of the health system, authorities around the world have opted for social distancing strategies that include closing gyms, among other measures. **Objectives:** This study analyzed the effect of social distancing on resistance training practitioners' quality of life and perception of body image in silhouette.

Methods: The volunteers were contacted through social media; data were collected between April 13 and 19, 2020, through a structured questionnaire, comprised of an Informed Consent Form, four questions about COVID-19 and restrictive measures; and twenty-nine questions designed to characterize the individuals' habits; as well as the Short Form Health Survey 36 questionnaire. All the questionnaires were applied over the Internet, using Google FormsR. After collection, the data were tabulated and interpreted using the software program AppleNumbersR, and subsequently presented as mean, standard deviation and percentiles. Results: The results revealed changes in perception of body image and decreased frequency and satisfaction with training. There was also an increase in sedentary behavior, food intake, and amount of sleep; and a reduction in parameters related to health and quality of life. Conclusions: The strategy of social distancing, adopted to curb the progress of COVID-19, has harmful consequences for resistance training practitioners, such as increased calorie intake, stress and anxiety, as well as possible psychological effects. These consequences, in turn, lead to changes in self-perception of body image and in the quality of training.

Publication Type

Journal article.

<213>

Accession Number

20210103300

Author

Lima, G. H. V.; Guimaraes, P. L.; Baboghluian, M.

Title

COVID-19 and surfing: problems, strategies and solutions for surfers.

Source

Revista Brasileira de Medicina do Esporte; 2021. 27(1):11-15. 34 ref.

Publisher

Sociedade Brasileira de Medicina do Esporte

Location of Publisher

Rio de Janeiro

Country of Publication

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Abstract

The pandemic caused by coronavirus disease (COVID-19) has changed the routine of surfers, professionals and all those involved in surfing. This unusual global crisis has caused major organizational, financial and social disruption for surfers, coaches, federations and fans. The world of sports, including surfing, entered extreme and uncharted territory, in which all competitions were postponed and many beaches were closed, preventing any kind of surfing activity. The primary objective of this article is to identify potential harmful effects caused by the COVID-19 pandemic on the health of surfers, while the secondary objective is

to provide practical recommendations for coaches, professional and amateur surfers to reduce the undesirable consequences of forced quarantine and direct the resumption of surfing activities while protecting the health of those involved. The main problems indicated were: the effects on body composition due to calorie imbalance, possible cardiac and pulmonary alterations caused by COVID-19, musculoskeletal symptoms and the consequences of detraining. The article also suggests recommendations for new attitudes towards surfing. Surfing is a growing sport that has been included in the upcoming Olympic Games in Tokyo. As the sport grows and becomes more professional, measures to protect the health of surfers need to be put in place. The current pandemic situation is extremely delicate and the measures proposed in this study are intended to serve as a guide for surfers and professionals in order to minimize the harmful effects of this situation.

Publication Type

Journal article.

<214>

Accession Number

20210103273

Author

Islam, J. Y.; Vidot, D. C.; Camacho-Rivera, M.

Title

Determinants of COVID-19 preventive behaviours among adults with chronic diseases in the USA: an analysis of the nationally representative COVID-19 impact survey.

Source

BMJ Open; 2021. 11(2). 37 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Preventive behaviours have been recommended to control the spread of SARS-CoV-2. Adults with chronic diseases (CDs) are at higher risk of COVID-19-related mortality compared to the general population. Our objective was to evaluate adherence to COVID-19 preventive behaviours among adults without CDs compared with those with CDs and identify determinants of non-adherence to COVID-19 preventive behaviours. Study design: Cross-sectional. Setting and participants: We used data from the nationally representative COVID-19 Impact Survey (n=10 760) conducted in the USA. Primary measures Adults with CDs were categorised based on a self-reported diagnosis of diabetes, high blood pressure, heart

disease/heart attack/stroke, asthma, chronic obstructive pulmonary disease (COPD), bronchitis or emphysema, cystic fibrosis, liver disease, compromised immune system, or cancer (54%). Results: Compared with adults without CDs, adults with CDs were more likely to adhere to preventive behaviours including wearing a face mask (X^2 - $p < 0.001$), social distancing (X^2 - $p < 0.001$), washing or sanitising hands (X^2 - $p < 0.001$), and avoiding some or all restaurants (X^2 - $p = 0.002$) and public or crowded places (X^2 - $p = 0.001$). Adults with a high school degree or below [Adjusted prevalence ratio (aPR):1.82, 95% Confidence interval (CI)1.04 to 3.17], household income <US\$50 000 (aPR:2.03, 95% CI 1.34 to 2.72), uninsured (aPR:1.65, 95% CI1.09 to 2.52), employed (aPR:1.48, 95% CI 1.02 to 2.17), residing in rural areas (aPR:1.70, 95% CI 1.01 to 2.85) and without any CD (aPR:1.78, 95% CI 1.24 to 2.55) were more likely to not adhere to COVID-19 preventive behaviours. Conclusion: Adults with CDs are more likely to adhere to recommended COVID-19 preventive behaviours. Public health messaging targeting specific demographic groups and geographic areas, such as adults without CD or adults living in rural areas, should be prioritised.

Publication Type

Journal article.

<215>

Accession Number

20210103268

Author

Kobayashi, L. C.; O'Shea, B. Q.; Kler, J. S.; Nishimura, R.; Palavicino-Maggio, C. B.; Eastman, M. R.; Vinson, Y. R.; Finlay, J. M.

Title

The COVID-19 coping study, a longitudinal mixed-methods study of middle-aged and older adults' mental health and well-being during the COVID-19 pandemic in the USA.

Source

BMJ Open; 2021. 11(2). 56 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Purpose: The COVID-19 pandemic, beginning in early 2020, has resulted in massive social, economic, political and public health upheaval around the world. We established a national longitudinal cohort study, the COVID-19 Coping Study, to investigate the effects of pandemic-related stressors and changes in life circumstances on mental health and well-being among middle-aged and older adults in the USA.

Participants: From 2 April to 31 May 2020, 6938 adults aged 55 years were recruited from all 50 US states, the District of Columbia and Puerto Rico using online, multi-frame non-probability-based sampling. Findings to date: Mean age of the baseline sample was 67.3 years (SD: 7.9 years) and 64% were women. Two in three adults reported leaving home only for essential purposes in the past week (population-weighted proportion: 69%; 95% CI: 68% to 71%). Nearly one in five workers aged 55-64 years was placed on a leave of absence or furloughed since the start of the pandemic (17%; 95% CI: 14% to 20%), compared with one in three workers aged 75 years (31%; 95% CI: 21% to 44%). Nearly one-third of adults screened positive for each of depression (32%; 95% CI: 30% to 34%), anxiety (29%; 28% to 31%) and loneliness (29%; 95% CI: 27% to 31%), with decreasing prevalence of each with increasing age. Future plans: Monthly and annual follow-ups of the COVID-19 Coping Study cohort will assess longitudinal changes to mental health, cognitive health and well-being in relation to social, behavioural, economic and other COVID-19-related changes to life circumstances. Quantitative and in-depth qualitative interview data will be collected through online questionnaires and telephone interviews. Cohort data will be archived for public use.

Publication Type

Journal article.

<216>

Accession Number

20210103265

Author

Dam, P. M. van; Zelis, N.; Stassen, P.; Twist, D. J. L. van; Leeuw, P. W. de; Kuijk, S. van; Buijs, J.

Title

Validating the rise up score for predicting prognosis in patients with COVID-19 in the emergency department: a retrospective study.

Source

BMJ Open; 2021. 11(2). 21 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective To mitigate the burden of COVID-19 on the healthcare system, information on the prognosis of the disease is needed. The recently developed Risk Stratification in the Emergency Department in Acutely ill Older Patients (RISE UP) score has very good discriminatory value for short-term mortality in older patients in the emergency department (ED). It consists of six readily available items. We hypothesised that the RISE

UP score could have discriminatory value for 30-day mortality in ED patients with COVID-19. Design Retrospective analysis. Setting Two EDs of the Zuyderland Medical Centre, secondary care hospital in the Netherlands. Participants The study sample consisted of 642 adult ED patients diagnosed with COVID-19 between 3 March and until 25 May 2020. Inclusion criteria were (1) admission to the hospital with symptoms suggestive of COVID-19 and (2) positive result of the PCR or (very) high suspicion of COVID-19 according to the chest CT scan. Outcome Primary outcome was 30-day mortality, secondary outcome was a composite of 30-day mortality and admission to intensive care unit (ICU). Results Within 30 days after presentation, 167 patients (26.0%) died and 102 patients (15.9%) were admitted to ICU. The RISE UP score showed good discriminatory value for 30-day mortality (area under the receiver operating characteristic curve (AUC) 0.77, 95% CI 0.73 to 0.81) and for the composite outcome (AUC 0.72, 95% CI 0.68 to 0.76). Patients with RISE UP scores below 10% (n=121) had favourable outcome (zero deaths and six ICU admissions), while those with scores above 30% (n=221) were at high risk of adverse outcome (46.6% mortality and 19.0% ICU admissions). Conclusion The RISE UP score is an accurate prognostic model for adverse outcome in ED patients with COVID-19. It can be used to identify patients at risk of short-term adverse outcome and may help guide decision-making and allocating healthcare resources.

Publication Type

Journal article.

<217>

Accession Number

20210103261

Author

Qutob, N.; Awartani, F.; Salah, Z.; Asia, M.; Khader, I. A.; Herzallah, K.; Balqis, N.; Sallam, H.

Title

Seroprevalence of SARS-CoV-2 in the west bank region of Palestine: a cross-sectional seroepidemiological study.

Source

BMJ Open; 2021. 11(2). 27 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Seroprevalence rates are important indicators to the epidemiology of COVID-19 and the extent of the pandemic given the existence of asymptomatic cases. The purpose of this study is to assess the

seroprevalence rate in the Palestinian population residing in the West Bank. Setting: The study involved 1355 participants from 11 governorates, including 112 localities in the West Bank and 1136 individuals visiting Palestinian medical laboratories. Participants: Blood samples were collected between 15th June 2020 and 30th June 2020 from 1355 individuals from randomly selected households in the West Bank, in addition to 1136 individuals visiting Palestinian medical laboratories between the 1st May 2020 and 9th July 2020 for a routine check-up. Primary and secondary outcome measures: Out of the 2491 blood samples collected, serological tests for 2455 adequate serum samples were done using an immunoassay for qualitative detection of antibodies against SARS-CoV- 2. Seroprevalence was estimated as the proportion of individuals who had a positive result in the total SARS-CoV- 2 antibodies in the immunoassay. Results: The random sample of Palestinians living in the West Bank yielded 0% seroprevalence with 95% and an adjusted CI (0% to 0.0043%), while the lab referral samples yielded an estimated seroprevalence of 0.354% with 95% and an adjusted CI (0.001325% to 0.011566%). Conclusions: Our results indicate that as of mid-June 2020, seroprevalence in Palestine persists low and is inadequate to provide herd immunity, emphasising the need to maintain health measures to keep the outbreak under control. Population-based seroprevalence studies are to be conducted periodically to monitor the SARS-CoV- 2 seroprevalence in Palestine and inform policymakers about the efficacy of their surveillance system.

Publication Type

Journal article.

<218>

Accession Number

20210103256

Author

Pana, T. A.; Bhattacharya, S.; Gamble, D. T.; Pasdar, Z.; Szlachetka, W. A.; Perdomo-Lampignano, J. A.; Ewers, K. D.; McLernon, D. J.; Myint, P. K.

Title

Country-level determinants of the severity of the first global wave of the COVID-19 pandemic: an ecological study.

Source

BMJ Open; 2021. 11(2). 49 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: We aimed to identify the country-level determinants of the severity of the first wave of the COVID-19 pandemic. **Design:** Ecological study of publicly available data. Countries reporting >25 COVID-19 related deaths until 8 June 2020 were included. The outcome was log mean mortality rate from COVID-19, an estimate of the country-level daily increase in reported deaths during the ascending phase of the epidemic curve. Potential determinants assessed were most recently published demographic parameters (population and population density, percentage population living in urban areas, population >65 years, average body mass index and smoking prevalence); economic parameters (gross domestic product per capita); environmental parameters pollution levels and mean temperature (January-May); comorbidities (prevalence of diabetes, hypertension and cancer); health system parameters (WHO Health Index and hospital beds per 10 000 population); international arrivals; the stringency index, as a measure of country-level response to COVID-19; BCG vaccination coverage; UV radiation exposure; and testing capacity. Multivariable linear regression was used to analyse the data. **Primary outcome:** Country-level mean mortality rate: the mean slope of the COVID-19 mortality curve during its ascending phase. **Participants:** Thirty-seven countries were included: Algeria, Argentina, Austria, Belgium, Brazil, Canada, Chile, Colombia, the Dominican Republic, Ecuador, Egypt, Finland, France, Germany, Hungary, India, Indonesia, Ireland, Italy, Japan, Mexico, the Netherlands, Peru, the Philippines, Poland, Portugal, Romania, the Russian Federation, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the UK and the USA. **Results:** Of all country-level determinants included in the multivariable model, total number of international arrivals (beta 0.033 (95% CI 0.012 to 0.054)) and BCG vaccination coverage (-0.018 (95% CI -0.034 to -0.002)), were significantly associated with the natural logarithm of the mean death rate. **Conclusions:** International travel was directly associated with the mortality slope and thus potentially the spread of COVID-19. Very early restrictions on international travel should be considered to control COVID-19 outbreaks and prevent related deaths.

Publication Type

Journal article.

<219>

Accession Number

20210103253

Author

Zurcher, K.; Zwahlen, M.; Berlin, C.; Egger, M.; Fenner, L.

Title

Losing ground at the wrong time: trends in self-reported influenza vaccination uptake in Switzerland, Swiss Health Survey 2007-2017.

Source

BMJ Open; 2021. 11(2). 35 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: We studied time trends in seasonal influenza vaccination and associations with socioeconomic and health-related determinants in Switzerland, overall and in people aged 65 years. **Design:** Three cross-sectional surveys. **Participants:** Individuals who participated in the Swiss Health Surveys 2007, 2012 and 2017. We calculated the proportion reporting influenza vaccination in the last 12 months, and performed multivariable logistic regression analyses. **Results:** We included 51 582 individuals in this analysis. The median age was 49 years (IQR 25-64), and 27 518 were women (53.3%). The proportion of reporting a history of influenza vaccination overall was 31.9% (95% CI 31.4 to 32.4); and dropped from 34.5% in 2007 to 28.8% in 2017. The uptake of vaccination within the past 12 months was 16% in 2007 and similar in 2012 and 2017 (around 14%). In people with chronic disease, uptake dropped from 43.8% in 2007 to 37.1% in 2012 and to 31.6% in 2017 ($p<0.001$). In people aged 65 years, uptake dropped from 47.8% in 2007 to 38.5% in 2012 to 36.2% in 2017 ($p<0.001$). In logistic regression, self-reported vaccination coverage decreased in the 65-75 years old (adjusted OR (aOR) 0.56, 95% CI 0.48 to 0.66 between 2007 and 2012; aOR 0.89, 95% CI 0.77 to 1.03 between 2012 and 2017). Uptake was positively associated with the 65 age group, living in French-speaking and urban areas, history of smoking, bad self-reported health status, private/semiprivate health insurance, having a medical profession and having any underlying chronic disease. **Conclusion:** Influenza vaccination coverage was low in older and chronically ill persons. Significant efforts are required in preparing for the influenza season 2020/2021 to reduce the double burden of COVID-19 and seasonal influenza. These efforts should include campaigns but also novel approaches using social media.

Publication Type

Journal article.

<220>

Accession Number

20210103252

Author

Gupta-Wright, A.; Macleod, C. K.; Barrett, J.; Filson, S. A.; Corrah, T.; Parris, V.; Sandhu, G.; Harris, M.; Tennant, R.; Vaid, N.; Takata, J.; Duraisingham, S.; Gandy, N.; Chana, H.; Whittington, A.; McGregor, A.; Papineni, P.

Title

False-negative RT-PCR for COVID-19 and a diagnostic risk score: a retrospective cohort study among patients admitted to hospital.

Source

BMJ Open; 2021. 11(2). 29 ref.

Publisher

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BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To describe the characteristics and outcomes of patients with a clinical diagnosis of COVID-19 and false-negative SARS-CoV-2 reverse transcription-PCR (RT-PCR), and develop and internally validate a diagnostic risk score to predict risk of COVID-19 (including RT-PCR-negative COVID-19) among medical admissions. **Design:** Retrospective cohort study. **Setting:** Two hospitals within an acute NHS Trust in London, UK. **Participants:** All patients admitted to medical wards between 2 March and 3 May 2020. **Outcomes:** Main outcomes were diagnosis of COVID-19, SARS-CoV-2 RT-PCR results, sensitivity of SARS-CoV-2 RT-PCR and mortality during hospital admission. For the diagnostic risk score, we report discrimination, calibration and diagnostic accuracy of the model and simplified risk score and internal validation. **Results:** 4008 patients were admitted between 2 March and 3 May 2020. 1792 patients (44.8%) were diagnosed with COVID-19, of whom 1391 were SARS-CoV-2 RT-PCR positive and 283 had only negative RT-PCRs. Compared with a clinical reference standard, sensitivity of RT-PCR in hospital patients was 83.1% (95% CI 81.2%-84.8%). Broadly, patients with false-negative RT-PCR COVID-19 and those confirmed by positive PCR had similar demographic and clinical characteristics but lower risk of intensive care unit admission and lower in-hospital mortality (adjusted OR 0.41, 95% CI 0.27-0.61). A simple diagnostic risk score comprising of age, sex, ethnicity, cough, fever or shortness of breath, National Early Warning Score 2, C reactive protein and chest radiograph appearance had moderate discrimination (area under the receiver-operator curve 0.83, 95% CI 0.82 to 0.85), good calibration and was internally validated. **Conclusion:** RT-PCR-negative COVID-19 is common and is associated with lower mortality despite similar presentation. Diagnostic risk scores could potentially help triage patients requiring admission but need external validation.

Publication Type

Journal article.

<221>

Accession Number

20210103248

Author

Aughterson, H.; McKinlay, A. R.; Burton, A.; Fancourt, D.

Title

Psychosocial impact on frontline health and social care professionals in the UK during the COVID-19 pandemic: a qualitative interview study.

Source

BMJ Open; 2021. 11(2). 46 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To explore the psychosocial well-being of health and social care professionals working during the COVID-19 pandemic. **Design:** This was a qualitative study deploying in-depth, individual interviews, which were audio-recorded and transcribed verbatim. Thematic analysis was used for coding. **Participants:** This study involved 25 participants from a range of frontline professions in health and social care. **Setting:** Interviews were conducted over the phone or video call, depending on participant preference. **Results:** From the analysis, we identified 5 overarching themes: communication challenges, work-related stressors, support structures, personal growth and individual resilience. The participants expressed difficulties such as communication challenges and changing work conditions, but also positive factors such as increased team unity at work, and a greater reflection on what matters in life. **Conclusions:** This study provides evidence on the support needs of health and social care professionals amid continued and future disruptions caused by the pandemic. It also elucidates some of the successful strategies (such as mindfulness, hobbies, restricting news intake, virtual socialising activities) deployed by health and social care professionals that can support their resilience and well-being and be used to guide future interventions.

Publication Type

Journal article.

<222>

Accession Number

20210103244

Author

Clough, H. E.; McIntyre, K. M.; Patterson, G. E.; Harris, J. P.; Rushton, J.

Title

Use of routine death and illness surveillance data to provide insight for UK pandemic planning: lessons from COVID-19.

Source

BMJ Open; 2021. 11(2). 30 ref.

Publisher

BMJ Publishing Group

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Location of Publisher

London

Country of Publication

UK

Abstract

Objectives Reporting of COVID-19 cases, deaths and testing has often lacked context for appropriate assessment of disease burden within risk groups. The research considers how routine surveillance data might provide initial insights and identify risk factors, setting COVID-19 deaths early in the pandemic into context. This will facilitate the understanding of wider consequences of a pandemic from the earliest stage, reducing fear, aiding in accurately assessing disease burden and ensuring appropriate disease mitigation. Setting UK, 2020. Participants The study is a secondary analysis of routine, public domain, surveillance data and information from Office for National Statistics (ONS), National Health Service (NHS) 111 and Public Health England (PHE) on deaths and disease. Primary and secondary outcome measures Our principal focus is ONS data on deaths mentioning COVID-19 on the death certificate. We also consider information provided in NHS 111 and PHE data summaries. Results Deaths with COVID-19 significantly contributed to, yet do not entirely explain, abnormally elevated all-cause mortality in the UK from weeks 12-18 of 2020. Early in the UK epidemic, COVID-19 was the greatest threat to those with underlying illness, rarely endangering people aged under 40 years. COVID-19-related death rates differed by region, possibly reflecting underlying population structure. Risk of COVID-19-related death was greater for healthcare and social care staff and black, Asian and minority ethnic individuals, having allowed for documented risk factors. Conclusion Early contextualisation of public health data is critical to recognising who gets sick, when and why. Understanding at-risk groups facilitates a targeted response considering indirect consequences of society's reaction to a pandemic alongside disease-related impacts. COVID-19-related deaths mainly mirror historical patterns, and excess non-COVID-19-related deaths partly reflect reduced access to and uptake of healthcare during lockdown. Future outbreak response will improve through better understanding of connectivity between disease monitoring systems to aid interpretation of disease risk patterns, facilitating nuanced mitigation measures.

Publication Type

Journal article.

<223>

Accession Number

20210103243

Author

Kim EunJi; Coppa, K.; Hirsch, J. S.; Abrahams, S.; Johnson, J.; Lesser, M.; Davidson, K. W.; Conigliaro, J.

Title

Examination of patient characteristics and hydroxychloroquine use based on the US Food and Drug administration's recommendation: a cross-sectional analysis in New York.

Source

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To describe the pattern of hydroxychloroquine use and examine the association between hydroxychloroquine use and clinical outcomes arising from changes in the US Food and Drug Administration (FDA)'s recommendation during the coronavirus disease 2019 (COVID-19) pandemic. **Design:** A retrospective cross-sectional analysis. **Setting and participants:** We included hospitalised adult patients at Northwell Health hospitals with confirmed COVID-19 infections between 1 March 2020 and 11 May 2020. We categorised changes in the FDA's recommendation as pre-FDA approval (1 March 2020-27 March 2020), FDA approval (28 March 2020-23 April 2020), and FDA warning (24 April 2020-11 May 2020). The hydroxychloroquine-treated group received at least one dose within 48 hours of hospital admission. **Primary outcome:** A composite of intubation and inpatient death. **Results:** The percentages of patients who were treated with hydroxychloroquine were 192/2202 (8.7%) pre-FDA approval, 2902/6741 (43.0%) FDA approval, and 176/1066 (16.5%) FDA warning period ($p<0.001$). Using propensity score matching, there was a higher rate of the composite outcome among patients treated with hydroxychloroquine (49/192, 25.5%) compared with no hydroxychloroquine (66/384, 17.2%) in the pre-FDA approval period ($p=0.03$) but not in the FDA approval period (25.5% vs 22.6%, $p=0.08$) or the FDA warning (21.0% vs 15.1%, $p=0.11$) periods. Coincidentally, there was an increase in number of patients with COVID-19 and disease severity during the FDA approval period (24.1% during FDA approval vs 21.4% during pre-FDA approval period had the composite outcome). Hydroxychloroquine use was associated with increased odds of the composite outcome during the pre-FDA approval period (OR=1.65 (95% CI 1.09 to 2.51)) but not during the FDA approval (OR=1.17 (95% CI 0.99 to 1.39)) and FDA warning (OR=1.50 (95% CI 0.94 to 2.39)) periods. **Conclusions:** Hydroxychloroquine use was associated with adverse clinical outcomes only during the pre-FDA approval period but not during the FDA approval and warning periods, even after adjusting for concurrent changes in the percentage of patients with COVID-19 treated with hydroxychloroquine and the number (and disease severity) of hospitalised patients with COVID-19 infections.

Publication Type

Journal article.

<224>

Accession Number

20210103234

Author

Keyes, D.; Hardin, B.; Sweeney, B.; Shedden, K.

Title

Change in urban and non-urban pattern of ED use during the COVID-19 pandemic in 28 Michigan hospitals: an observational study.

Source

BMJ Open; 2021. 11(2). 23 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To assess the trends in visits, overall and by age, to urban and non-urban emergency departments (EDs), and visits resulting in admission to hospital before and during the COVID-19 pandemic using a large regional database. **Setting:** A large regional database of 28 EDs during the COVID-19 pandemic in Michigan, with an index case of 11 March 2020 and peak in the first week of April. **Participants:** ED visits during the first 5 months of the calendar year were included and compared with the previous year. **Facilities** where these participants were seen were classified as urban or non-urban, with comparisons of total visits, COVID-like cases, paediatric and trauma. **Outcome measures:** Daily visits to EDs of patients presenting with COVID-like symptoms, trauma, age patterns and total cases, and stratified between urban and non-urban settings. **Results:** There were 1 732 852 visits across the 2 years, 953 407 between study and comparison periods, and 457 130 visits defined as COVID-like (median age 44 years). Total ED visits decreased to 48% of the previous year, showing a delayed-inverse relationship with COVID-19. Trauma cases dropped but returned to the pre-COVID-19 rate by the end of May in Urban centres. Paediatric cases decreased to 20% of the previous year by the end of April. The oldest age groups showed the least change in ED visits in response to the pandemic. **Conclusions:** This large US Midwestern state study describes a dramatic decrease in ED visits after the onset of the COVID-19 pandemic in Michigan, including stratification by varying ages and trauma, demonstrating the tangible impact of the COVID-19 pandemic on urban and non-urban EDs.

Publication Type

Journal article.

<225>

Accession Number

20210103231

Author

Macia-Rodriguez, C.; Ona, A. A. de; Martin-Iglesias, D.; Barrera-Lopez, L.; Perez-Sanz, M. T.; Moreno-Diaz, J.; Gonzalez-Munera, A.

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Title

Burn-out syndrome in Spanish internists during the COVID-19 outbreak and associated factors: a cross-sectional survey.

Source

BMJ Open; 2021. 11(2). 30 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: The objective of this study is to evaluate the impact of the COVID-19 outbreak on mental health and burn-out syndrome in Spanish internists and the factors that could be related to its appearance. **Design:** We performed an observational, cross-sectional, descriptive study for which we designed a survey that was distributed in May 2020. **Setting:** We included internists who worked in Spain during the COVID-19 outbreak. **Participants:** A total of 1015 internists responded to the survey. Of those 62.9% were women. **Results:** Of 1015 people, 58.3% presented with high emotional exhaustion, 61.5% had a high level of depersonalisation and 67.6% reported low personal fulfilment. 40.1% presented with the 3 criteria described, and therefore burn-out syndrome. Burn-out syndrome was independently related to the management of patients with SARS-CoV-2 (HR: 2.26; 95% CI 1.15 to 4.45), the lack of availability of personal protective equipment (HR: 1.41; 95% CI 1.05 to 1.91), increased responsibility (HR: 2.13; 95% CI 1.51 to 3.01), not having received financial compensation for overtime work (HR: 0.43; 95% CI 0.31 to 0.62), not having rested after 24-hour shifts (HR: 1.61; 95% CI 1.09 to 2.38), not having had holidays in the previous 6 months (HR: 1.36; 95% CI 1.01 to 1.84), consumption of sleeping pills (HR: 1.83; 95% CI 1.28 to 2.63) and higher alcohol intake (HR: 1.95; 95% CI 1.39 to 2.73). **Conclusions:** During the COVID-19 outbreak, 40.1% of Internal Medicine physicians in Spain presented with burn-out syndrome, which was independently related to the assistance of patients with SARS-CoV-2, overworking without any compensation and the fear of being contagious to their relatives. Therefore, it is imperative to initiate programmes to prevent and treat burn-out in front-line physicians during the COVID-19 outbreak.

Publication Type

Journal article.

<226>

Accession Number

20210103230

Author

Svensson, P.; Hofmann, R.; Habel, H.; Jernberg, T.; Nordberg, P.

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Title

Association between cardiometabolic disease and severe COVID-19: a nationwide case-control study of patients requiring invasive mechanical ventilation.

Source

BMJ Open; 2021. 11(2). 34 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Aims: The risks associated with diabetes, obesity and hypertension for severe COVID-19 may be confounded and differ by sociodemographic background. We assessed the risks associated with cardiometabolic factors for severe COVID-19 when accounting for socioeconomic factors and in subgroups by age, sex and region of birth. **Methods and results:** In this nationwide case-control study, 1,086 patients admitted to intensive care with COVID-19 requiring mechanical ventilation (cases), and 10,860 population-based controls matched for age, sex and district of residency were included from mandatory national registries. ORs with 95% CIs for associations between severe COVID-19 and exposures with adjustment for confounders were estimated using logistic regression. The median age was 62 years (IQR 52-70), and 3003 (24.9%) were women. Type 2 diabetes (OR, 2.3 (95% CI 1.9 to 2.7)), hypertension (OR, 1.7 (95% CI 1.5 to 2.0)), obesity (OR, 3.1 (95% CI 2.4 to 4.0)) and chronic kidney disease (OR, 2.5 (95% CI 1.7 to 3.7)) were all associated with severe COVID-19. In the younger subgroup (below 57 years), ORs were significantly higher for all cardiometabolic risk factors. The risk associated with type 2 diabetes was higher in women ($p=0.001$) and in patients with a region of birth outside European Union(EU) ($p=0.004$). **Conclusion:** Diabetes, obesity and hypertension were all independently associated with severe COVID-19 with stronger associations in the younger population. Type 2 diabetes implied a greater risk among women and in non-EU immigrants. These findings, originating from high-quality Swedish registries, may be important to direct preventive measures such as vaccination to susceptible patient groups.

Publication Type

Journal article.

<227>

Accession Number

20210103229

Author

Eibensteiner, F.; Ritschl, V.; Stamm, T.; Cetin, A.; Schmitt, C. P.; Ariceta, G.; Bakkaloglu, S.; Jankauskiene, A.; Klaus, G.; Paglialonga, F.; Edefonti, A.; Ranchin, B.; Shroff, R.; Stefanidis, C. J.; Vandewalle, J.; Verrina, E.; Vondrak, K.; Zurowska, A.; Alper, S. L.; Aufricht, C.

Title

Countermeasures against COVID-19: how to navigate medical practice through a nascent, evolving evidence base - a European multicentre mixed methods study.

Source

BMJ Open; 2021. 11(2). 32 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: In a previously published Delphi exercise the European Pediatric Dialysis Working Group (EPDWG) reported widely variable counteractive responses to COVID-19 during the first week of statutory public curfews in 12 European countries with case loads of 4-680 infected patients per million. To better understand these wide variations, we assessed different factors affecting countermeasure implementation rates and applied the capability, opportunity, motivation model of behaviour to describe their determinants. **Design:** We undertook this international mixed methods study of increased depth and breadth to obtain more complete data and to better understand the resulting complex evidence. **Setting:** This study was conducted in 14 paediatric nephrology centres across 12 European countries during the COVID-19 pandemic. **Participants:** The 14 participants were paediatric nephrologists and EPDWG members from 12 European centres. **Main outcome measures:** 52 countermeasures clustered into eight response domains (access control, patient testing, personnel testing, personal protective equipment policy, patient cohorting, personnel cohorting, suspension of routine care, remote work) were categorised by implementation status, drivers (expert opinion, hospital regulations) and resource dependency. Governmental strictness and media attitude were independently assessed for each country and correlated with relevant countermeasure implementation factors. **Results:** Implementation rates varied widely among response domains (median 49.5%, range 20%-71%) and centres (median 46%, range 31%-62%). Case loads were insufficient to explain response rate variability. Increasing case loads resulted in shifts from expert opinion-based to hospital regulation-based decisions to implement additional countermeasures despite increased resource dependency. Higher governmental strictness and positive media attitude towards countermeasure implementation were associated with higher implementation rates. **Conclusions:** COVID-19 countermeasure implementation by paediatric tertiary care centres did not reflect case loads but rather reflected heterogeneity of local rules and of perceived resources. These data highlight the need of ongoing reassessment of current practices, facilitating rapid change in 'institutional behavior' in response to emerging evidence of countermeasure efficacy.

Publication Type

Journal article.

<228>

Accession Number

20210103228

Author

Singh, B. M.; Bateman, J.; Viswanath, A.; Klaire, V.; Mahmud, S.; Nevill, A.; Dunmore, S. J.

Title

Risk of COVID-19 hospital admission and COVID-19 mortality during the first COVID-19 wave with a special emphasis on ethnic minorities: an observational study of a single, deprived, multiethnic UK health economy.

Source

BMJ Open; 2021. 11(2). 34 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: The objective of this study was to describe variations in COVID-19 outcomes in relation to local risks within a well-defined but diverse single-city area. **Design** Observational study of COVID-19 outcomes using quality-assured integrated data from a single UK hospital contextualised to its feeder population and associated factors (comorbidities, ethnicity, age, deprivation). **Setting/participants:** Single-city hospital with a feeder population of 228 632 adults in Wolverhampton. **Main outcome measures** Hospital admissions (defined as COVID-19 admissions (CA) or non-COVID- 19 admissions (NCA)) and mortality (defined as COVID-19 deaths or non-COVID- 19 deaths). **Results:** Of the 5558 patients admitted, 686 died (556 in hospital); 930 were CA, of which 270 were hospital COVID-19 deaths, 47 non-COVID- 19 deaths and 36 deaths after discharge; of the 4628 NCA, there were 239 in-hospital deaths (2 COVID-19) and 94 deaths after discharge. Of the 223 074 adults not admitted, 407 died. Age, gender, multimorbidity and black ethnicity (OR 2.1 (95% CI 1.5 to 3.2), $p < 0.001$, compared with white ethnicity, absolute excess risk of $< 1/1000$) were associated with CA and mortality. The South Asian cohort had lower CA and NCA, lower mortality compared with the white group (CA, 0.5 (0.3 to 0.8), $p < 0.01$; NCA, 0.4 (0.3 to 0.6), $p < 0.001$) and community deaths (0.5 (0.3 to 0.7), $p < 0.001$). Despite many common risk factors for CA and NCA, ethnic groups had different admission rates and within-group differing association of risk factors. Deprivation impacted only the white ethnicity, in the oldest age bracket and in a lesser (not most) deprived quintile. **Conclusions:** Wolverhampton's results, reflecting high ethnic diversity and deprivation, are similar to other studies of black ethnicity, age and comorbidity risk in COVID-19 but strikingly different in South Asians and for deprivation. Sequentially considering population and then hospital-based NCA and CA outcomes, we present a complete single health economy picture. Risk factors may differ within ethnic groups; our data may be more representative of communities with high Black, Asian and minority ethnic populations, highlighting the need for locally focused public health strategies. We emphasise the need for a more comprehensible and nuanced conveyance of risk.

Publication Type

Journal article.

<229>

Accession Number

20210103227

Author

Wang JingYuan; Tang Ke; Feng Kai; Lin Xin; Lv WeiFeng; Chen Kun; Wang Fei

Title

Impact of temperature and relative humidity on the transmission of COVID-19: a modelling study in China and the United States.

Source

BMJ Open; 2021. 11(2). 44 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: We aim to assess the impact of temperature and relative humidity on the transmission of COVID-19 across communities after accounting for community-level factors such as demographics, socioeconomic status and human mobility status. **Design:** A retrospective cross-sectional regression analysis via the Fama-MacBeth procedure is adopted. **Setting:** We use the data for COVID-19 daily symptom-onset cases for 100 Chinese cities and COVID-19 daily confirmed cases for 1005 US counties. **Participants:** A total of 69 498 cases in China and 740 843 cases in the USA are used for calculating the effective reproductive numbers. **Primary outcome measures:** Regression analysis of the impact of temperature and relative humidity on the effective reproductive number (R value). **Results:** Statistically significant negative correlations are found between temperature/relative humidity and the effective reproductive number (R value) in both China and the USA. **Conclusions:** Higher temperature and higher relative humidity potentially suppress the transmission of COVID-19. Specifically, an increase in temperature by 1 degrees C is associated with a reduction in the R value of COVID-19 by 0.026 (95% CI (-0.0395 to -0.0125)) in China and by 0.020 (95% CI (-0.0311 to -0.0096)) in the USA; an increase in relative humidity by 1% is associated with a reduction in the R value by 0.0076 (95% CI (-0.0108 to -0.0045)) in China and by 0.0080 (95% CI (-0.0150 to -0.0010)) in the USA. Therefore, the potential impact of temperature/relative humidity on the effective reproductive number alone is not strong enough to stop the pandemic.

Publication Type

Journal article.

<230>

Accession Number

20210103224

Author

Malloy, G. S. P.; Puglisi, L.; Brandeau, M. L.; Harvey, T. D.; Wang, E. A.

Title

Effectiveness of interventions to reduce COVID-19 transmission in a large urban jail: a model-based analysis.

Source

BMJ Open; 2021. 11(2). 25 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: We aim to estimate the impact of various mitigation strategies on COVID-19 transmission in a US jail beyond those offered in national guidelines. **Design:** We developed a stochastic dynamic transmission model of COVID-19. **Setting:** One anonymous large urban US jail. **Participants:** Several thousand staff and incarcerated individuals. **Interventions:** There were four intervention phases during the outbreak: the start of the outbreak, depopulation of the jail, increased proportion of people in single cells and asymptomatic testing. These interventions were implemented incrementally and in concert with one another. **Primary and secondary outcome measures:** The basic reproduction ratio, R_0 , in each phase, as estimated using the next generation method. The fraction of new cases, hospitalisations and deaths averted by these interventions (along with the standard measures of sanitization, masking and social distancing interventions). **Results:** For the first outbreak phase, the estimated R_0 was 8.44 (95% credible interval (CrI): 5.00 to 13.10), and for the subsequent phases, R_0 , phase 2=3.64 (95% CrI: 2.43 to 5.11), R_0 , phase 3=1.72 (95% CrI: 1.40 to 2.12) and R_0 , phase 4=0.58 (95% CrI: 0.43 to 0.75). In total, the jail's interventions prevented approximately 83% of projected cases, hospitalizations and deaths over 83 days. **Conclusions:** Depopulation, single celling and asymptomatic testing within jails can be effective strategies to mitigate COVID-19 transmission in addition to standard public health measures. Decision makers should prioritize reductions in the jail population, single celling and testing asymptomatic populations as additional measures to manage COVID-19 within correctional settings.

Publication Type

Journal article.

<231>

Accession Number

20210103222

Author

Mao YiMeng; Chen Hao; Wang Yi; Chen SuHong; Gao JunLing; Dai JunMing; Jia YingNan; Xiao QianYi; Zheng PinPin; Fu Hua

Title

How can the uptake of preventive behaviour during the COVID-19 outbreak be improved? An online survey of 4827 Chinese residents.

Source

BMJ Open; 2021. 11(2). 41 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives The aims of this study were to assess the uptake of preventive behaviour during the COVID-19 outbreak and to investigate the factors influencing the uptake of preventive behaviour based on the theory of planned behaviour (TPB). **Design, setting and participants** A cross-sectional online survey was conducted among Chinese residents aged 18 years and 4827 participants from 31 provinces and autonomous regions were included in the current study. **Uptake of preventive behaviour, attitude towards the spread of COVID-19 and preventive behaviour, subjective norms, perceived behavioural control, demographic characteristics and the information attention and processing mode** were measured. **Multivariate logistic regressions** were used to identify associations between the potential influencing factors and uptake of preventive behaviour. **Results** There were 2393 (52.8%) respondents reported high uptake of preventive behaviour. **Multivariate analyses** demonstrated that attitude towards the behaviour, subjective norms and perceived behavioural control were significantly correlated with uptake of preventive behaviour, and perceived behavioural control was the strongest influencing factor (OR=4.09, 95% CI 3.57 to 4.69). Furthermore, systematic information processing mode was positively associated with high uptake of preventive behaviour compared with heuristic information processing mode (OR=2.16, 95% CI 1.67 to 2.81). **Conclusions** These findings are helpful for developing education and interventions to promote high uptake of preventive behaviour and enhance public health outcomes during pandemic.

Publication Type

Journal article.

<232>

Accession Number

20210103213

Author

Yoneoka, D.; Shi, S.; Nomura, S.; Tanoue, Y.; Kawashima, T.; Eguchi, A.; Matsuura, K.; Makiyama, K.; Uryu, S.; Ejima, K.; Sakamoto, H.; Taniguchi, T.; Kunishima, H.; Gilmour, S.; Nishiura, H.; Miyata, H.

Title

Assessing the regional impact of Japan's COVID-19 state of emergency declaration: a population-level observational study using social networking services.

Source

BMJ Open; 2021. 11(2). 23 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: On 7 April 2020, the Japanese government declared a state of emergency in response to the novel coronavirus outbreak. To estimate the impact of the declaration on regional cities with low numbers of COVID-19 cases, large-scale surveillance to capture the current epidemiological situation of COVID-19 was urgently conducted in this study. **Design:** Cohort study. **Setting** Social networking service (SNS)-based online survey conducted in five prefectures of Japan: Tottori, Kagawa, Shimane, Tokushima and Okayama. **Participants:** 127 121 participants from the five prefectures surveyed between 24 March and 5 May 2020. **Interventions:** An SNS-based healthcare system named COOPERA (COvid-19: Operation for Personalized Empowerment to Render smart prevention And care seeking) was launched. It asks questions regarding postcode, personal information, preventive actions, and current and past symptoms related to COVID-19. **Primary and secondary outcome measures:** Empirical Bayes estimates of age-sex-standardised incidence rate (EBSIR) of symptoms and the spatial correlation between the number of those who reported having symptoms and the number of COVID-19 cases were examined to identify the geographical distribution of symptoms in the five prefectures. **Results:** 97.8% of participants had no subjective symptoms. We identified several geographical clusters of fever with significant spatial correlation ($r=0.67$) with the number of confirmed COVID-19 cases, especially in the urban centres of prefectural capital cities. **Conclusions:** Given that there are still several high-risk areas measured by EBSIR, careful discussion on which areas should be reopened at the end of the state of emergency is urgently required using real-time SNS system to monitor the nationwide epidemic.

Publication Type

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<233>

Accession Number

20210103211

Author

Ebinger, J. E.; Botwin, G. J.; Albert, C. M.; Alotaibi, M.; Arditi, M.; Berg, A. H.; Binek, A.; Botting Patrick; Fert-Bober, J.; Figueiredo, J. C.; Grein, J. D.; Hasan, W.; Henglin, M.; Hussain, S. K.; Jain, M.; Joung Sandy; Karin, M.; Kim, E. H.; Li DaLin; Liu YunXian; Luong Eric; McGovern, D. P. B.; Merchant, A.; Merin, N.; Miles, P. B.; Minissian, M.; Trevor Trung Nguyen; Raedschelders, K.; Rashid, M. A.; Riera, C. E.; Riggs, R. V.; Sonia Sharma; Sternbach, S.; Sun, N.; Tourtellotte, W. G.; Eyk, J. E. van; Sobhani, K.; Braun, J. G.; Cheng, S.

Title

Seroprevalence of antibodies to SARS-CoV-2 in healthcare workers: a cross-sectional study.

Source

BMJ Open; 2021. 11(2). 37 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: We sought to determine the extent of SARS-CoV-2 seroprevalence and the factors associated with seroprevalence across a diverse cohort of healthcare workers. **Design:** Observational cohort study of healthcare workers, including SARS-CoV-2 serology testing and participant questionnaires. **Settings:** A multisite healthcare delivery system located in Los Angeles County. **Participants:** A diverse and unselected population of adults (n=6062) employed in a multisite healthcare delivery system located in Los Angeles County, including individuals with direct patient contact and others with non-patient-oriented work functions. **Main outcomes:** Using Bayesian and multivariate analyses, we estimated seroprevalence and factors associated with seropositivity and antibody levels, including pre-existing demographic and clinical characteristics; potential COVID-19 illness-related exposures; and symptoms consistent with COVID-19 infection. **Results:** We observed a seroprevalence rate of 4.1%, with anosmia as the most prominently associated self-reported symptom (OR 11.04, p<0.001) in addition to fever (OR 2.02, p=0.002) and myalgias (OR 1.65, p=0.035). After adjusting for potential confounders, seroprevalence was also associated with Hispanic ethnicity (OR 1.98, p=0.001) and African-American race (OR 2.02, p=0.027) as well as contact with a COVID-19-diagnosed individual in the household (OR 5.73, p<0.001) or clinical work setting (OR 1.76, p=0.002). Importantly, African-American race and Hispanic ethnicity were associated with antibody positivity even after adjusting for personal COVID-19 diagnosis status, suggesting the contribution of

unmeasured structural or societal factors. Conclusion and relevance: The demographic factors associated with SARS-CoV-2 seroprevalence among our healthcare workers underscore the importance of exposure sources beyond the workplace. The size and diversity of our study population, combined with robust survey and modelling techniques, provide a vibrant picture of the demographic factors, exposures and symptoms that can identify individuals with susceptibility as well as potential to mount an immune response to COVID-19.

Publication Type

Journal article.

<234>

Accession Number

20210103210

Author

Statsenko, Y.; Al-Zahmi, F.; Habuza, T.; Neidl-Vangorkom, K.; Zaki, N.

Title

Prediction of COVID-19 severity using laboratory findings on admission: informative values, thresholds, ML model performance.

Source

BMJ Open; 2021. 11(2). 33 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Despite the necessity, there is no reliable biomarker to predict disease severity and prognosis of patients with COVID-19. The currently published prediction models are not fully applicable to clinical use. **Objectives** To identify predictive biomarkers of COVID-19 severity and to justify their threshold values for the stratification of the risk of deterioration that would require transferring to the intensive care unit (ICU). **Methods:** The study cohort (560 subjects) included all consecutive patients admitted to Dubai Mediclinic Parkview Hospital from February to May 2020 with COVID-19 confirmed by the PCR. The challenge of finding the cut-off thresholds was the unbalanced dataset (eg, the disproportion in the number of 72 patients admitted to ICU vs 488 non-severe cases). Therefore, we customised supervised machine learning (ML) algorithm in terms of threshold value used to predict worsening. **Results:** With the default thresholds returned by the ML estimator, the performance of the models was low. It was improved by setting the cut-off level to the 25th percentile for lymphocyte count and the 75th percentile for other features. The study

justified the following threshold values of the laboratory tests done on admission: lymphocyte count < 2.59.109/L, and the upper levels for total bilirubin 11.9 mol/L, alanine aminotransferase 43 U/L, aspartate aminotransferase 32 U/L, D-dimer 0.7 mg/L, activated partial thromboplastin time (aPTT) 39.9 s, creatine kinase 247 U/L, C reactive protein (CRP) 14.3 mg/L, lactate dehydrogenase 246 U/L, troponin 0.037 ng/mL, ferritin 498 ng/mL and fibrinogen 446 mg/dL. Conclusion: The performance of the neural network trained with top valuable tests (aPTT, CRP and fibrinogen) is admissible (area under the curve (AUC) 0.86; 95% CI 0.486 to 0.884; p<0.001) and comparable with the model trained with all the tests (AUC 0.90; 95% CI 0.812 to 0.902; p<0.001). Free online tool at <https://med.com> predict. com illustrates the study results.

Publication Type

Journal article.

<235>

Accession Number

20210103208

Author

Liu Wei; Liu Jia

Title

Living with COVID-19: a phenomenological study of hospitalised patients involved in family cluster transmission.

Source

BMJ Open; 2021. 11(2). 32 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To describe experiences of hospitalised patients with COVID-19 following family cluster transmission of the infection and the meaning of these experiences for them. **Design:** A descriptive phenomenological design was used to construct themes depicting patients' experiences of living with COVID-19. **Setting:** This study was conducted in a major teaching hospital in Wuhan, China, in March 2020. **Participants:** Fourteen patients involved in family cluster transmission of COVID-19 were recruited into the study. The participants consisted of seven males and seven females. Data were collected through semistructured, in-depth, face-to-face interviews. Interviews were transcribed verbatim and analysed using Colaizzi's approach. **Results:** Six themes emerged from data analysis during two distinct phases of patients going through COVID-19: the early outbreak phase and the later hospitalisation phase. Early in the

outbreak, patients experienced life imbalances between individual well-being and family responsibilities. While facing widespread prejudice and rejection, patients dealt with the heavy toll that the illness had left on their body and mind. After being hospitalised, patients described feelings of living with uncertainty, sadness, fear of death and concerns about family, while simultaneously hoping for a better life after recovery. Conclusions: Our findings suggest that living with COVID-19 is an emotionally and physically challenging experience for patient participants in the study. Psychological evaluations need to be routinely carried out with patients in a public health crisis. Interprofessional and interorganisational collaborative efforts should be made to examine the physical and psychological sequelae of COVID-19, as well as investigate outcomes of existing intervention programmes.

Publication Type

Journal article.

<236>

Accession Number

20210103207

Author

Llorca, J.; Lechosa-Muniz, C.; Gortazar, P.; Fernandez-Ortiz, M.; Jubete, Y.; Cabero, M. J.

Title

COVID-19 in a cohort of pregnant women and their descendants, the MOACC-19 study.

Source

BMJ Open; 2021. 11(2). 39 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Purpose: The Mother and Child COVID-19 study is a cohort recruiting pregnant women and their children in Cantabria, North of Spain, during COVID-19 pandemic in order to ascertain consequences of SARS-CoV-2 infection on pregnant women and their descendants. This article reports the cohort profile and preliminary results as recruitment is still open. **Participants:** Three subcohorts can be identified at recruitment. Subcohort 1 includes women giving birth between 23 March and 25 May 2020; they have been retrospectively recruited and could have been exposed to COVID-19 only in their third trimester of pregnancy. Subcohort 2 includes women giving birth from 26 May 2020 on; they are being prospectively recruited and could have been exposed to COVID-19 in both their second and third trimesters of pregnancy. Subcohort 3 includes women in their 12 week of pregnancy prospectively recruited from 26 May 2020 on;

they could have been exposed to COVID-19 anytime in their pregnancy. All women are being tested for SARS-CoV-2 infection using both RT-PCR for RNA detection and ELISA for anti-SARS-CoV-2 antibodies. All neonates are being tested for antibodies using immunochemoluminescence tests; if the mother is tested positive for SARS-CoV-2 RNA, a nasopharyngeal swab is also obtained from the child for RT-PCR analysis. Findings to date: As of 22 October, 1167 women have been recruited (266, 354 and 547 for subcohorts 1, 2 and 3, respectively). Fourteen women tested positive to SARS-CoV-2 RNA by the day of delivery. All 14 children born from these women tested negative for SARS-CoV-2 RNA. Future plans: Children from women included in subcohort 3 are expected to be recruited by the end of 2020. Children will be followed-up for 1 year in order to ascertain the effect that COVID-19 has on their development.

Publication Type

Journal article.

<237>

Accession Number

20210103204

Author

Toman, E.; Soon WaiCheong; Gopiga Thanabalasundaram; Burns, D.; Petrik, V.; Watts, C.; Wykes, V.; White, A.

Title

Comparison of outcomes of neurosurgical operations performed before and during the COVID-19 pandemic: a matched cohort study.

Source

BMJ Open; 2021. 11(2). 22 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To determine how the first wave of the COVID-19 pandemic affected outcomes for all operatively managed neurosurgical patients, not only those positive for SARS-CoV-2. **Design:** Matched cohort (pairwise method). **Setting:** A single tertiary neurosurgical referral centre at a large UK Major Trauma Centre. **Participants:** During the first COVID-19 wave, 231 neurosurgical cases were performed. These cases were matched to cases from 2019. Cases were matched for age (+or-10 years), primary pathology and surgical procedure. Cases were excluded from analysis if either the age could not be matched to within 10 years, or the primary pathology or procedure was too unique. After exclusions, 191

cases were included in final analysis. Outcome measures: Primary outcomes were 30-day mortality and postoperative pulmonary complications. Secondary outcomes included Glasgow Outcome Score (GOS) on discharge, length of stay (LoS), operative and anaesthetic times and grade of primary surgeon. An exploratory outcome was the SARS-CoV-2 status of patients. Results: There was no significant difference between the pandemic and matched cohorts in 30-day mortality, pulmonary complications, discharge GOS, LoS, operative or anaesthetic times. There was a significant difference in the variation of grade of primary surgeon. Only 2.2% (n=5) of patients had a SARS-CoV-2 positive swab. Conclusion: During the first UK wave of the COVID-19 pandemic, the mortality, morbidity and functional outcomes of operatively managed neurosurgical patients at University Hospitals Birmingham were not significantly affected compared with normal practice. The grade of primary surgeon was significantly more senior and adds to the growing body of evidence that demonstrates how the pandemic has negatively impacted UK surgical training. Mixing COVID-19 positive, unknown and negative cases did not significantly impact on outcomes and indicates that further research is required to support the implementation of evidence-based surgical pathways, such as COVID-light sites, throughout the next stage of the pandemic.

Publication Type

Journal article.

<238>

Accession Number

20210103201

Author

Kimura, M.; Kimura, K.; Ojima, T.

Title

Relationships between changes due to COVID-19 pandemic and the depressive and anxiety symptoms among mothers of infants and/or preschoolers: a prospective follow-up study from pre-COVID- 19 Japan.

Source

BMJ Open; 2021. 11(2). 25 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

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UK

Abstract

Objectives: Mothers with young children are particularly vulnerable to the impacts of the lifestyle changes brought about by the COVID-19 pandemic. However, the association between such changes and maternal mental health has not been examined, and comparable pre-COVID- 19 baseline data were lacking. Thus, we

aimed to examine the relationships between changes due to COVID-19 pandemic and the development of depressive and anxiety symptoms among mothers of infants and/or preschoolers in Japan. Design: Prospective follow-up study. The baseline survey was conducted in February 2020, and the follow-up survey was conducted in June 2020. Setting: All 47 prefectures in Japan. Participants: At the baseline, 4700 mothers of infants and/or preschoolers (0-6 years) participated in the online survey (100 respondents per prefecture); 2489 of them also participated in the follow-up survey. After excluding 203 participants with a higher risk of severe mental illness at the baseline, 2286 were included in the analysis. Outcome measures: The Kessler Psychological Distress Scale was used to measure depressive and anxiety symptoms, with a cut-off point of 13 or more. We estimated the adjusted OR (AOR) using multiple logistic regression analysis. Results: During the follow-up period, 151 (6.6%) of respondents newly developed depressive and anxiety symptoms. Participants who experienced a shortage of relaxation time (AOR 1.61, 95% CI 1.06 to 2.47), increased difficulty in child rearing (AOR 1.89, 95% CI 1.32 to 2.70), increased partner aggression (AOR 2.93, 95% CI 1.42 to 6.05) and an increased sense of unfairness (AOR 1.74, 95% CI 1.10 to 2.73) were more likely to develop these symptoms. Conclusions: Changes in circumstances and perceptions during COVID-19 outbreak were significantly related to the development of depressive and anxiety symptoms among mothers of young children. Strategies to reduce solo parenting and increase social awareness related to domestic violence are needed.

Publication Type

Journal article.

<239>

Accession Number

20210103199

Author

Jarkovsky, J.; Benesova, K.; Cerny, V.; Razova, J.; Kala, P.; Dolina, J.; Majek, O.; Sebestova, S.; Bezdekova, M.; Melicharova, H.; Snajdrova, L.; Dusek, L.; Parenica, J.

Title

Covidogram as a simple tool for predicting severe course of COVID-19: population-based study.

Source

BMJ Open; 2021. 11(2). 26 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: COVID-19 might either be entirely asymptomatic or manifest itself with a large variability of disease severity. It is beneficial to identify early patients with a high risk of severe course. The aim of the analysis was to develop a prognostic model for the prediction of the severe course of acute respiratory infection. Design: A population-based study. Setting: Czech Republic. Participants: The first 7455 consecutive patients with COVID-19 who were identified by reverse transcription-PCR testing from 1 March 2020 to 17 May 2020. Primary outcome: Severe course of COVID-19. Result: Of a total 6.2% of patients developed a severe course of COVID-19. Age, male sex, chronic kidney disease, chronic obstructive pulmonary disease, recent history of cancer, chronic heart failure, acid-related disorders treated with proton-pump inhibitors and diabetes mellitus were found to be independent negative prognostic factors (Area under the ROC Curve (AUC) was 0.893). The results were visualised by risk heat maps, and we called this diagram a 'covidogram'. Acid-related disorders treated with proton-pump inhibitors might represent a negative prognostic factor. Conclusion: We developed a very simple prediction model called 'covidogram', which is based on elementary independent variables (age, male sex and the presence of several chronic diseases) and represents a tool that makes it possible to identify-with a high reliability-patients who are at risk of a severe course of COVID-19. Obtained results open clinically relevant question about the role of acid-related disorders treated by proton-pump inhibitors as predictor for severe course of COVID-19.

Publication Type

Journal article.

<240>

Accession Number

20210103197

Author

Thomas, R.; Greenwood, H.; Michaleff, Z. A.; Abukmail, E.; Hoffmann, T. C.; McCaffery, K.; Hardiman, L.; Glasziou, P.

Title

Examining Australian's beliefs, misconceptions and sources of information for COVID-19: a national online survey.

Source

BMJ Open; 2021. 11(2). 22 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

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UK

Abstract

Objective: Public cooperation to practise preventive health behaviours is essential to manage the transmission of infectious diseases such as COVID-19. We aimed to investigate beliefs about COVID-19 diagnosis, transmission and prevention that have the potential to impact the uptake of recommended public health strategies. Design: An online cross-sectional survey. Participants: A national sample of 1500 Australian adults with representative quotas for age and gender provided by an online panel provider. Main outcome measure: Proportion of participants with correct/incorrect knowledge of COVID-19 preventive behaviours and reasons for misconceptions. Results: Of the 1802 potential participants contacted, 289 did not qualify, 13 declined and 1500 participated in the survey (response rate 83%). Most participants correctly identified 'washing your hands regularly with soap and water' (92%) and 'staying at least 1.5 m away from others' (90%) could help prevent COVID-19. Over 40% (incorrectly) considered wearing gloves outside of the home would prevent them from contracting COVID-19. Views about face masks were divided. Only 66% of participants correctly identified that 'regular use of antibiotics' would not prevent COVID-19. Most participants (90%) identified 'fever, fatigue and cough' as indicators of COVID-19. However, 42% of participants thought that being unable to 'hold your breath for 10 s without coughing' was an indicator of having the virus. The most frequently reported sources of COVID-19 information were commercial television channels (56%), the Australian Broadcasting Corporation (43%) and the Australian Government COVID-19 information app (31%). Conclusions: Public messaging about hand hygiene and physical distancing to prevent transmission appears to have been effective. However, there are clear, identified barriers for many individuals that have the potential to impede uptake or maintenance of these behaviours in the long term. We need to develop public health messages that harness these barriers to improve future cooperation. Ensuring adherence to these interventions is critical.

Publication Type

Journal article.

<241>

Accession Number

20210103196

Author

Masoud, A. T.; Zaazouee, M. S.; Elsayed, S. M.; Ragab, K. M.; Kamal, E. M.; Alnasser, Y. T.; Assar, A.; Nourelden, A. Z.; Istatiah, L. J.; Abd-Elgawad, M. M.; Abdelsattar, A. T.; Sofy, A. A.; Hegazy, D. G.; Femia, V. Z.; Mendonca, A. R.; Sayed, F. M.; Elmoursi, A.; Alareidi, A.; Abd-Eltawab, A. K.; Abdelmonem, M.; Mohammed, O. M.; Derballa, E. A.; El-Fas, K. A.; Abdel-Daim, M. M.; Abushouk, A. I.

Title

KAP-COVIDGLOBAL: a multinational survey of the levels and determinants of public knowledge, attitudes and practices towards COVID-19.

Source

BMJ Open; 2021. 11(2). 36 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: The adherence to public health recommendations to control COVID-19 spread is influenced by public knowledge, attitudes and practices (KAP). We performed this cross-sectional study to assess the levels and determinants of public KAP towards COVID-19 in a large, multinational sample. **Design:** Cross-sectional study (survey). **Setting:** The questionnaire was distributed to potential respondents via online platforms. **Participants:** 71 890 individuals from 22 countries. **Methods:** We formulated a four-section questionnaire in English, followed by validation and translation into seven languages. The questionnaire was distributed (May to June 2020) and each participant received a score for each KAP section. **Results:** Overall, the participants had fair knowledge (mean score: 19.24+or-3.59) and attitudes (3.72+or-2.31) and good practices (12.12+or-1.83) regarding COVID-19. About 92% reported moderate to high compliance with national lockdown. However, significant gaps were observed: only 68.2% knew that infected individuals may be asymptomatic; 45.4% believed that antibiotics are an effective treatment; and 55.4% stated that a vaccine has been developed (at the time of data collection). 71.9% believed or were uncertain that COVID-19 is a global conspiracy; 36.8% and 51% were afraid of contacting doctors and Chinese people, respectively. Further, 66.4% reported the pandemic had moderate to high negative effects on their mental health. Female gender, higher education and urban residents had significantly (p0.001) higher knowledge and practice scores. Further, we observed significant correlations between all KAP scores. **Conclusions:** Although the public have fair/good knowledge and practices regarding COVID-19, significant gaps should be addressed. Future awareness efforts should target less advantaged groups and future studies should develop new strategies to tackle COVID-19 negative mental health effects.

Publication Type

Journal article.

<242>

Accession Number

20210103194

Author

Du Min; Yang Jie; Han Na; Liu Min; Liu Jue

Title

Association between the COVID-19 pandemic and the risk for adverse pregnancy outcomes: a cohort study.

Source

BMJ Open; 2021. 11(2). 33 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives The secondary impacts of the COVID-19 pandemic on adverse maternal and neonatal outcomes remain unclear. In this study, we aimed to evaluate the association between the COVID-19 pandemic and the risk for adverse pregnancy outcomes. **Design** We conducted retrospective analyses on two cohorts comprising 7699 pregnant women in Beijing, China, and compared pregnancy outcomes between the pre-COVID-2019 cohort (women who delivered from 20 May 2019 to 30 November 2019) and the COVID-2019 cohort (women who delivered from 20 January 2020 to 31 July 2020). The secondary impacts of the COVID-2019 pandemic on pregnancy outcomes were assessed by using multivariate log-binomial regression models, and we used interrupted time-series (ITS) regression analysis to further control the effects of time-trends. **Setting** One tertiary-level centre in Beijing, China **Participants** 7699 pregnant women. **Results** Compared with women in the pre-COVID-19 pandemic group, pregnant women during the COVID-2019 pandemic were more likely to be of advanced age, exhibit insufficient or excessive gestational weight gain and show a family history of chronic disease (all $p < 0.05$). After controlling for other confounding factors, the risk of premature rupture of membranes and foetal distress was increased by 11% (95% CI, 1.04 to 1.18; $p > 0.01$) and 14% (95% CI, 1.01 to 1.29; $p > 0.05$), respectively, during the COVID-2019 pandemic. The association still remained in the ITS analysis after additionally controlling for time-trends (all $p > 0.01$). We uncovered no other associations between the COVID-19 pandemic and other pregnancy outcomes ($p > 0.05$). **Conclusions** During the COVID-19 pandemic, more women manifested either insufficient or excessive gestational weight gain; and the risk of premature rupture of membranes and foetal distress was also higher during the pandemic.

Publication Type

Journal article.

<243>

Accession Number

20210103192

Author

Collard, D.; Nurmohamed, N. S.; Kaiser, Y.; Reeskamp, L. F.; Dormans, T.; Moeniralam, H.; Simsek, S.; Douma, R.; Eerens, A.; Reidinga, A. C.; Elbers, P. W. G.; Beudel, M.; Vogt, L.; Stroes, E. S. G.; Born, B. J. H. van den

Title

Cardiovascular risk factors and COVID-19 outcomes in hospitalised patients: a prospective cohort study.

Source

BMJ Open; 2021. 11(2). 34 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Recent reports suggest a high prevalence of hypertension and diabetes in COVID-19 patients, but the role of cardiovascular disease (CVD) risk factors in the clinical course of COVID-19 is unknown. We evaluated the time-to-event relationship between hypertension, dyslipidaemia, diabetes and COVID-19 outcomes. **Design:** We analysed data from the prospective Dutch CovidPredict cohort, an ongoing prospective study of patients admitted for COVID-19 infection. **Setting:** Patients from eight participating hospitals, including two university hospitals from the CovidPredict cohort were included. **Participants:** Admitted, adult patients with a positive COVID-19 PCR or high suspicion based on CT-imaging of the thorax. Patients were followed for major outcomes during the hospitalisation. CVD risk factors were established via home medication lists and divided in antihypertensives, lipid-lowering therapy and antidiabetics. **Primary and secondary outcomes measures:** The primary outcome was mortality during the first 21 days following admission, secondary outcomes consisted of intensive care unit (ICU) admission and ICU mortality. **Kaplan-Meier and Cox regression analyses** were used to determine the association with CVD risk factors. **Results:** We included 1604 patients with a mean age of 66+or-15 of whom 60.5% were men. Antihypertensives, lipid-lowering therapy and antidiabetics were used by 45%, 34.7% and 22.1% of patients. After 21-days of follow-up; 19.2% of the patients had died or were discharged for palliative care. Cox regression analysis after adjustment for age and sex showed that the presence of 2 risk factors was associated with increased mortality risk (HR 1.52, 95% CI 1.15 to 2.02), but not with ICU admission. Moreover, the use of 2 antidiabetics and 2 antihypertensives was associated with mortality independent of age and sex with HRs of, respectively, 2.09 (95% CI 1.55 to 2.80) and 1.46 (95% CI 1.11 to 1.91). **Conclusions:** The accumulation of hypertension, dyslipidaemia and diabetes leads to a stepwise increased risk for short-term mortality in hospitalised COVID-19 patients independent of age and sex. Further studies investigating how these risk factors disproportionately affect COVID-19 patients are warranted.

Publication Type

Journal article.

<244>

Accession Number

20210103191

Author

Usha Dutta; Anurag Sachan; Madhumita Premkumar; Tulika Gupta; Swapnajeet Sahoo; Sandeep Grover; Sugandhi Sharma; Lakshmi, P. V. M.; Shweta Talati; Manisha Biswal; Vikas Suri; Singh, M. P.; Babita Ghai; Rajesh Chhabra; Bhavneet Bharti; Jayanta Samanta; Pankaj Arora; Ritin Mohindra; Sunita Malhotra; Gurmeet Singh; Rashmi Ranjan Guru; Navin Pandey; Vipin Koushal; Ashok Kumar; Bhogal, R. S.; Aggarwal, A.

K.; Kapil Goel; Pankaj Malhotra; Narayana Yaddanapudi; Pranay Mahajan; Thakur, J. S.; Rakesh Sehgal; Arnab Ghosh; Sehgal, I. S.; Ritesh Agarwal; Muralidharan Jayashree; Ashish Bhalla; Sanjay Jain; Rakesh Kochhar; Arunaloake Chakrabarti; Puri, G. D.; Jagat Ram

Title

Multidimensional dynamic healthcare personnel (HCP)-centric model from a low-income and middle-income country to support and protect COVID-19 warriors: a large prospective cohort study.

Source

BMJ Open; 2021. 11(2). 46 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Healthcare personnel (HCP) are at an increased risk of acquiring COVID-19 infection especially in resource-restricted healthcare settings, and return to homes unfit for self-isolation, making them apprehensive about COVID-19 duty and transmission risk to their families. We aimed at implementing a novel multidimensional HCP-centric evidence-based, dynamic policy with the objectives to reduce risk of HCP infection, ensure welfare and safety of the HCP and to improve willingness to accept and return to duty. **Setting:** Our tertiary care university hospital, with 12 600 HCP, was divided into high-risk, medium-risk and low-risk zones. In the high-risk and medium-risk zones, we organised training, logistic support, postduty HCP welfare and collected feedback, and sent them home after they tested negative for COVID-19. We supervised use of appropriate personal protective equipment (PPE) and kept communication paperless. **Participants:** We recruited willing low-risk HCP, aged <50 years, with no comorbidities to work in COVID-19 zones. Social distancing, hand hygiene and universal masking were advocated in the low-risk zone. **Results:** Between 31 March and 20 July 2020, we clinically screened 5553 outpatients, of whom 3012 (54.2%) were COVID-19 suspects managed in the medium-risk zone. Among them, 346 (11.4%) tested COVID-19 positive (57.2% male) and were managed in the high-risk zone with 19 (5.4%) deaths. One (0.08%) of the 1224 HCP in high-risk zone, 6 (0.62%) of 960 HCP in medium-risk zone and 23 (0.18%) of the 12 600 HCP in the low-risk zone tested positive at the end of shift. All the 30 COVID-19-positive HCP have since recovered. This HCP-centric policy resulted in low transmission rates (<1%), ensured satisfaction with training (92%), PPE (90.8%), medical and psychosocial support (79%) and improved acceptance of COVID-19 duty with 54.7% volunteering for re-deployment. **Conclusion:** A multidimensional HCP-centric policy was effective in ensuring safety, satisfaction and welfare of HCP in a resource-poor setting and resulted in a willing workforce to fight the pandemic.

Publication Type

Journal article.

<245>

Accession Number

20210103189

Author

Richardson, D.; Muhammad Faisal; Fiori, M.; Beatson, K.; Mohammed Mohammed

Title

Use of the first national early warning score recorded within 24 hours of admission to estimate the risk of in-hospital mortality in unplanned COVID-19 patients: a retrospective cohort study.

Source

BMJ Open; 2021. 11(2). 18 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Although the National Early Warning Score (NEWS) and its latest version NEWS2 are recommended for monitoring deterioration in patients admitted to hospital, little is known about their performance in COVID-19 patients. We aimed to compare the performance of the NEWS and NEWS2 in patients with COVID-19 versus those without during the first phase of the pandemic. **Design:** A retrospective cross-sectional study. **Setting:** Two acute hospitals (Scarborough and York) are combined into a single dataset and analysed collectively. **Participants:** Adult (18 years) non-elective admissions discharged between 11 March 2020 and 13 June 2020 with an index or on-admission NEWS2 electronically recorded within +or-24 hours of admission to predict mortality at four time points (in-hospital, 24 hours, 48 hours and 72 hours) in COVID-19 versus non-COVID-19 admissions. **Results:** Out of 6480 non-elective admissions, 620 (9.6%) had a diagnosis of COVID-19. They were older (73.3 vs 67.7 years), more often male (54.7% vs 50.1%), had higher index NEWS (4 vs 2.5) and NEWS2 (4.6 vs 2.8) scores and higher in-hospital mortality (32.1% vs 5.8%). The c-statistics for predicting in-hospital mortality in COVID-19 admissions was significantly lower using NEWS (0.64 vs 0.74) or NEWS2 (0.64 vs 0.74), however, these differences reduced at 72 hours (NEWS: 0.75 vs 0.81; NEWS2: 0.71 vs 0.81), 48 hours (NEWS: 0.78 vs 0.81; NEWS2: 0.76 vs 0.82) and 24 hours (NEWS: 0.84 vs 0.84; NEWS2: 0.86 vs 0.84). Increasing NEWS2 values reflected increased mortality, but for any given value the absolute risk was on average 24% higher (eg, NEWS2=5: 36% vs 9%). **Conclusions:** The index or on-admission NEWS and NEWS2 offers lower discrimination for COVID-19 admissions versus non-COVID-19 admissions. The index NEWS2 was not proven to be better than the index NEWS. For each value of the index NEWS/NEWS2, COVID-19 admissions had a substantially higher risk of mortality than non-COVID-19 admissions which reflects the increased baseline mortality risk of COVID-19.

Publication Type

Journal article.

<246>

Accession Number

20210103188

Author

Lombardi, A.; Mangioni, D.; Consonni, D.; Cariani, L.; Bono, P.; Cantu, A. P.; Tiso, B.; Carugno, M.; Muscatello, A.; Lunghi, G.; Pesatori, A. C.; Riboldi, L.; Ceriotti, F.; Bandera, A.; Gori, A.

Title

Seroprevalence of anti-SARS-CoV-2 IgG among healthcare workers of a large university hospital in Milan, Lombardy, Italy: a cross-sectional study.

Source

BMJ Open; 2021. 11(2). 33 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To assess the seroprevalence of anti-SARS-CoV-2 IgG among health careworkers (HCWs) in our university hospital and verify the risk of acquiring the infection according to work area. **Design:** Cross-sectional study. **Setting:** Monocentric, Italian, third-level university hospital. **Participants:** All the employees of the hospital on a voluntary base, for a total of 4055 participants among 4572 HCWs (88.7%). **Primary and secondary outcome measures:** Number of anti-SARS-CoV-2 positive serology according to working area. **Association of anti-SARS-CoV-2 positive serology to selected variables** (age, gender, country of origin, body mass index, smoking, symptoms and contact with confirmed cases). **Results:** From 27 April 2020 to 12 June 2020, 4055 HCWs were tested and 309 (7.6%) had a serological positive test. No relevant difference was found between men and women (8.3% vs 7.3%, $p=0.3$), whereas a higher prevalence was observed among foreign-born workers (27/186, 14.5%, $p<0.001$), employees younger than 30 (64/668, 9.6%, $p=0.02$) or older than 60 years (38/383, 9.9%, $p=0.02$) and among healthcare assistants (40/320, 12.5%, $p=0.06$). Working as frontline HCWs was not associated with an increased frequency of positive serology ($p=0.42$). A positive association was found with presence and number of symptoms ($p<0.001$). The symptoms most frequently associated with a positive serology were taste and smell alterations (OR 4.62, 95% CI: 2.99 to 7.15) and fever (OR 4.37, 95% CI: 3.11 to 6.13). No symptoms were reported in 84/309 (27.2%) HCWs with positive IgG levels. Declared exposure to a suspected/confirmed case was more frequently associated ($p<0.001$) with positive serology when the contact was a family member (19/94, 20.2%) than a patient or colleague (78/888, 8.8%). **Conclusions:** SARS-CoV-2 infection occurred undetected in a large fraction of HCWs and it was not associated with working in COVID-19 frontline areas. Beyond the hospital setting, exposure within the community represents an additional source of infection for HCWs.

Publication Type

Journal article.

<247>

Accession Number

20210103185

Author

Aert, G. J. J. van; Laan, L. van der; Boonman-De-Winter, L. J. M.; Berende, C. A. S.; Groot, H. G. W. de; Hensbroek, P. B. van; Schormans, P. M. J.; Winkes, M. B.; Vos, D. I.

Title

Effect of the COVID-19 pandemic during the first lockdown in the Netherlands on the number of trauma-related admissions, trauma severity and treatment: the results of a retrospective cohort study in a level 2 trauma centre.

Source

BMJ Open; 2021. 11(2). 23 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To determine the impact of the first lockdown in the Netherlands' measures during the COVID-19 pandemic on the number and type of trauma-related injuries presenting to the emergency department (ED). **Design:** A single-centre retrospective cohort study. **Setting** A level 2 trauma centre in Breda, The Netherlands. **Participants:** All patients with trauma seen at the ED between 11 March and 10 May 2020 (the first Dutch lockdown period) were included in this study. **Comparable groups** were generated for 2019 and 2018. **Main outcome measures:** Primary outcomes were the total number of patients with trauma admitted to the ED and the trauma mechanism. **Secondary outcomes** were triage categories, time of ED visit, trauma severity (Injury Severity Score (ISS) >12), anatomical region of injury and treatment. **Results:** A total of 4674 patients were included in this study. During the first months of the COVID-19 pandemic, there was a decrease of 32% in traumatic injuries at the ED (n=1182) compared with the previous years 2019 (n=1717) and 2018 (n=1775) (p < 0.001). Sports-related injuries decreased most during the lockdown (n=164) compared with 2019 (n=386) and 2018 (n=367) (p < 0.001). We observed more frequent injuries due to a fall from standing height (p < 0.001) and work-related injuries (p < 0.05). The mean age was significantly higher (mean 48 years vs 42 and 43 years). There was no difference in anatomical place of injury or ISS >12. The amount of patients admitted for emergency surgery was significantly higher (14.6% vs 9.4%; 8.6%, p < 0.001). Seven patients (0.6%) tested positive for COVID-19. **Conclusions:** Measures taken in the COVID-19 outbreak result in a predictable decrease in the total number of patients with trauma, especially sports-related trauma. Although the trauma burden on the emergency room appears to be lower, more people have been admitted for trauma surgery, possibly due to increased throughput in the operating theatres.

Publication Type

Journal article.

<248>

Accession Number

20210103182

Author

Rao, G. G.; Allen, A.; Papineni, P.; Wang LiYang; Anderson, C.; McGregor, A.; Whittington, A.; John, L.; Harris, M.; Hiles, S.; Nicholas, T.; Adams, K.; Akbar, A.; Blomquist, P.; Decraene, V.; Patel, B.; Manuel, R.; Chow, Y.; Kuper, M.

Title

Cross-sectional observational study of epidemiology of COVID-19 and clinical outcomes of hospitalised patients in North West London during March and April 2020.

Source

BMJ Open; 2021. 11(2). 22 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: The aim of this paper is to describe evolution, epidemiology and clinical outcomes of COVID-19 in subjects tested at or admitted to hospitals in North West London. **Design:** Observational cohort study. **Setting:** London North West Healthcare NHS Trust (LNWH). **Participants:** Patients tested and/or admitted for COVID-19 at LNWH during March and April 2020 **Main outcome measures:** Descriptive and analytical epidemiology of demographic and clinical outcomes (intensive care unit (ICU) admission, mechanical ventilation and mortality) of those who tested positive for COVID-19. **Results:** The outbreak began in the first week of March 2020 and reached a peak by the end of March and first week of April. In the study period, 6183 tests were performed in on 4981 people. Of the 2086 laboratory confirmed COVID-19 cases, 1901 were admitted to hospital. Older age group, men and those of black or Asian minority ethnic (BAME) group were predominantly affected ($p<0.05$). These groups also had more severe infection resulting in ICU admission and need for mechanical ventilation ($p<0.05$). However, in a multivariate analysis, only increasing age was independently associated with increased risk of death ($p<0.05$). Mortality rate was 26.9% in hospitalised patients. **Conclusion:** The findings confirm that men, BAME and older population were most commonly and severely affected groups. Only older age was independently associated with mortality.

Publication Type

Journal article.

<249>

Accession Number

20210103180

Author

Jiang QiXia; Liu YuXiu; Song SiPing; Wei Wei; Bai YuXuan

Title

Association between N95 respirator wearing and device-related pressure injury in the fight against COVID-19: a multicentre cross-sectional survey in China.

Source

BMJ Open; 2021. 11(2). 20 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To explore the association between N95 respirator wearing and device-related pressure injury (DRPI) and to provide a basis for protecting medical staff from skin injuries. **Design:** A cross-sectional, multicentre study. **Setting and participants:** Medical staff of 60 hospitals were selected from 145 designated medical institutions located in the epidemic area where the patients with COVID-19 were treated in China. **Results:** In total, 1761 respondents wore N95 respirators (use alone 20.8%; combination use 79.2%), and the prevalence of DRPI was 59.2% (95% CI 56.93 to 61.53). A daily wearing time of >4 hours (OR 1.62, 95% CI 1.11 to 2.35), wearing a N95 respirator in combination with goggles both with the presence of sweating (OR 13.40, 95% CI 7.34 to 23.16) and without the presence of sweating (OR 0.80, 95% CI 0.56 to 1.14) and wearing only a N95 respirator with the presence of sweating (OR 9.60, 95% CI 7.00 to 13.16) were associated with DRPI. A correspondence analysis indicated that if there was no sweating, regardless of whether the N95 respirator was worn by itself or in combination with goggles, single-site DRPI mainly occurred on the nose bridge, cheek and auricle. If there was sweating present, regardless of whether the N95 was worn by itself or in combination with goggles, multiple DRPI sites occurred more often on the face. **Conclusions:** The prevalence of DRPI among medical staff caused by N95 respirators was very high, which was mainly associated with a longer daily wearing time and interaction with sweating. The nasal bridge, cheeks and auricles were the primary protection locations found.

Publication Type

Journal article.

<250>

Accession Number

20210103179

Author

Alomar, R. S.; Alshamlan, N. A.; Alamer, N. A.; Fajar Aldulijan; Seereen Almuheidib; Omar Almukhadhib; Algarni, S. A.; Askar Alshaibani; Magdy Darwish; Malak Al Shammari

Title

What are the barriers and facilitators of volunteering among healthcare students during the COVID-19 pandemic? A Saudi-based cross-sectional study.

Source

BMJ Open; 2021. 11(2). 26 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: The objectives of this study were to assess the volunteering of undergraduate health students and interns in the Ministry of Health (MOH) services in the Kingdom of Saudi Arabia (KSA) during the COVID-19 pandemic, its motivational factors and barriers, as well as their risk perception of COVID-19. **Design:** A cross-sectional study. **Participants:** From 12 to 21 May 2020, an online survey was sent to all undergraduate health students and interns in the KSA. This included questions on demographics, volunteering status, risk perception of COVID-19, as well as motivations and barriers towards volunteering. **Results:** In a convenience sample of 6016 students and interns across KSA, 1824 (30.31%) have volunteered with the MOH services during the COVID-19 pandemic. Volunteering was more likely among older participants, from the College of Medicine, those with self-perceived at risk of COVID-19 infection and those with self-perceived healthy participants. Females, those who did not think that students had moral duties to volunteer, those who were at risk of seasonal influenza and those with self-perceived at risk of hospitalisation from COVID-19 were less likely to volunteer. Patriotism, gaining experience, assisting when able and religious rewards all were reported as major motivators to volunteer. Non-volunteering participants reported that lack of interest, protocol and knowledge, as well as issues related to their personal health and transportation were the main barriers to volunteering. **Conclusions:** About one-third of undergraduate health students and interns volunteered during the first 2 months of the COVID-19 pandemic in KSA. Moral values were the most important motivations among volunteers. Efforts to encourage health students and interns to volunteer and providing those with appropriate educational programmes are recommended.

Publication Type

<251>

Accession Number

20210103176

Author

Alene, K. A.; Yalemzewod Assefa Gelaw; Fetene, D. M.; Koye, D. N.; Melaku, Y. A.; Hailay Gesesew; Mulugeta Molla Birhanu; Akilew Awoke Adane; Muluken Dessalegn Muluneh; Berihun Assefa Dachew; Abrha, S.; Atsede Aregay; Asnakew Achaw Ayele; Bezabhe, W. M.; Kidane Tadesse Gebremariam; Tesfaye Gebremedhin; Gebremedhin, A. T.; Gebremichae, L.; Ayele Bali Geleto; Habtamu Tilahun Kassahun; Getiye Dejenu Kibret; Cheru Tesema Leshargie; Mekonnen, A.; Mirkuzie, A. H.; Mohammed, H.; Henok Getachew Tegegn; Azeb Gebresilassie Tesema; Fisaha Haile Tesfay; Befikadu Legesse Wubishet; Kinfu, Y.

Title

COVID-19 in Ethiopia: a geospatial analysis of vulnerability to infection, case severity and death.

Source

BMJ Open; 2021. 11(2). many ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 has caused a global public health crisis affecting most countries, including Ethiopia, in various ways. This study maps the vulnerability to infection, case severity and likelihood of death from COVID-19 in Ethiopia. Methods: Thirty-eight potential indicators of vulnerability to COVID-19 infection, case severity and likelihood of death, identified based on a literature review and the availability of nationally representative data at a low geographic scale, were assembled from multiple sources for geospatial analysis. Geospatial analysis techniques were applied to produce maps showing the vulnerability to infection, case severity and likelihood of death in Ethiopia at a spatial resolution of 1 kmx1 km. Results: This study showed that vulnerability to COVID-19 infection is likely to be high across most parts of Ethiopia, particularly in the Somali, Afar, Amhara, Oromia and Tigray regions. The number of severe cases of COVID-19 infection requiring hospitalization and intensive care unit admission is likely to be high across Amhara, most parts of Oromia and some parts of the Southern Nations, Nationalities and Peoples' Region. The risk of COVID-19-related death is high in the country's border regions, where public health preparedness for responding to COVID-19 is limited. Conclusion: This study revealed geographical differences in vulnerability to infection, case severity and likelihood of death from COVID-19 in Ethiopia. The study offers maps that can guide the targeted interventions necessary to contain the spread of COVID-19 in Ethiopia.

Publication Type

Journal article.

<252>

Accession Number

20210103175

Author

Hailay Abrha Gesesew; Koye, D. N.; Fetene, D. M.; Woldegiorgis, M.; Kinfu, Y.; Ayele Bali Geleto; Melaku, Y. A.; Mohammed, H.; Alene, K. A.; Awoke, M. A.; Birhanu, M. M.; Gebremedhin, A. T.; Gelaw, Y. A.; Desalegn Markos Shifti; Muluken Dessalegn Muluneh; Teketo Kassaw Tegegne; Solomon Abrha; Aregay, A. F.; Mohammed Biset Ayalew; Gebre, A. K.; Gebremariam, K. T.; Gebremedhin, T.; Gebremichael, L.; Leshargie, C. T.; Kibret, G. D.; Meazaw, M. W.; Mekonnen, A. B.; Tekle, D. Y.; Tesema, A. G.; Tesfay, F. H.; Tesfaye, W.; Wubishet, B. L.; Berihun Assefa Dachew; Akilew Awoke Adane

Title

Risk factors for COVID-19 infection, disease severity and related deaths in Africa: a systematic review.

Source

BMJ Open; 2021. 11(2). 46 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: The aim of this study was to provide a comprehensive evidence on risk factors for transmission, disease severity and COVID-19 related deaths in Africa. **Design:** A systematic review has been conducted to synthesise existing evidence on risk factors affecting COVID-19 outcomes across Africa. **Data sources:** Data were systematically searched from MEDLINE, Scopus, MedRxiv and BioRxiv. **Eligibility criteria:** Studies for review were included if they were published in English and reported at least one risk factor and/or one health outcome. We included all relevant literature published up until 11 August 2020. **Data extraction and synthesis:** We performed a systematic narrative synthesis to describe the available studies for each outcome. Data were extracted using a standardised Joanna Briggs Institute data extraction form. **Results:** Fifteen articles met the inclusion criteria of which four were exclusively on Africa and the remaining 11 papers had a global focus with some data from Africa. Higher rates of infection in Africa are associated with high population density, urbanisation, transport connectivity, high volume of tourism and international trade, and high level of economic and political openness. Limited or poor access to healthcare are also associated with higher COVID-19 infection rates. Older people and individuals with chronic conditions such as HIV, tuberculosis and anaemia experience severe forms COVID-19 leading to hospitalisation and death.

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Similarly, high burden of chronic obstructive pulmonary disease, high prevalence of tobacco consumption and low levels of expenditure on health and low levels of global health security score contribute to COVID-19 related deaths. Conclusions: Demographic, institutional, ecological, health system and politico-economic factors influenced the spectrum of COVID-19 infection, severity and death. We recommend multidisciplinary and integrated approaches to mitigate the identified factors and strengthen effective prevention strategies.

Publication Type

Journal article.

<253>

Accession Number

20210103156

Author

Galindo, I.; Garaigorta, U.; Lasala, F.; Cuesta-Geijo, M. A.; Bueno, P.; Gil, C.; Delgado, R.; Gastaminza, P.; Alonso, C.

Title

Antiviral drugs targeting endosomal membrane proteins inhibit distant animal and human pathogenic viruses.

Source

Antiviral Research; 2021. 186. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The endocytic pathway is a common strategy that several highly pathogenic viruses use to enter into the cell. To demonstrate the usefulness of this pathway as a common target for the development of broad-spectrum antivirals, the inhibitory effect of drug compounds targeting endosomal membrane proteins were investigated. This study entailed direct comparison of drug effectiveness against animal and human pathogenic viruses, namely Ebola (EBOV), African swine fever virus (ASFV), and the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). A panel of experimental and FDA-approved compounds targeting calcium channels and PIKfyve at the endosomal membrane caused potent reductions of entry up to 90% in SARS-CoV-2 S-protein pseudotyped retrovirus. Similar inhibition was observed against transduced EBOV glycoprotein pseudovirus and ASFV. SARS-CoV-2 infection was potently inhibited by selective estrogen receptor modulators in cells transduced with pseudovirus, among them Raloxifen inhibited ASFV with very

low 50% inhibitory concentration. Finally, the mechanism of the inhibition caused by the latter in ASFV infection was analyzed. Overall, this work shows that cellular proteins related to the endocytic pathway can constitute suitable cellular targets for broad range antiviral compounds.

Publication Type

Journal article.

<254>

Accession Number

20210102838

Author

Yurteri, N.; Sarigedik, E.

Title

Evaluation of the effects of COVID-19 pandemic on sleep habits and quality of life in children.

Source

Annals of Medical Research; 2021. 28(1):186-192. 39 ref.

Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

Aim: Children are thought to be one of the groups most affected by the psychosocial impact of the pandemic. The aim of this study is to examine the effects of COVID-19 pandemic on sleep habits and quality of life in children. **Materials and Methods:** 60 children between the ages of 8-13, who were not diagnosed with any psychiatric disorder with regard to pre-pandemic period according clinical assessment and "Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children- Present and Lifetime Version (KSADS-PL)" semi-structured interview tool, clinically normal intelligence level, did not have any medical illness that required treatment, had no history of adverse life events other than Covid pandemic, and had verbal consent and written informed consent of the family were included. Pre-pandemic and pandemic data were evaluated with Children's Sleep Habits Questionnaire (CSHQ)- Short Form, Pediatric Quality of Life Inventory (PedsQL) parent forms and Screen for Child Anxiety Related Disorders (SCARED), Children's Depression Inventory (CDI) self-report scales. **Results:** "Bedtime resistance", "Delayed sleep onset", "Night awakenings", "Parasomnias", "Daytime sleepiness" scale scores increased statistically significantly during the pandemic period. A statistically significant decrease was also found in all PedsQL scale scores compared to the pre-pandemic period. All CSHQ subscales except "sleep duration" related to the pandemic period were found to be statistically correlated with PedsQL scale scores. Additionally, statistically significant

increases were found in SCARED anxiety and CDI depression scores of children during the pandemic period compared to the pre-pandemic period. Furthermore, anxiety and depression scores were found to be correlated with both sleep problems and decrease in psychosocial quality of life domains except social anxiety. Conclusion: The results of our study indicate that COVID-19 pandemic may affect sleep habits and quality of life of children. We suggest that interventions targeted to regulate sleep habits are important for well-being of children during and after the pandemic. In addition, the results of increased anxiety and depression levels and the correlations between anxiety, depression with sleep problems and worse quality of life indicates the importance of evaluating anxiety and depression among children during COVID-19 pandemic.

Publication Type

Journal article.

<255>

Accession Number

20210102835

Author

Aras, A.; Gorus, Z.; Akyol, S.; Uner, D. D.

Title

Evaluation of attitudes and knowledge levels of dental students regarding COVID-19.

Source

Annals of Medical Research; 2021. 28(1):154-158.

Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

Aim: This study aimed to determine the attitude and knowledge levels of the students of Harran University Faculty of Dentistry about novel coronavirus disease (COVID-19) and to evaluate their thoughts on distance education. **Materials and Methods:** An online questionnaire about COVID-19 was conducted to students studying in the Faculty of Dentistry (n=144). The questionnaire consisted of a series of questions such as the demographic features of dentistry students, their degree of knowledge about COVID-19, where they got this information, methods of protection related to COVID-19, their psychological status during this pandemic period and their thoughts about the distance education program. The data obtained from the questionnaires were statistically analyzed. **Results:** This current study consisted of 144 participants (mean age of 20+or-1.3) including 83 (57.6%) females and 61 (42.4%) males. The majority of the participants

(76.4%) stated that they learned information related to COVID-19 from the Ministry of Health, the World Health Organization (WHO), and the Turkish Dental Association (TDA). The most common individual measure was determined 'not to be in crowded environments' (86.1%). During this period, 124 (86.1%) participants, consisting of 43 (34.7%) male and 81 (65.3%) female, reported that they voluntarily put themselves into quarantine (p0.05). Of 87.5% the participants noted that they thought distance education system implemented due to COVID-19 is not enough. Conclusion: Dental students at Harran University Faculty of Dentistry were aware of the seriousness of the COVID-19 pandemic. Even if this epidemic badly affected their psychology, they would not give up on their profession.

Publication Type

Journal article.

<256>

Accession Number

20210102832

Author

Tekin, E.; Bayraktar, M.; Ozlu, I.; Can, F. K.

Title

Perceived stress levels in patients in novel corona virus infection pandemic: prospective single-center study.

Source

Annals of Medical Research; 2021. 28(1):67-72. 23 ref.

Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

Aim: In the progression of the diseases, the psychological and stress levels of the patients affect the course of the disease. This situation is also important and should be analyzed in the follow-up of COVID-19 patients. In this study, it was aimed to investigate the stress levels of COVID-19 patients in our hospital isolation services. **Materials and Methods:** A prospective cross-sectional study is conducted in our isolation services where possible/definite COVID-19 patients older than 18 years old are followed. According to the patients' swap test results, patients are divided into two groups; group 1: COVID-19 possible, and the group 2: COVID-19 definitive groups. The demographic properties of the patients investigated, and the "Perceived Stress Scale", was applied to all groups the day after the swap test results were completed, and the outputs were analyzed. **Results:** A total of 157 patients with voluntary participation (94 possible and 63 definite

COVID-19 patients) were included. The mean age of the patients was 39.34 +or-12.87 years and 54.1% were women. In the analysis of the stress levels of the patients, while both groups have increased scores, but the Perceived Stress Scale (PSS) score was higher in COVID-19 definite group and statistically significant (p0.001). The patients with high stress levels (PSS score 36) were found to be 7.4% (n=7) in group 1; 77.8% (n=49) in group 2; and 35.7% (n=56) in total, and statistically significant (p0.05). Conclusion: Stress levels of patients increase in COVID-19 pandemic. It should be kept in mind that the stress levels may be higher particularly in positive cases, and psychiatric support and preventive measures should be occupied accordingly.

Publication Type

Journal article.

<257>

Accession Number

20210102829

Author

Wu Yu; Ye Jin; Xuan ZhiHong; Li Li; Wang HaiBo; Wang SongShan; Liu HongMei; Wang SongXue

Title

Development and validation of a rapid and efficient method for simultaneous determination of mycotoxins in coix seed using one-step extraction and UHPLC-HRMS.

Source

Food Additives and Contaminants A; 2020. 38(1):148-159. 39 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Coix seed is an important food and traditional Chinese medicine in China and other Asian countries. Notably, coix seed is currently being used as a traditional medicine for the treatment of COVID-19 in China. However, coix seeds are generally contaminated by mycotoxins, and this risk cannot be ignored. In this paper, we developed a method that involves direct extraction and UHPLC-HRMS analysis for the simultaneous detection of 24 mycotoxins in coix seeds. UHPLC-HRMS instrument and data acquisition parameters, and the sample pretreatment were optimised. One-step extraction showed several advantages compared to the three commercial solid-phase extraction clean-up methods, including ease of use, reduced time of sample preparation, low cost, good recovery, and acceptable matrix effect. The method validation results indicate that all mycotoxins have good linearity and sensitivity. Recoveries were between 74.2-

101.1%, and RSD ranged from 0.1-5.8%. The LOQs for 24 mycotoxins were in the range of 0.5-100 micro g/kg. To survey the contamination levels of these mycotoxins in commercial coix seeds, more than 70 samples were collected from Chinese markets and were analysed using the newly developed method. Zearalenone (positive ratio: 98.7%, range:1.1-1562 micro g/kg), deoxynivalenol (positive ratio: 87%, range: 8.4-382.5 micro g/kg), nivalenol (positive ratio: 85.7%, range: 26.8-828.2 micro g/kg), fumonisin B1 (positive ratio: 84.4%, range:2.5-314.5 micro g/kg), fumonisin B2 (positive ratio: 75.3%, range:1.6-72.8 micro g/kg), fumonisin B3 (positive ratio: 48%, range:1.0-203.6 micro g/kg), aflatoxin B1 (positive ratio: 29.9%, range: 0.39-14.7 micro g/kg), sterigmatocystin (positive ratio: 29.9%, range: 1.4-51.6 micro g/kg), and tenuazonic acid (positive ratio: 19.5%, range 36.1-105.7 micro g/kg) were the most frequent mycotoxin contaminants. These results highlight the importance of routine monitoring and control of mycotoxins in coix seeds.

Publication Type

Journal article.

<258>

Accession Number

20210102760

Author

Auvinen, R.; Nohynek, H.; Syrjanen, R.; Ollgren, J.; Kerttula, T.; Mantyla, J.; Ikonen, N.; Loginov, R.; Haveri, A.; Kurkela, S.; Skogberg, K.

Title

Comparison of the clinical characteristics and outcomes of hospitalized adult COVID-19 and influenza patients - a prospective observational study.

Source

Infectious Diseases; 2021. 53(2):111-121. 37 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Background: We compared the clinical characteristics, findings, and outcomes of hospitalized patients with coronavirus disease 2019 (COVID-19) or influenza to detect relevant differences. **Methods:** From December 2019 to April 2020, we recruited all eligible hospitalized adults with respiratory infection to a prospective observational study at a tertiary care hospital in Finland. Influenza and SARS-CoV-2 infections were confirmed by RT-PCR. Follow-up lasted for 3 months from admission. **Results:** We included 61 patients, of whom 28 were COVID-19 and 33 influenza patients with median ages of 53 and 56 years.

Majority of both COVID-19 and influenza patients were men (61% vs. 67%) and had at least one comorbidity (68% vs. 85%). Pulmonary diseases and current smoking were less common among COVID-19 than influenza patients (5 [18%] vs. 15 [45%], $p=.03$ and 1 [4%] vs. 10 [30%], $p=.008$). In chest X-ray at admission, ground-glass opacities (GGOs) and consolidations were more frequent among COVID-19 than influenza patients (19 [68%] and 7 [21%], $p<.001$). Severe disease and intensive care unit (ICU) admission occurred more often among COVID-19 than influenza patients (26 [93%] vs. 19 [58%], $p=.003$ and 8 [29%] vs. 2 [6%], $p=.034$). COVID-19 patients were hospitalized longer than influenza patients (six days [IQR 4-21] vs. 3 [2-4], $p<.001$). Conclusions: Bilateral GGOs and consolidations in chest X-ray may help to differentiate COVID-19 from influenza. Hospitalized COVID-19 patients had more severe disease, required longer hospitalization and were admitted to ICU more often than influenza patients, which has important implications for public health policies.

Publication Type

Journal article.

<259>

Accession Number

20210102759

Author

Karami, Z.; Knoop, B. T.; Dofferhoff, A. S. M.; Blaauw, M. J. T.; Janssen, N. A.; Apeldoorn, M. van; Kerckhoffs, A. P. M.; Maat, J. S. van de; Hoogerwerf, J. J.; Oever, J. ten

Title

Few bacterial co-infections but frequent empiric antibiotic use in the early phase of hospitalized patients with COVID-19: results from a multicentre retrospective cohort study in the Netherlands.

Source

Infectious Diseases; 2021. 53(2):102-110. 34 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Background: Knowledge on bacterial co-infections in COVID-19 is crucial to use antibiotics appropriately. Therefore, we aimed to determine the incidence of bacterial co-infections, antibiotic use and application of antimicrobial stewardship principles in hospitalized patients with COVID-19. **Methods:** We performed a retrospective observational study in four hospitals (1 university, 2 non-university teaching, 1 non-teaching hospital) in the Netherlands from March to May 2020 including consecutive patients with PCR-confirmed

COVID-19. Data on first microbiological investigations obtained at the discretion of the physician and antibiotic use in the first week of hospital admission were collected. Results: Twelve (1.2%) of the 925 patients included had a documented bacterial co-infection (75.0% pneumonia) within the first week. Microbiological testing was performed in 749 (81%) patients: sputum cultures in 105 (11.4%), blood cultures in 711 (76.9%), pneumococcal urinary antigen testing in 202 (21.8%), and Legionella urinary antigen testing in 199 (21.5%) patients, with clear variation between hospitals. On presentation 556 (60.1%; range 33.3-73.4%) patients received antibiotics for a median duration of 2 days (IQR 1-4). Intravenous to oral switch was performed in 41 of 413 (9.9%) patients who received intravenous treatment >48 h. Mean adherence to the local guideline on empiric antibiotic therapy on day 1 was on average 60.3% (range 45.3%-74.7%). Conclusions: On presentation to the hospital bacterial co-infections are rare, while empiric antibiotic use is abundant. This implies that in patients with COVID-19 empiric antibiotic should be withheld. This has the potential to dramatically reduce the current overuse of antibiotics in the COVID-19 pandemic.

Publication Type

Journal article.

<260>

Accession Number

20210102581

Author

He ShanShan; Han Jie

Title

Biorepositories (biobanks) of human body fluids and materials as archives for tracing early infections of COVID-19.

Source

Environmental Pollution; 2021. 274. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Identifying the individuals and geographical regions witnessing early infections or outbreaks of SARS-CoV-2 and its variants is helpful for studying the early epidemiology or even the origin of the novel coronavirus. Here, we put forward a strategy that can potentially contribute to this goal. Human body fluids and biological materials collected before the COVID-19 pandemic may serve as archives for retrospective testing

of early human infections before the recent outbreaks. These have been routinely donated, collected, and archived, creating biorepositories or "biobanks" for clinical or research purposes. SARS-CoV-2 genetic materials and its antibodies have been confirmed in various types of biological samples from COVID-19 patients, including blood, sperm, umbilical cord blood, lung, heart, kidney and so on, making these biological archives as candidates for detecting early COVID-19 infections. Unlike sewage-based epidemiology which only provides information on the geographical aspect, viruses identified in archived human biological samples provide direct links to individuals, from whom a wealth of personal information including their profession, hobbies and activities, travel history, and previous exposure to wildlife can all be retrieved. By analyzing the patterns and links in the behavior of those early infected individuals, it is possible to trace the origin of the virus, for instance, in certain wild animals or local environments.

Publication Type

Journal article.

<261>

Accession Number

20210102576

Author

Lovric, M.; Pavlovic, K.; Vukovic, M.; Grange, S. K.; Haberl, M.; Kern, R.

Title

Understanding the true effects of the COVID-19 lockdown on air pollution by means of machine learning.

Source

Environmental Pollution; 2021. 274. 36 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

During March 2020, most European countries implemented lockdowns to restrict the transmission of SARS-CoV-2, the virus which causes COVID-19 through their populations. These restrictions had positive impacts for air quality due to a dramatic reduction of economic activity and atmospheric emissions. In this work, a machine learning approach was designed and implemented to analyze local air quality improvements during the COVID-19 lockdown in Graz, Austria. The machine learning approach was used as a robust alternative to simple, historical measurement comparisons for various individual pollutants. Concentrations of NO₂ (nitrogen dioxide), PM₁₀ (particulate matter), O₃ (ozone) and Ox (total oxidant) were selected from five measurement sites in Graz and were set as target variables for random forest

regression models to predict their expected values during the city's lockdown period. The true vs. expected difference is presented here as an indicator of true pollution during the lockdown. The machine learning models showed a high level of generalization for predicting the concentrations. Therefore, the approach was suitable for analyzing reductions in pollution concentrations. The analysis indicated that the city's average concentration reductions for the lockdown period were: -36.9 to -41.6%, and -6.6 to -14.2% for NO₂ and PM₁₀, respectively. However, an increase of 11.6-33.8% for O₃ was estimated. The reduction in pollutant concentration, especially NO₂ can be explained by significant drops in traffic-flows during the lockdown period (-51.6 to -43.9%). The results presented give a real-world example of what pollutant concentration reductions can be achieved by reducing traffic-flows and other economic activities.

Publication Type

Journal article.

<262>

Accession Number

20210102526

Author

Dipesh Kumar; Singh, A. K.; Vaibhav Kumar; Poyoja, R.; Ashok Ghosh; Bhaskar Singh

Title

COVID-19 driven changes in the air quality; a study of major cities in the Indian state of Uttar Pradesh.

Source

Environmental Pollution; 2021. 274. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Amid the COVID-19 pandemic, there has been an unprecedented cessation of outdoor anthropogenic activities leading to a significant improvement of the environment across the world. However, the positive impacts on the environment are not expected to last long as countries have started to gradually come out of lockdown and engage in aggressive measures to regain the pre-COVID-19 levels of economic activity. The present study provides for an assessment of air quality changes during the period of lockdown and unlocking across 9 major cities in the Indian state of Uttar Pradesh, including three cities (Ghaziabad, Noida, and Greater Noida) in the national capital region, which have frequently been included among the most polluted cities in the world. The pollutant load in a vertical column of air during March-July 2020 has been analyzed and compared with the corresponding period's pollution load in 2019. In addition, a detailed

analysis of the ground-level changes in pollution load for Ghaziabad, Noida, and Greater Noida is also presented, along with the changes in local meteorology. A significant reduction in the total column density of NO₂, CO and ground-level pollution load of PM₁₀, PM_{2.5}, NO₂, and SO₂ have been observed. In contrast, an increase in total column density of SO₂ across all the cities (except Kanpur) and ground-level concentration of CO (in Noida and Greater Noida) and O₃ (in Noida) was evident. The improvement in air quality (with respect to particulate matter) can primarily be attributed to the restrictions on construction and demolition activities, reduced re-suspension of roadside dust, and the restrictions on the movement of vehicles. A significant decline in the average summer temperature was recorded, and it can plausibly be attributed to lower radiative forcing due to reduced pollutant load in the atmosphere.

Publication Type

Journal article.

<263>

Accession Number

20210102500

Author

Rigo-Bonnin, R.; Canalias, F.

Title

Estimation of the uncertainty of values assigned to calibration materials prepared in-house: an example for hydroxychloroquine calibrators in blood-hemolysate-based matrix.

Source

Clinical Biochemistry; 2021. 89:70-76. 17 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Hydroxychloroquine is an antimalarial drug that has been prescribed for the treatment of patients with COVID-19 infection. To assist in clinician decision-making, several clinical laboratories have developed and validated measurement procedures in-house based on HPLC or HPLC-MS/MS to measure the mass concentration of hydroxychloroquine in different biological fluids. In these cases, laboratories produce their calibration materials but rarely estimate the measurement uncertainty of their assigned values. Thus, we aimed to show how this uncertainty can be calculated, using the preparation of hydroxychloroquine calibrators in blood-hemolysate-based matrix as an example. Methods: A bottom-up approach was used to estimate the uncertainty related to the values assigned to end-user calibration

materials prepared in-house. First, a specification of the measurand and a measurement equation were proposed. Then, different sources of uncertainty related to the preparation of hydroxychloroquine calibration materials were identified and quantified. Afterwards, the combined uncertainty was calculated using the law for the propagation of uncertainty resulting in the final expanded uncertainty. Results: In this study, the most significant source of uncertainty was that associated with the hydroxychloroquine's reference material mass obtained via balance, while the smallest contribution was from the uncertainty associated with the hydroxychloroquine reference material purity. Conclusions: A simple procedure to estimate the measurement uncertainty of values assigned to calibration materials is presented here, which would be easy to implement in clinical laboratories. Also, it could be put into practice for other pharmacological quantities measured by in-house HPLC or HPLC-MS/MS procedures commonly used in clinical laboratories.

Publication Type

Journal article.

<264>

Accession Number

20210102496

Author

Liu Cheng; Boland, S.; Scholle, M. D.; Bardiot, D.; Marchand, A.; Chaltin, P.; Blatt, L. M.; Beigelman, L.; Symons, J. A.; Raboisson, P.; Gurard-Levin, Z. A.; Vandyck, K.; Deval, J.

Title

Dual inhibition of SARS-CoV-2 and human rhinovirus with protease inhibitors in clinical development.

Source

Antiviral Research; 2021. 187. 28 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The 3-chymotrypsin-like cysteine protease (3CLpro) of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is considered a major target for the discovery of direct antiviral agents. We previously reported the evaluation of SARS-CoV-2 3CLpro inhibitors in a novel self-assembled monolayer desorption ionization mass spectrometry (SAMDI-MS) enzymatic assay (Gurard-Levin et al., 2020). The assay was further improved by adding the rhinovirus HRV3C protease to the same well as the SARS-CoV-2 3CLpro enzyme. High substrate specificity for each enzyme allowed the proteases to be combined in a single assay

reaction without interfering with their individual activities. This novel duplex assay was used to profile a diverse set of reference protease inhibitors. The protease inhibitors were grouped into three categories based on their relative potency against 3CLpro and HRV3C including those that are: equipotent against 3CLpro and HRV3C (GC376 and calpain inhibitor II), selective for 3CLpro (PF-00835231, calpain inhibitor XII, boceprevir), and selective for HRV3C (rupintrivir). Structural analysis showed that the combination of minimal interactions, conformational flexibility, and limited bulk allows GC376 and calpain inhibitor II to potently inhibit both enzymes. In contrast, bulkier compounds interacting more tightly with pockets P2, P3, and P4 due to optimization for a specific target display a more selective inhibition profile. Consistently, the most selective viral protease inhibitors were relatively weak inhibitors of human cathepsin L. Taken together, these results can guide the design of cysteine protease inhibitors that are either virus-specific or retain a broad antiviral spectrum against coronaviruses and rhinoviruses.

Publication Type

Journal article.

<265>

Accession Number

20210102458

Author

Zhao Yi; Liu YuJie; Yi FangZheng; Zhang Jun; Xu ZhaoHui; Liu YehAi; Tao Ye

Title

Type 2 diabetes mellitus impaired nasal immunity and increased the risk of hyposmia in COVID-19 mild pneumonia patients.

Source

International Immunopharmacology; 2021. 93. 45 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In patients with COVID-19, type 2 diabetes mellitus (T2DM) can impair the function of nasal-associated lymphoid tissue (NALT) and result in olfactory dysfunction. Exploring the causative alterations of T2DM within the nasal mucosa and NALT could provide insight into the pathogenic mechanisms and bridge the gap between innate immunity and adaptive immunity for virus clearance. Here, we designed a case-control study to compare the olfactory function (OF) among the groups of normal control (NC), COVID-19 mild pneumonia (MP), and MP patients with T2DM (MPT) after a 6-8 months' recovery, in which MPT had a

higher risk of hyposmia than MP and NC. No significant difference was found between the MP and NC. This elevated risk of hyposmia indicated that T2DM increased COVID-19 susceptibility in the nasal cavity with unknown causations. Therefore, we used the T2DM animal model (db/db mice) to evaluate how T2DM increased COVID-19 associated susceptibilities in the nasal mucosa and lymphoid tissues. Db/db mice demonstrated upregulated microvasculature ACE2 expression and significant alterations in lymphocytes component of NALT. Specifically, db/db mice NALT had increased immune-suppressive TCRP+ CD4-CD8- T and decreased immune-effective CD4+/CD8+ TCRbeta+ T cells and decreased mucosa-protective CD19+ B cells. These results indicated that T2DM could dampen the first-line defense of nasal immunity, and further mechanic studies of metabolic damage and NALT restoration should be one of the highest importance for COVID-19 healing.

Publication Type

Journal article.

<266>

Accession Number

20210102376

Author

Mallio, C. A.; Napolitano, A.; Castiello, G.; Giordano, F. M.; D'Alessio, P.; Iozzino, M.; Sun YiPeng; Angeletti, S.; Russano, M.; Santini, D.; Tonini, G.; Zobel, B. B.; Vincenzi, B.; Quattrocchi, C. C.

Title

Deep learning algorithm trained with COVID-19 pneumonia also identifies immune checkpoint inhibitor therapy-related pneumonitis.

Source

Cancers; 2021. 13(4). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: Coronavirus disease 2019 (COVID-19) pneumonia and immune checkpoint inhibitor (ICI) therapy-related pneumonitis share common features. The aim of this study was to determine on chest computed tomography (CT) images whether a deep convolutional neural network algorithm is able to solve the challenge of differential diagnosis between COVID-19 pneumonia and ICI therapy-related pneumonitis. Methods: We enrolled three groups: a pneumonia-free group (n = 30), a COVID-19 group (n = 34), and a group of patients with ICI therapy-related pneumonitis (n = 21). Computed tomography images were

analyzed with an artificial intelligence (AI) algorithm based on a deep convolutional neural network structure. Statistical analysis included the Mann-Whitney U test (significance threshold at $p < 0.05$) and the receiver operating characteristic curve (ROC curve). Results: The algorithm showed low specificity in distinguishing COVID-19 from ICI therapy-related pneumonitis (sensitivity 97.1%, specificity 14.3%, area under the curve (AUC) = 0.62). ICI therapy-related pneumonitis was identified by the AI when compared to pneumonia-free controls (sensitivity = 85.7%, specificity 100%, AUC = 0.97). Conclusions: The deep learning algorithm is not able to distinguish between COVID-19 pneumonia and ICI therapy-related pneumonitis. Awareness must be increased among clinicians about imaging similarities between COVID-19 and ICI therapy-related pneumonitis. ICI therapy-related pneumonitis can be applied as a challenge population for cross-validation to test the robustness of AI models used to analyze interstitial pneumonias of variable etiology.

Publication Type

Journal article.

<267>

Accession Number

20210102372

Author

Muller, W. E. G.; Neufurth, M.; Wang ShunFeng; Schroder, H. C.; Wang XiaoHong

Title

Polyphosphate reverses the toxicity of the quasi-enzyme bleomycin on alveolar endothelial lung cells in vitro.

Source

Cancers; 2021. 13(4). 96 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The anti-cancer antitumor antibiotic bleomycin(s) (BLM) induces athymic sites in DNA after its activation, a process that results in strand splitting. Here, using A549 human lung cells or BEAS-2B cells lung cells, we show that the cell toxicity of BLM can be suppressed by addition of inorganic polyphosphate (polyP), a physiological polymer that accumulates and is released from platelets. BLM at a concentration of 20 micro g ml⁻¹ causes a decrease in cell viability (by ~70%), accompanied by an increased DNA damage and chromatin expansion (by amazingly 6-fold). Importantly, the BLM-caused effects on cell growth and DNA

integrity are substantially suppressed by polyP. In parallel, the enlargement of the nuclei/chromatin in BLM-treated cells (diameter, 20-25 micro m) is normalized to ~12 micro m after co-incubation of the cells with BLM and polyP. A sequential application of the drugs (BLM for 3 days, followed by an exposure to polyP) does not cause this normalization. During co-incubation of BLM with polyP the gene for the BLM hydrolase is upregulated. It is concluded that by upregulating this enzyme polyP prevents the toxic side effects of BLM. These data might also contribute to an application of BLM in COVID-19 patients, since polyP inhibits binding of SARS-CoV-2 to cellular ACE2.

Publication Type

Journal article.

<268>

Accession Number

20210102371

Author

Liontos, M.; Kastritis, E.; Markellos, C.; Migkou, M.; Eleftherakis-Papaiakovou, E.; Koutsoukos, K.; Gavriatopoulou, M.; Zagouri, F.; Psaltopoulou, T.; Terpos, E.; Dimopoulos, M. A.

Title

Continuing cancer therapy through the pandemic while protecting our patients: results of the implementation of preventive strategies in a referral oncology unit.

Source

Cancers; 2021. 13(4). 37 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Cancer patients infected with SARS-CoV-2 have worse outcomes, including higher morbidity and mortality than the general population. Protecting this vulnerable group of patients from COVID-19 is of the utmost importance for the continuous operation of an oncology unit. Preventive strategies have been proposed by various societies, and centers around the world have implemented these or modified measures; however, the efficacy of these measures has not been evaluated. In our center, a referral oncology/hematology unit in Athens, Greece, we implemented strict protective measures from the outset of the pandemic in the country and we have prospectively recorded the epidemiological characteristics of COVID-19. Among 11,618 patient visits performed in our unit, 26 patients (case-to-visit ratio of 0.22%) were found positive for SARS-CoV-2, including 4 (1%) among 392 patients that were screened before starting primary systemic

treatment. Among patients tested positive for SARS-CoV-2, 22 were symptomatic at the time of diagnosis; subsequently, 12 required hospitalization and 5 died due to COVID-19. Detailed contact tracing indicated that there was no in-unit transmission of the infection. Thus, strict implementation of multilevel protective strategies along with a modestly intense screening program allowed us to continue cancer care in our unit through the pandemic.

Publication Type

Journal article.

<269>

Accession Number

20210102314

Author

McHugh, T.; Voit, D.

Title

Social distancing in a modern food factory. (Special Coverage: COVID-19.)

Source

Food Technology (Chicago); 2020. 74(5):77-78, 82.

Publisher

Institute of Food Technologists

Location of Publisher

Chicago

Country of Publication

USA

Publication Type

Journal article.

<270>

Accession Number

20210102232

Author

Bright, B.; Babalola, C. P.; Sam-Agudu, N. A.; Onyeaghala, A. A.; Olatunji, A.; Aduh, U.; Sobande, P. O.; Crowell, T. A.; Yewew Kebede Tebeje; Phillip, S.; Ndembi, N.; Folayan, M. O.

Title

COVID-19 preparedness: capacity to manufacture vaccines, therapeutics and diagnostics in sub-Saharan Africa.

Source

Globalization and Health; 2021. 17(24):(3 March 2021). 161 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: The COVID-19 pandemic is a biosecurity threat, and many resource-rich countries are stockpiling and/or making plans to secure supplies of vaccine, therapeutics, and diagnostics for their citizens. We review the products that are being investigated for the prevention, diagnosis, and treatment of COVID-19; discuss the challenges that countries in sub-Saharan Africa may face with access to COVID-19 vaccine, therapeutics, and diagnostics due to the limited capacity to manufacture them in Africa; and make recommendations on actions to mitigate these challenges and ensure health security in sub-Saharan Africa during this unprecedented pandemic and future public-health crises. Main body: Sub-Saharan Africa will not be self-reliant for COVID-19 vaccines when they are developed. It can, however, take advantage of existing initiatives aimed at supporting COVID-19 vaccine access to resource-limited settings such as partnership with AstraZeneca, the Coalition for Epidemic Preparedness and Innovation, the Global Alliance for Vaccine and Immunisation, the Serum Institute of India, and the World Health Organization's COVID-19 Technology Access Pool. Accessing effective COVID-19 therapeutics will also be a major challenge for countries in sub-Saharan Africa, as production of therapeutics is frequently geared towards profitable Western markets and is ill-adapted to sub-Saharan Africa realities. The region can benefit from pooled procurement of COVID-19 therapy by the Africa Centres for Disease Control and Prevention in partnership with the African Union. If the use of convalescent plasma for the treatment of patients who are severely ill is found to be effective, access to the product will be minimally challenging since the region has a pool of recovered patients and human resources that can man supportive laboratories. The region also needs to drive the local development of rapid-test kits and other diagnostics for COVID-19. Conclusion: Access to vaccines, therapeutics, and diagnostics for COVID-19 will be a challenge for sub-Saharan Africans. This challenge should be confronted by collaborating with vaccine developers; pooled procurement of COVID-19 therapeutics; and local development of testing and diagnostic materials. The COVID-19 pandemic should be a wake-up call for sub-Saharan Africa to build vaccines, therapeutics, and diagnostics manufacturing capacity as one of the resources needed to address public-health crises.

Publication Type

Journal article.

<271>

Accession Number

20210102211

Author

English, E.; Long, C. R.; Langston, K.; Faitak, B.; Brown, A. L.; Echevoyen, A.; Gardner, J.; Cowan, C.; Rambo, D.; Perritt, B.; Laubenstein, B.; Snyder, A.; Bourke, P.; Lelan, M.; McElfish, P. A.

Title

A community partnership for home delivery of food boxes to COVID-19 quarantined and isolated families.

Source

Journal of Hunger & Environmental Nutrition; 2021. 16(1):19-28. 35 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Latinx and Marshallese populations experienced significant COVID-19 disparities in Arkansas, as well as high rates of food insecurity. This case study describes a partnership to rapidly deliver food to isolated and quarantined individuals with COVID-19. It focuses on the project's initial three weeks (June 19-July 2, 2020) of operation in which 531 home deliveries of food boxes were made to 2,192 unique individuals in 373 unique households. This community partnership was possible because of existing relationships established prior to the pandemic and leveraged to rapidly reach and respond to acute need in the community.

Publication Type

Journal article.

<272>

Accession Number

20210101981

Author

O'Horo, J. C.; Cerhan, J. R.; Cahn, E. J.; Bauer, P. R.; Temesgen, Z.; Ebbert, J.; Abril, A.; Abu Saleh, O. M.; Assi, M.; Berbari, E. F.; Bierle, D. M.; Bosch, W.; Burger, C. D.; Cano Cevallos, E. J.; Clements, C. M.; Porquera, E. M. C.; Almeida, N. E. C.; Challener, D. W.; Chesdachai, S.; Comba, I. Y.; Campioli, C. G. C.; Crane, S. J.; Dababneh, A. S.; Enzler, M. J.; Fadel, H. J.; Ganesh, R.; Moraes, A. G. de; Go, J. R.; Gordon, J. E.; Gurram, P. R.; Guru, P. K.; Halverson, E. L.; Harrison, M. F.; Heaton, H. A.; Hurt, R.; Kasten, M. J.; Lee, A. S.; Levy, E. R.; Libertin, C. R.; Mallea, J. M.; Marshall, W. F.; Matcha, G.; Meehan, A. M.; Franco, P. M.; Morice, W. G.; O'Brien, J. J.; Oeckler, R.; Ommen, S.; Oravec, C. P.; Orenstein, R.; Ough, N. J.; Palraj, R.; Patel, B. M.; Pureza, V. S.; Pickering, B.; Phelan, D. M.; Razonable, R. R.; Rizza, S.; Sampathkumar, P.; Sanghavi, D. K.; Sen, A.; Siegel, J. L.; Singbartl, K.; Shah, A. S.; Shweta, F. N. U.; Speicher, L. L.; Suh, G.; Tabaja, H.; Tande, A.; Ting, H. H.; Tontz, R. C., III; Vaillant, J. J.; Vergidis, P.; Warsame, M. Y.; Yetmar, Z. A.; Zomok, C. D.; Williams, A. W.; Badley, A. D.

Title

Outcomes of COVID-19 with the Mayo Clinic model of care and research.

Source

Mayo Clinic Proceedings; 2021. 96(3):601-618. 34 ref.

Publisher

Mayo Foundation for Medical Education and Research

Location of Publisher

Rochester

Country of Publication

USA

Abstract

Objective: To report the Mayo Clinic experience with coronavirus disease 2019 (COVID-19) related to patient outcomes. **Methods:** We conducted a retrospective chart review of patients with COVID-19 diagnosed between March 1, 2020, and July 31, 2020, at any of the Mayo Clinic sites. We abstracted pertinent comorbid conditions such as age, sex, body mass index, Charlson Comorbidity Index variables, and treatments received. Factors associated with hospitalization and mortality were assessed in univariate and multivariate models. **Results:** A total of 7891 patients with confirmed COVID-19 infection with research authorization on file received care across the Mayo Clinic sites during the study period. Of these, 7217 patients were adults 18 years or older who were analyzed further. A total of 897 (11.4%) patients required hospitalization, and 354 (4.9%) received care in the intensive care unit (ICU). All hospitalized patients were reviewed by a COVID-19 Treatment Review Panel, and 77.5% (695 of 897) of inpatients received a COVID-19-directed therapy. Overall mortality was 1.2% (94 of 7891), with 7.1% (64 of 897) mortality in hospitalized patients and 11.3% (40 of 354) in patients requiring ICU care. **Conclusion:** Mayo Clinic outcomes of patients with COVID-19 infection in the ICU, hospital, and community compare favorably with those reported nationally. This likely reflects the impact of interprofessional multidisciplinary team evaluation, effective leveraging of clinical trials and available treatments, deployment of remote monitoring tools, and maintenance of adequate operating capacity to not require surge adjustments. These best practices can help guide other health care systems with the continuing response to the COVID-19 pandemic.

Publication Type

Journal article.

<273>

Accession Number

20210101940

Author

Huang Rui; Zhu Li; Wang Jian; Xue LeYang; Liu LongGen; Yan XueBing; Huang SongPing; Li Yang; Yan XiaoMin; Zhang Biao; Xu TianMin; Li ChunYang; Ji Fang; Ming Fang; Zhao Yun; Cheng Juan; Wang YinLing; Zhao HaiYan; Hong ShuQin; Chen Kang; Zhao XiangAn; Zou Lei; Sang DaWen; Shao HuaPing; Guan XinYing; Chen XiaoBing; Chen YuXin; Wei Jie; Zhu Chuanwu; Wu Chao

Title

Clinical features of patients with COVID-19 with nonalcoholic fatty liver disease.

Source

Hepatology Communications; 2020. 4(12):1758-1768. 33 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Previous studies reported that coronavirus disease 2019 (COVID-19) was likely to result in liver injury. However, few studies investigated liver injury in patients with COVID-19 with chronic liver diseases. We described the clinical features in patients with COVID-19 with nonalcoholic fatty liver disease (NAFLD). Confirmed patients with COVID-19 from hospitals in 10 cities of Jiangsu Province, China, were retrospectively included between January 18, 2020, and February 26, 2020. The hepatic steatosis index (HSI) was used to defined NAFLD. A total of 280 patients with COVID-19 were enrolled. Eighty-six (30.7%) of 280 patients with COVID-19 were diagnosed as NAFLD by HSI. One hundred (35.7%) patients presented abnormal liver function on admission. The median alanine aminotransferase (ALT) levels (34.5 U/L vs. 23.0 U/L; $P < 0.001$) and the proportion of elevated ALT (>40 U/L) (40.7% vs. 10.8%; $P < 0.001$) were significantly higher in patients with NAFLD than in patients without NAFLD on admission. The proportion of elevated ALT in patients with NAFLD was also significantly higher than patients without NAFLD (65.1% vs. 38.7%; $P < 0.001$) during hospitalization. Multivariate analysis showed that age over 50 years (odds ratio [OR], 2.077; 95% confidence interval [CI], 1.183, 3.648; $P = 0.011$) and concurrent NAFLD (OR, 2.956; 95% CI, 1.526, 5.726; $P = 0.001$) were independent risk factors of ALT elevation in patients with COVID-19, while the atomized inhalation of interferon α -2b (OR, 0.402; 95% CI, 0.236, 0.683; $P = 0.001$) was associated with a reduced risk of ALT elevation during hospitalization. No patient developed liver failure or death during hospitalization. The complications and clinical outcomes were comparable between patients with COVID-19 with and without NAFLD. Conclusion: Patients with NAFLD are more likely to develop liver injury when infected by COVID-19. However, no patient developed severe liver-related complications during hospitalization.

Publication Type

Journal article.

<274>

Accession Number

20210101939

Author

Toyoda, H.; Huang, D. Q.; Le, M. H.; Nguyen, M. H.

Title

Liver care and surveillance: the global impact of the COVID-19 pandemic.

Source

Hepatology Communications; 2020. 4(12):1751-1757. 17 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

As social distancing and strict stay-at-home orders have been instituted to slow the spread of coronavirus disease 2019 (COVID-19), unintentional outcomes among those with chronic diseases including screening for the lethal hepatocellular carcinoma (HCC) may be occurring. We aimed to describe the changes in liver care before and after COVID-19 restricted access to health care. We obtained data on the number of liver clinic visits, abdominal ultrasound, computed tomography, and magnetic resonance imaging using electronic query or clinic registry at three medical centers in the United States, Japan, and Singapore for the following periods: February 1 to March 14, 2018, 2019, and 2020; and March 15 to May 1, 2018, 2019, and 2020. We performed trend analysis using logistic regression. In total, 14,403 visits were made to the liver clinics at the three centers: 5,900 in 2018, 5,270 in 2019, and 3,233 in 2020. Overall, there were no significant changes in the distribution of males and females between February 1 and May 1 from 2018 to 2020, but there was a lower proportion of seniors ages 65 years and older ($P < 0.001$). There were significant decreasing trends in the total number of liver clinic visits overall (p -trend = 0.038) and in the subanalysis for chronic hepatitis B, C, and other liver diseases. HCC/cirrhosis visits also dropped from 883 to 538 (39.07% decrease) overall and 665 to 355 (46.62% decrease) for the US site. In addition, there was a significant decreasing trend in the number of abdominal ultrasounds (P -trend = 0.004) and computed tomography/magnetic resonance imaging (P -trend = 0.007) performed overall. Conclusion: Liver clinic visits, hepatoma surveillance, and diagnostic abdominal imaging fell dramatically as social distancing measures were instituted. Care providers must find ways to recall patients for important care monitoring, including HCC surveillance.

Publication Type

Journal article.

<275>

Accession Number

20210101938

Author

Shao Tuo; Tong Yu; Lu ShuShu; Jeyarajan, A. J.; Su FeiFei; Dai JianYi; Shi JiChan; Huang JianPing; Hu ChenChan; Wu LianPeng; Dai XianNing; Cheng ZhiMeng; Yan JiuLiang; Huang Peng; Tian YanZhang; Li ShaSha; Chung, R. T.; Chen Dong

Title

Gamma-glutamyltransferase elevation is frequent in patients with COVID-19: a clinical epidemiologic study.

Source

Hepatology Communications; 2020. 4(12):1744-1750. 20 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

A newly identified coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes the infectious coronavirus disease 2019 (COVID-19), emerged in December 2019 in Wuhan, Hubei Province, China, and now poses a major threat to global public health. Previous studies have observed highly variable alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels in patients with COVID-19. However, circulating levels of the cholangiocyte injury biomarker gamma-glutamyltransferase (GGT) have yet to be reported in the existing COVID-19 case studies. Herein, we describe the relationship between GGT levels and clinical and biochemical characteristics of patients with COVID-19. Our study is a retrospective case series of 98 consecutive hospitalized patients with confirmed COVID-19 at Wenzhou Central Hospital in Wenzhou, China, from January 17 to February 5, 2020. Clinical data were collected using a standardized case report form. Diagnosis of COVID-19 was assessed by symptomatology, reverse-transcription polymerase chain reaction (RT-PCR), and computed tomography scan. The medical records of patients were analyzed by the research team. Of the 98 patients evaluated, elevated GGT levels were observed in 32.7%; increased C-reactive protein (CRP) and elevated ALT and AST levels were observed in 22.5%, 13.3%, and 20.4%, respectively; and elevated alkaline phosphatase (ALP) and triglycerides (TGs) were found in 2% and 21.4%, respectively. Initially, in the 82 patients without chronic liver disease and alcohol history, age older than 40 years ($P = 0.027$); male sex ($P = 0.0145$); elevated CRP ($P = 0.0366$), ALT ($P < 0.0001$), and ALP ($P = 0.0003$); and increased TGs ($P = 0.0002$) were found to be associated with elevated GGT levels. Elevated GGT ($P = 0.0086$) and CRP ($P = 0.0162$) levels had a longer length of hospital stay. Conclusion: A sizable number of patients with COVID-19 infection have elevated serum GGT levels. This elevation supports involvement of the liver in persons with COVID-19.

Publication Type

Journal article.

<276>

Accession Number

20210101937

Author

Ishay, Y.; Kessler, A.; Schwarts, A.; Ilan, Y.

Title

Antibody response to severe acute respiratory syndrome- corona virus 2, diagnostic and therapeutic implications.

Source

Hepatology Communications; 2020. 4(12):1731-1743. 128 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

The immune response against severe acute respiratory syndrome-corona virus 2 (SARS-CoV-2) is comprised of both cellular and humoral arms. While current diagnostic methods are mainly based on polymerase chain reaction, they suffer from insensitivity. Therefore, antibody-based serologic tests are being developed to achieve higher sensitivity and specificity. Current efforts in treating SARS-CoV-2 infection include blocking of viral entry into the host cells, prohibiting viral replication and survival in the host cells, and reducing the exaggerated host immune response. Administration of convalescent plasma containing antiviral antibodies was proposed to improve the outcome in severe cases. In this paper, we review some of the aspects associated with the development of antibodies against SARS-CoV-2 and their potential use for improved diagnosis and therapy.

Publication Type

Journal article.

<277>

Accession Number

20210101916

Author

Liu Chang; Zhang Shuang; Zhang ChenZheng; Tai BaoJun; Jiang Han; Du MinQuan

Title

The impact of coronavirus lockdown on oral healthcare and its associated issues of pre-schoolers in China: an online cross-sectional survey.

Source

BMC Oral Health; 2021. 21(54):(6 February 2021). 29 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The sudden outbreak of coronavirus disease (COVID-19) epidemic influenced people's daily life. During lockdown of Wuhan city, the oral health and its associated issues of preschool children were investigated and guidance for dental clinics when the epidemic were controlled in the future were also provided. Methods: A national online survey was conducted among preschool children and completed by their caregivers. The questionnaire related to children's oral health status and care behaviour, caregivers' attitudes. The information was statistically analyzed between Wuhan residents and others residents. Results: 4495 valid questionnaires were collected. In oral health status, during Wuhan lockdown, 60.8%, 35.5% and 18.3% children had self-reported dental caries, toothache and halitosis respectively. In oral health attitudes, respondents who would increase attention to oral health was more than that would decrease. In oral hygiene behaviour, compared to non-Wuhan children, the children in Wuhan became more active in brushing their teeth. In utilization of dental services in the future, less Wuhan residents would choose to have dental visit directly, 28.5% Wuhan residents and 34.7% non-Wuhan residents agreed all of procedures could be done if proper protected. Conclusions: Oral health status and associated issues of preschool children in Wuhan were significantly different from that of others during lockdown of Wuhan city and in the future. Effective measures should be taken as early as possible to protect children's oral health.

Publication Type

Journal article.

<278>

Accession Number

20210101893

Author

Packer, C.; Halabi, S. F.; Hollmeyer, H.; Mithani, S. S.; Wilson, L.; Ruckert, A.; Labonte, R.; Fidler, D. P.; Gostin, L. O.; Wilson, K.

Title

A survey of international health regulations national focal points experiences in carrying out their functions.

Source

Globalization and Health; 2021. 17(25):(06 March 2021). 13 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The 2005 International Health Regulations (IHR (2005)) require States Parties to establish National Focal Points (NFPs) responsible for notifying the World Health Organization (WHO) of potential events that might constitute public health emergencies of international concern (PHEICs), such as outbreaks of novel infectious diseases. Given the critical role of NFPs in the global surveillance and response system supported by the IHR, we sought to assess their experiences in carrying out their functions. **Methods:** In collaboration with WHO officials, we administered a voluntary online survey to all 196 States Parties to the IHR (2005) in Africa, Asia, Europe, and South and North America, from October to November 2019. The survey was available in six languages via a secure internet-based system. **Results:** In total, 121 NFP representatives answered the 56-question survey; 105 in full, and an additional 16 in part, resulting in a response rate of 62% (121 responses to 196 invitations to participate). The majority of NFPs knew how to notify the WHO of a potential PHEIC, and believed they have the content expertise to carry out their functions. Respondents found training workshops organized by WHO Regional Offices helpful on how to report PHEICs. NFPs experienced challenges in four critical areas: (1) insufficient intersectoral collaboration within their countries, including limited access to, or a lack of cooperation from, key relevant ministries; (2) inadequate communications, such as deficient information technology systems in place to carry out their functions in a timely fashion; (3) lack of authority to report potential PHEICs; and (4) inadequacies in some resources made available by the WHO, including a key tool - the NFP Guide. Finally, many NFP representatives expressed concern about how WHO uses the information they receive from NFPs. **Conclusion:** Our study, conducted just prior to the COVID-19 pandemic, illustrates key challenges experienced by NFPs that can affect States Parties and WHO performance when outbreaks occur. In order for NFPs to be able to rapidly and successfully communicate potential PHEICs such as COVID-19 in the future, continued measures need to be taken by both WHO and States Parties to ensure NFPs have the necessary authority, capacity, training, and resources to effectively carry out their functions as described in the IHR.

Publication Type

<279>

Accession Number

20210101892

Author

Li Zheng; Jones, C.; Ejigu, G. S.; George, N.; Geller, A. L.; Chang, G. C.; Adamski, A.; Igboh, L. S.; Merrill, R. D.; Ricks, P.; Mirza, S. A.; Lynch, M.

Title

Countries with delayed COVID-19 introduction - characteristics, drivers, gaps, and opportunities.

Source

Globalization and Health; 2021. 17(28):(17 March 2021). 39 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Three months after the first reported cases, COVID-19 had spread to nearly 90% of World Health Organization (WHO) member states and only 24 countries had not reported cases as of 30 March 2020. This analysis aimed to (1) assess characteristics, capability to detect and monitor COVID-19, and disease control measures in these 24 countries, (2) understand potential factors for the reported delayed COVID-19 introduction, and (3) identify gaps and opportunities for outbreak preparedness, particularly in low and middle-income countries (LMICs). We collected and analyzed publicly available information on country characteristics, COVID-19 testing, influenza surveillance, border measures, and preparedness activities in these countries. We also assessed the association between the temporal spread of COVID-19 in all countries with reported cases with globalization indicator and geographic location. **Results:** Temporal spreading of COVID-19 was strongly associated with countries' globalization indicator and geographic location. Most of the 24 countries with delayed COVID-19 introduction were LMICs; 88% were small island or landlocked developing countries. As of 30 March 2020, only 38% of these countries reported in-country COVID-19 testing capability, and 71% reported conducting influenza surveillance during the past year. All had implemented two or more border measures, (e.g., travel restrictions and border closures) and multiple preparedness activities (e.g., national preparedness plans and school closing). **Conclusions:** Limited testing capacity suggests that most of the 24 delayed countries may have lacked the capability to detect and identify cases early through sentinel and case-based surveillance. Low global connectedness, geographic isolation, and border measures were common among these countries and may have contributed to the delayed introduction of COVID-19 into these countries. This paper contributes to identifying opportunities

for pandemic preparedness, such as increasing disease detection, surveillance, and international collaborations. As the global situation continues to evolve, it is essential for countries to improve and prioritize their capacities to rapidly prevent, detect, and respond, not only for COVID-19, but also for future outbreaks.

Publication Type

Journal article.

<280>

Accession Number

20210101883

Author

Manisha Kumar; Manju Puri; Reena Yadav; Ratna Biswas; Meenakshi Singh; Vidhi Chaudhary; Nishtha Jaiswal; Deepika Meena

Title

Stillbirths and the COVID-19 pandemic: looking beyond SARS-CoV-2 infection.

Source

International Journal of Gynecology & Obstetrics; 2020. 153(1):76-82.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To study the impact of the COVID-19 outbreak and subsequent lockdown on the incidence, associated causes, and modifiable factors of stillbirth. **Methods:** An analytical case-control study was performed comparing stillbirths from March to September 2020 (cases) and March to September 2019 (controls) in a tertiary care center in India. Modifiable factors were observed as level-I, level-II, and level-III delays. **Results:** A significant difference in the rate of stillbirths was found among cases (37.4/1000) and controls (29.9/1000) ($P = 0.045$). Abruption in normotensive women was significantly higher in cases compared to controls ($P = 0.03$). Modifiable factors or preventable causes were noted in 76.1% of cases and 59.6% of controls; the difference was highly significant ($P < 0.001$, relative risk [RR] 1.8). Level-II delays or delays in reaching the hospital for delivery due to lack of transport were observed in 12.7% of cases compared to none in controls ($P < 0.006$, RR 47.7). Level-III delays or delays in providing care at the facility were observed in 31.3% of cases and 11.5% of controls ($P < 0.001$, RR 2.7). **Conclusion:** Although there was no difference in causes of stillbirth between cases and controls, level-II and level-III delays were significantly

impacted by the pandemic, leading to a higher rate of preventable stillbirths in pregnant women not infected with COVID-19.

Publication Type

Journal article.

<281>

Accession Number

20210101881

Author

Abel Teshome; Wondimu Gudu; Delayehu Bekele; Mariamawit Asfaw; Ruhama Enyew; Compton, S. D.

Title

Intimate partner violence among prenatal care attendees amidst the COVID-19 crisis: the incidence in Ethiopia.

Source

International Journal of Gynecology & Obstetrics; 2021. 153(1):45-50.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To assess the incidence and predictors of intimate partner violence (IPV) during pregnancy amidst the coronavirus disease 2019 pandemic. **Methods:** This cross-sectional study was conducted at the prenatal care clinic of St. Paul's Hospital Millennium Medical College (SPHMMC), Addis Ababa, Ethiopia, among pregnant women from 31 August to 2 November 2020. Participants were interviewed using Open Data Kit. Logistic regression was used to assess predictors. **Results:** Among the 464 pregnant women, 33 (7.1%) reported IPV during pregnancy, and among these 24 (72.7%) reported emotional violence, 16 (48.5%) reported sexual violence, and 10 (30.3%) reported physical violence. Among the study participants, only 8 (1.7%) were screened for IPV. IPV was reported 3.27 times more often by women who reported that their partner chewed Khat compared with those women whose partner did not (adjusted odds ratio [aOR] 3.27; 95% confidence interval [CI] 1.45-7.38), and 1.52 times more often women who reported that their partner drank alcohol compared with those women whose partner did not (aOR 1.52; 95% CI 1.01-2.28). **Conclusion:** Very few women were screened for IPV. Partners drinking alcohol and chewing Khat are significantly positively associated with IPV during pregnancy. IPV screening should be included in the national management protocol of obstetric cases of Ethiopia.

Publication Type

Journal article.

<282>

Accession Number

20210101753

Author

Iliev, I. D.; Cadwell, K.

Title

Effects of intestinal fungi and viruses on immune responses and inflammatory bowel diseases.

Source

Gastroenterology; 2021. 160(4):1050-1066.

Publisher

Elsevier Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

The intestinal microbiota comprises diverse fungal and viral components, in addition to bacteria. These microbes interact with the immune system and affect human physiology. Advances in metagenomics have associated inflammatory and autoimmune diseases with alterations in fungal and viral species in the gut. Studies of animal models have found that commensal fungi and viruses can activate host-protective immune pathways related to epithelial barrier integrity, but can also induce reactions that contribute to events associated with inflammatory bowel disease. Changes in our environment associated with modernization and the COVID-19 pandemic have exposed humans to new fungi and viruses, with unknown consequences. We review the lessons learned from studies of animal viruses and fungi commonly detected in the human gut and how these might affect health and intestinal disease .

Publication Type

Journal article.

<283>

Accession Number

20210101705

Author

Kunutsor, S. K.; Laukkanen, J. A.

Title

High fitness levels, frequent sauna bathing and risk of pneumonia in a cohort study: are there potential implications for COVID-19?

Source

European Journal of Clinical Investigation; 2021. 51(3). 41 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

Background: There is an ongoing debate on a potential protective role of habitual physical activity and passive heat therapy on the risk of COVID-19, a respiratory infectious disease that can manifest as severe pneumonia. To explore these putative roles, we evaluated the independent and joint associations of cardiorespiratory fitness (CRF) and frequency of sauna bathing (FSB) with pneumonia risk in a prospective cohort study of 2275 men aged 42-61 years at recruitment. **Material and Methods:** Objectively measured CRF and self-reported sauna bathing habits were assessed at baseline. CRF was categorized as low and high (median cut-offs) and FSB as low and high (defined as 1 and 2-7 sessions/wk, respectively). Multivariable-adjusted hazard ratios (HRs) with confidence intervals (CIs) were calculated for incident pneumonia. **Results:** During a median follow-up of 26.6 years, 529 cases of pneumonia occurred. Comparing high vs low CRF, the multivariable-adjusted HR (95% CIs) for pneumonia was 0.75 (0.61-0.91). Comparing high vs low FSB, the corresponding HR was 0.81 (0.68-0.97). Compared to men with low CRF & low FSB, the multivariable-adjusted HRs of pneumonia for the following groups: high CRF & low FSB; low CRF & high FSB; and high CRF & high FSB were 0.88 (0.65-1.20), 0.89 (0.71-1.13), and 0.62 (0.48-0.80) respectively. **Conclusions:** In a general male Caucasian population, a combination of high fitness levels and frequent sauna baths is associated with a substantially lowered future pneumonia risk compared with each modality alone. The implications of these findings in altering COVID-19 disease or its severity deserve study.

Publication Type

Journal article.

<284>

Accession Number

20210101673

Author

Shikha Jain; Monika Nehra; Rajesh Kumar; Neeraj Dilbaghi; Hu, T. Y.; Sandeep Kumar; Kaushik, A.; Li ChenZhong

Title

Internet of medical things (IoMT)-integrated biosensors for point-of-care testing of infectious diseases.

Source

Biosensors & Bioelectronics; 2021. 179. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

On global scale, the current situation of pandemic is symptomatic of increased incidences of contagious diseases caused by pathogens. The faster spread of these diseases, in a moderately short timeframe, is threatening the overall population wellbeing and conceivably the economy. The inadequacy of conventional diagnostic tools in terms of time consuming and complex laboratory-based diagnosis process is a major challenge to medical care. In present era, the development of point-of-care testing (POCT) is in demand for fast detection of infectious diseases along with "on-site" results that are helpful in timely and early action for better treatment. In addition, POCT devices also play a crucial role in preventing the transmission of infectious diseases by offering real-time testing and lab quality microbial diagnosis within minutes. Timely diagnosis and further treatment optimization facilitate the containment of outbreaks of infectious diseases. Presently, efforts are being made to support such POCT by the technological development in the field of internet of medical things (IoMT). The IoMT offers wireless-based operation and connectivity of POCT devices with health expert and medical centre. In this review, the recently developed POC diagnostics integrated or future possibilities of integration with IoMT are discussed with focus on emerging and re-emerging infectious diseases like malaria, dengue fever, influenza A (H1N1), human papilloma virus (HPV), Ebola virus disease (EVD), Zika virus (ZIKV), and coronavirus (COVID-19). The IoMT-assisted POCT systems are capable enough to fill the gap between bioinformatics generation, big rapid analytics, and clinical validation. An optimized IoMT-assisted POCT will be useful in understanding the diseases progression, treatment decision, and evaluation of efficacy of prescribed therapy.

Publication Type

Journal article.

<285>

Accession Number

20210101655

Author

Deeb, A.; Khawaja, K.; Sakrani, N.; Alakhras, A.; Mesabi, A. A.; Trehan, R.; Kumar, P. C.; Babiker, Z.; Nagelkerke, N.; Fru-Nsutebu, E.

Title

Impact of ethnicity and underlying comorbidity on COVID-19 inhospital mortality: an observational study in Abu Dhabi, UAE.

Source

BioMed Research International; 2021. 2021(6695707). 40 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Background. The UAE reported its first cluster of COVID 2019 in a group of returned travellers from Wuhan in January 2020. Various comorbidities are associated with worse disease prognosis. Understanding the impact of ethnicity on the disease outcome is an important public health issue but data from our region is lacking. **Aim.** We aim to identify comorbidities among patients hospitalized for COVID-19 that are associated with inhospital death. Also, to assess if ethnicity is correlated with increased risk of death. **Patients and Method.** The study is a single-centre, observational study in Shaikh Shakhbout Medical City, Abu Dhabi. Patients admitted with COVID-19, between 1st of March and the end of May, were enrolled. Records were studied for demography, comorbidity, and ethnicity. Ethnicity was divided into Arabs (Gulf, North Africa, and the Levant), South Asia (India, Pakistan, Bangladesh, Nepal, and Afghanistan), Africans, the Philippines, and others. The study was approved by the Department of Health of Abu Dhabi. **Results.** 1075 patients (972 males) were enrolled. There were 24 nationalities under 5 ethnicity groups. Mean (average) age was 51 years (20-81). 101 (9.4%) died with deceased patients being significantly older. Death risk was not significantly influenced by sex. Duration of hospitalization among survivors was 6.2 days (0.2-40.4) with older patients and men staying longer ($P < 0.01$). Comorbidities of diabetes, hypertension, cardiovascular disease, chronic renal disease, liver disease, and malignancy were associated with higher risk of mortality univariate, but only liver disease reached statistical significance after adjustment for age. The highest percentage of death was seen in Arab Levant (21.2) followed by the Asian Afghan (18.8); however, differences among ethnicities did not reach statistical significance ($P = 0.086$). **Conclusion.** COVID-19 outcome was worse in older people and those with comorbidities. Men and older patients required longer hospitalization. Ethnicity is not seen to impact the risk of mortality.

Publication Type

Journal article.

<286>

Accession Number

20210101630

Author

Wang PeiYu; Li Yin; Wang Qin

Title

Sarcopenia: an underlying treatment target during the COVID-19 pandemic.

Source

Nutrition; 2021. 84. 43 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

The role of skeletal muscle mass in modulating immune response and supporting metabolic stress has been increasingly confirmed. Patients with sarcopenia, characterized by reduced muscle mass and muscle strength, were reported to have poor immune response and metabolic stress when facing acute infection, major surgeries, and other attacks. Based on empirical data, patients with sarcopenia are speculated to have increased infection rates and dismal prognoses amid the current 2019 novel coronavirus disease (COVID-19) epidemic. COVID-19 infection also aggravates sarcopenia because of the increased muscle wasting caused by systematic inflammation and the reduced physical activity and inadequate nutrient intake caused by social isolation. Notably, the interventions targeting skeletal muscle are anticipated to break the vicious circle and benefit the treatment of both conditions. We recommend sarcopenia assessment for populations with advanced age, inactivity, chronic disease, cancers, and nutritional deficiency. Patients with sarcopenia and COVID-19 infection need intensive care and aggressive treatments. The provision of at-home physical activities together with protein supplementation is anticipated to reverse sarcopenia and promote the prevention and treatment of COVID-19. The recommended protocols on nutritional support and physical activities are provided in detail.

Publication Type

Journal article.

<287>

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Accession Number

20210101608

Author

Hu Xiang; Deng HuiHui; Wang YuXia; Chen LingQiao; Gu XueMei; Wang XiaoBo

Title

Predictive value of the prognostic nutritional index for the severity of coronavirus disease 2019.

Source

Nutrition; 2021. 84. 25 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Objectives: Malnutrition plays a critical role in the onset and progress of the coronavirus disease 2019 (COVID-19). The aim of the present study was to explore the association of the prognostic nutritional index (PNI) score with the severity of COVID-19 and its predictive value of the severe form of COVID-19. Methods: Clinical data were collected from 122 patients infected with COVID-19 and hospitalized at the Sixth People's Hospital of Wenzhou, China, a specialized infectious hospital affiliated with the Wenzhou Central Hospital. PNI score was calculated as serum albumin (g/L) + 5 x total lymphocyte count (/nL). Results: The study population consisted of 105 patients (86.1%) with a common form and 17 patients (13.9%) with a severe form of COVID-19. PNI score significantly decreased from patients with common to severe forms of COVID-19 (P = .029) regardless of sex, age range, and body mass index (BMI). After adjustment for sex, age, indexes of liver and renal function, C-reactive protein, and current smoking status, PNI scores remained independently and inversely associated with the severity of COVID-19 (odd ratio: 0.797; P = .030). A receiver operating characteristic analysis showed that PNI scores had a similar accuracy to predict severe forms of COVID-19 compared with its combination with sex, age, and BMI (P = .402). PNI < 49 was defined as the cutoff value to predict the severe form of COVID-19. Conclusions: Poorer nutritional status predisposed patients infected with COVID-19 to its severe form. Independently associated with the severity of COVID-19, PNI score could serve as a simple, fast, and effective predictor among patients with different sex, age, and BMI.

Publication Type

Journal article.

<288>

Accession Number

20210101598

Author

Katz, J.; Yue Sijia; Xue Wei

Title

Increased risk for COVID-19 in patients with vitamin D deficiency.

Source

Nutrition; 2021. 84. 35 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Objective: The 2019 coronavirus disease (COVID-19) pandemic has disproportionately affected a variety of patients with underlying risk factors such as respiratory and cardiovascular diseases, diabetes, obesity, and black race. Vitamin D deficiency, which can result in a compromised immune response, has been also linked to increased risk and increased morbidities associated with COVID-19. In the absence of large-scale longitudinal studies to determine the strength of association between vitamin deficiency and COVID-19, cross-sectional studies of large patient cohorts can be used. **Methods:** We used the i2b2 patient's registry platform at the University of Florida Health Center to generate a count of patients using the international classification of diseases (ICD)-10 diagnosis codes for the period of October 1, 2015, through June 30, 2020. Logistic regression of the aggregates was used for the analysis. **Results:** Patients with vitamin D deficiency were 4.6 times more likely to be positive for COVID-19 (indicated by the ICD-10 diagnostic code COVID19) than patients with no deficiency ($P < 0.001$). The association decreased slightly after adjusting for sex (odds ratio [OR] = 4.58; $P < 0.001$) and malabsorption (OR = 4.46; $P < 0.001$), respectively. The association decreased significantly but remained robust ($P < 0.001$) after adjusting for race (OR = 3.76; $P < 0.001$), periodontal disease status (OR = 3.64; $P < 0.001$), diabetes (OR = 3.28; $P < 0.001$), and obesity (OR = 2.27; $P < 0.001$), respectively. In addition, patients with vitamin D deficiency were 5 times more likely to be infected with COVID-19 than patients with no deficiency after adjusting for age groups (OR = 5.155; $P < 0.001$). **Conclusions:** Vitamin D deficiency is significantly associated with increased risk for COVID-19.

Publication Type

Journal article.

<289>

Accession Number

20210101592

Author

Keflie, T. S.; Biesalski, H. K.

Title

Micronutrients and bioactive substances: their potential roles in combating COVID-19.

Source

Nutrition; 2021. 84. 179 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Objectives: The coronavirus disease 2019 (COVID-19) pandemic is seriously threatening public health and setting off huge economic crises across the world. In the absence of specific drugs for COVID-19, there is an urgent need to look for alternative approaches. Therefore, the aim of this paper was to review the roles of micronutrients and bioactive substances as potential alternative approaches in combating COVID-19.

Methods: This review was based on the literature identified using electronic searches in different databases. **Results:** Vitamins (A, B, C, D, and E), minerals (selenium and zinc), and bioactive substances from curcumin, echinacea, propolis, garlic, soybean, green tea, and other polyphenols were identified as having potential roles in interfering with spike glycoproteins, angiotensin converting enzyme 2, and transmembrane protease serine 2 at the entry site, and inhibiting activities of papain-like protease, 3 chymotrypsin-like protease, and RNA-dependent RNA polymerase in the replication cycle of severe acute respiratory syndrome coronavirus 2. Having immunomodulating, antiinflammatory, antioxidant, and antiviral properties, such micronutrients and bioactive substances are consequently promising alternative nutritional approaches to combat COVID-19. **Conclusions:** The roles of micronutrients and bioactive substances in the fight against COVID-19 are exciting areas of research. This review may suggest directions for further study.

Publication Type

Journal article.

<290>

Accession Number

20210101582

Author

Philippe, K.; Chabanet, C.; Issanchou, S.; Monnery-Patris, S.

Title

Child eating behaviors, parental feeding practices and food shopping motivations during the COVID-19 lockdown in France: (how) did they change? (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 161. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The COVID-19 pandemic caused France to impose a strict lockdown, affecting families' habits in many domains. This study evaluated possible changes in child eating behaviors, parental feeding practices, and parental motivations when buying food during the lockdown, compared to the period before the lockdown. Parents of 498 children aged 3-12 years (238 boys; M = 7.32; SD = 2.27) completed an online survey with items from validated questionnaires (e.g., CEDQ, CEBQ, HomeSTEAD). They reported on their (child's) current situation during the lockdown, and retrospectively on the period before the lockdown. Many parents reported changes in child eating behaviors, feeding practices, and food shopping motivations. When changes occurred, child appetite, food enjoyment, food responsiveness and emotional overeating significantly increased during the lockdown. Increased child boredom significantly predicted increased food responsiveness, emotional overeating and snack frequency in between meals. When parents changed their practices, they generally became more permissive: less rules, more soothing with food, more child autonomy. They bought pleasurable and sustainable foods more frequently, prepared more home-cooked meals and cooked more with the child. Level of education and increased stress level predicted changes in parental practices and motivations. This study provides insights in factors that can induce positive and negative changes in families' eating, feeding and cooking behaviors. This can stimulate future studies and interventions.

Publication Type

Journal article.

<291>

Accession Number

20210101581

Author

Coulthard, H.; Sharps, M.; Cunliffe, L.; Tol, A. van den

Title

Eating in the lockdown during the COVID 19 pandemic; self-reported changes in eating behaviour, and associations with BMI, eating style, coping and health anxiety. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 161. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The global coronavirus pandemic (Covid 19) resulted in national lockdowns where individuals were asked to isolate in their homes to stop the spread of the disease. Using a cross-sectional survey, the current paper aimed to examine self-reported changes in eating patterns and behaviour during the lockdown in the UK, and associations with BMI, demographic variables, eating styles, health anxiety, food insecurity and coping strategies. Participants (N = 620) were recruited online through social media advertising. The results showed that there were self-reported changes to food consumption during the lockdown across the sample. Increases in consumption of HED (high energy density) snack foods during the lockdown was associated with sex, pre-lockdown eating behaviour (emotional eating and uncontrolled eating), and Covid-specific health anxiety. Increases in positive eating practices such as eating more home prepared foods, and fruits and vegetables, were associated with adaptive coping strategies. Higher emotional eating (EE) during the lockdown was associated with a higher BMI, higher pre-lockdown EE and maladaptive coping strategies. Maladaptive coping strategies moderated the relationship between BMI and EE during the lockdown. In particular a higher BMI was associated with higher EE during the lockdown if an individual also had higher maladaptive coping strategies. These findings suggest that changes to eating behaviour may be part of a wider style of maladaptive or adaptive coping, particularly in those with a history of EE or uncontrolled eating. Preparing individuals to adopt more adaptive coping strategies during lockdown situations may be crucial to improving health during subsequent the lockdown events.

Publication Type

Journal article.

<292>

Accession Number

20210101580

Author

Powell, P. K.; Lawler, S.; Durham, J.; Cullerton, K.

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Title

The food choices of US university students during COVID-19. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 161. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 triggered widespread disruption in the lives of university students across the United States. We conducted 9 online focus groups with 30 students from a large public university to understand the impact of COVID-19 on the food choices of those displaced from their typical residences due to the pandemic. To the authors' knowledge, this is the first qualitative research to examine the changes in food choice for US university students due to COVID-19 and offer insight into why these changes occurred. Students in this study reported significant, and often negative, changes in food choices during the pandemic compared to when on campus. Many students described changes in the foods they ate, the amount consumed, and increased snacking behaviors. We found food availability and household roles to be powerful factors influencing food choices. Most students had returned to family homes with many students taking a passive role in activities that shape food choices. Parents usually purchased groceries and prepared meals with students eating foods made available to them. Increased free time contributed to boredom and snacking for some students, while for a few students with increased skills and/or agency, additional free time was used to plan and prepare meals. About a third of the students attributed eating different foods at home to food availability issues related to the pandemic such as groceries being out of stock, purchasing non-perishable foods, or the inability to get to a store. This information may be helpful to researchers and health promotion professionals interested in the effects of COVID-19 on student nutrition and related food behaviors, including those interested in the relationship between context and food choice.

Publication Type

Journal article.

<293>

Accession Number

20210101579

Author

McAtamney, K.; Mantzios, M.; Egan, H.; Wallis, D. J.

Title

Emotional eating during COVID-19 in the United Kingdom: exploring the roles of alexithymia and emotion dysregulation. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 161. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Emotional eating, generally defined as (over)-eating in response to negative emotions, has been associated with poor physical and psychological outcomes. During a time of heightened negative affect, it is important to understand the impact of the COVID-19 pandemic and associated lockdown measures on eating behaviours, and further elucidate the ways in which emotional eating is related to emotion dysregulation and impaired abilities to identify emotions (i.e. alexithymia). The aims of this study were to explore perceived changes in eating behaviours in relation to self-reported negative affect during the pandemic and to examine direct and indirect effects of alexithymia on emotional eating. An online questionnaire measured these constructs in the general population of the United Kingdom (n = 136). Findings demonstrated that those who reported changes to their eating behaviours during the pandemic also reported greater levels of depression during the same time frame. Mediation analyses revealed that difficulties identifying and describing feelings both predicted emotional eating indirectly via emotion dysregulation. Findings contribute to the understanding of the mechanisms underpinning the relationship between alexithymia and emotional eating and describe changes to eating behaviours during COVID-19. We discuss how these findings should be applied, and recommendations for future research.

Publication Type

Journal article.

<294>

Accession Number

20210101578

Author

Jansen, E.; Thapaliya, G.; Aghababian, A.; Sadler, J.; Smith, K.; Carnell, S.

Title

Parental stress, food parenting practices and child snack intake during the COVID-19 pandemic. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 161. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic has caused unprecedented disruptions to the lives of families. This study aimed to investigate the impact of pandemic-associated stress on food parenting practices including interactions surrounding snacks, and child diet. **Methods:** Parents (N = 318) of 2-12-year old children completed a cross-sectional online survey assessing current COVID-19-specific stress, pre-COVID-19 stress, financial stress (e.g. food insecurity), food parenting practices, and child snack intake frequency. Structural Equation Modeling was used to model simultaneous paths of relationships and test direct and indirect effects. **Results:** Stress, including financial hardship, was higher compared with before the crisis. The majority of children had regular mealtimes and irregular snack times. Higher COVID-19-specific stress was associated with more non-nutritive use of food and snacks (e.g. emotional and instrumental feeding), but also more structure and positive interactions (e.g. eating with or engaging with child around mealtimes). Higher COVID-19-specific stress was also associated with greater child intake frequency of sweet and savory snacks, with some evidence for mediation by snack parenting practices. **Conclusion:** Our findings indicate that stress associated with the COVID-19 pandemic may be linked to child snack intake with potential impacts on child obesity risk, and suggest several modifiable points of intervention within the family context.

Publication Type

Journal article.

<295>

Accession Number

20210101552

Author

Wolfson, J. A.; Ishikawa, Y.; Hosokawa, C.; Janisch, K.; Massa, J.; Eisenberg, D. M.

Title

Gender differences in global estimates of cooking frequency prior to COVID-19.

Source

Appetite; 2021. 161. 36 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The frequency of cooking at home has not been assessed globally. Data from the Gallup World Poll in 2018/2019 wave (N = 145,417) were collected in 142 countries using telephone and face to face interviews. We describe differences in frequency of 'scratch' cooking lunch and dinner across the globe by gender. Poisson regression was used to assess predictors of cooking frequency. Associations between disparities in cooking frequency (at the country level) between men and women with perceptions of subjective well-being were assessed using linear regression. Across the globe, cooking frequency varied considerably; dinner was cooked more frequently than lunch; and, women (median frequency 5 meals/week) cooked both meals more frequently than men (median frequency 0 meals/week). At the country level, greater gender disparities in cooking frequency are associated with lower Positive Experience Index scores (-0.021, p = 0.009). Prior to the COVID-19 pandemic, the frequency with which men and women cook meals varied considerably between nations; and, women cooked more frequently than men worldwide. The pandemic, and related 'stay at home' directives have dramatically reshaped the world, and it will be important to monitor changes in the ways and frequency with which people around the world cook and eat; and, how those changes relate to dietary patterns and health outcomes on a national, regional and global level.

Publication Type

Journal article.

<296>

Accession Number

20210101550

Author

Lehberger, M.; Kleih, A. K.; Sparke, K.

Title

Panic buying in times of coronavirus (COVID-19): extending the theory of planned behavior to understand the stockpiling of nonperishable food in Germany.

Source

Appetite; 2021. 161.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

At the onset of the coronavirus pandemic, sales of nonperishable food drastically increased in Germany. Reports of hoarding and panic buying flooded the media. To identify the drivers of the increased sales of these products, we carried out an online survey with n = 495 people living in Germany. We followed a concurrent triangulation design. For the quantitative analysis, we extended the theory of planned behavior to identify possible reasons for stockpiling nonperishable food. The results suggest that "attitude", "subjective norm", and the "fear of future unavailability" were main drivers of stockpiling behavior in our sample. Additionally, we analyzed answers to open questions capturing participants' own explanations of why they did or did not stockpile nonperishable food. By contrasting the results, we found that our qualitative results validate some of our quantitative findings but also deliver new insights. For instance, a key stated reason for stockpiling nonperishable food was to reduce shopping frequency.

Publication Type

Journal article.

<297>

Accession Number

20210101546

Author

Villerabel, C.; Makinson, A.; Jaussent, A.; Picot, M. C.; Negre-Pages, L.; Rouviere, J. A.; Favier, V.; Crampette, L.; Morquin, D.; Reynes, J.; Moing, V. le; Tuailon, E.; Venail, F.

Title

Diagnostic value of patient-reported and clinically tested olfactory dysfunction in a population screened for COVID-19.

Source

JAMA Otolaryngology - Head & Neck Surgery; 2021. 147(3):271-279. 46 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

Country of Publication

USA

Abstract

Importance: Recent studies have suggested that olfactory dysfunction and gustatory dysfunction are associated with coronavirus disease 2019 (COVID-19). However, olfaction has been evaluated solely on reported symptoms, after COVID-19 diagnosis, and in both mild and severe COVID-19 cases, but rarely has it been assessed in prospectively unselected populations. **Objective** To evaluate the diagnostic value of a semiobjective olfactory test developed to assess patient-reported chemosensory dysfunction prior to testing for the presence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in patients attending a COVID-19 screening facility. **Design, Setting, and Participants:** This prospective diagnostic study with participants and observers blinded to COVID-19 status was conducted in a COVID-19 screening center of a tertiary university hospital in France from March 23 to April 22, 2020. Participants were 854 consecutively included health care workers or outpatients with symptoms or with close contact with an index case. Exclusion criteria were prior chemosensory dysfunction, testing inability, or contraindications (n = 45). **Main Outcomes and Measures:** Participants were interviewed to ascertain their symptoms and then underwent Clinical Olfactory Dysfunction Assessment (CODA), an ad hoc test developed for a simple and fast evaluation of olfactory function. This assessment followed a standardized procedure in which participants identified and rated the intensity of 3 scents (lavender, lemongrass, and mint) to achieve a summed score ranging from 0 to 6. The COVID-19 status was assessed using reverse transcriptase-polymerase chain reaction to detect the presence of SARS-CoV-2 in samples collected via nasopharyngeal swab (reference standard) to calculate the diagnostic values of patient-reported chemosensory dysfunction and CODA. **Results:** Of 809 participants, the female to male sex ratio was 2.8, and the mean (SD) age was 41.8 (13.0) years (range, 18-94 years). All participants, if symptomatic, had mild disease at the time of testing, and 58 (7.2%) tested positive for SARS-CoV-2. Chemosensory dysfunction was reported by 20 of 58 participants (34.5%) with confirmed COVID-19 vs 29 of 751 participants (3.9%) who tested negative for COVID-19 (absolute difference, 30.6% [95% CI, 18.3%-42.9%]). Olfactory dysfunction, either self-reported or clinically ascertained (CODA score 3), yielded similar sensitivity (0.31 [95% CI, 0.20-0.45] vs 0.34 [95% CI, 0.22-0.48]) and specificity (0.97 [95% CI, 0.96-0.98] vs 0.98 [95% CI, 0.96-0.99]) for COVID-19 diagnosis. Concordance was high between reported and clinically tested olfactory dysfunction, with a Gwet AC1 of 0.95 (95% CI, 0.93-0.97). Of 19 participants, 15 (78.9%) with both reported olfactory dysfunction and a CODA score of 3 or lower were confirmed to have COVID-19. The CODA score also revealed 5 of 19 participants (26.3%) with confirmed COVID-19 who had previously unperceived olfactory dysfunction. **Conclusions and Relevance:** In this prospective diagnostic study of outpatients with asymptomatic or mild to moderate COVID-19, systematically assessed anamnesis and clinical testing with the newly developed CODA were complementary and specific for chemosensory dysfunction. Olfactory dysfunction was suggestive of COVID-19, particularly when clinical testing confirmed anamnesis. However, normal olfaction was most common among patients with COVID-19.

Publication Type

Journal article.

<298>

Accession Number

20210101508

Author

Pietri, L.; Giorgi, R.; Begu, A.; Lojou, M.; Koubi, M.; Cauchois, R.; Grangeot, R.; Dubois, N.; Kaplanski, G.; Valero, R.; Beliard, S.

Title

Excess body weight is an independent risk factor for severe forms of COVID-19.

Source

Metabolism, Clinical and Experimental; 2021. 117. 25 ref.

Publisher

Elsevier Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

Background and aims: Few studies distinguished the independent role of overweight/obesity or their associated-comorbidities in the evolution towards severe forms of COVID-19. Obesity as a unifying risk factor for severe COVID-19 is an emerging hypothesis. The aim of this study was to evaluate whether excessive body weight per se, was a risk factor for developing a severe form of COVID-19. Patients and methods: We included 131 patients hospitalized for COVID-19 pneumonia in a single center of the internal medicine department in Marseille, France. We recorded anthropometric and metabolic parameters such as fasting glycaemia, insulinemia, HOMA-IR, lipids, and all clinical criteria linked to SARS-CoV-2 infection at the admission. Excess body weight was defined by a BMI ≥ 25 kg/m². The occurrence of a serious event was defined as a high-debit oxygen requirement over 6 L/min, admission into the intensive care unit, or death. Results: Among 113 patients, two thirds (n = 76, 67%) had an excess body weight. The number of serious events was significantly higher in excess body weight patients compared to normal weight patients (respectively 25% vs 8%, p = 0.03) although excess body weight patients were younger (respectively 63.6 vs 70.3 years old, p = 0.01). In multivariate analyses, the excess body weight status was the only predictor for developing a serious event linked to SARS-CoV-2 infection, with an odds ratio at 5.6 (95% CI: 1.30-23.96; p = 0.02), independently of previous obesity associated comorbidities. There was a trend towards a positive association between the BMI (normal weight, overweight and obesity) and the risk of serious events linked to COVID-19, with a marked increase from 8.1% to 20% and 30.6% respectively (p = 0.05). Conclusion: Excess body weight was significantly associated with severe forms of the disease, independently of its classical associated comorbidities. Physicians and specialists in Public Health must be sensitized to better protect people with an excess body weight against SARS-CoV-2 infection.

Publication Type

Journal article.

<299>

Accession Number

20210101507

Author

Du YanBin; Lv Yuan; Zha WenTing; Zhou Nan; Hong XiuQin

Title

Association of body mass index (BMI) with critical COVID-19 and in-hospital mortality: a dose-response meta-analysis.

Source

Metabolism, Clinical and Experimental; 2021. 117.

Publisher

Elsevier Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

Background and purpose: The coronavirus disease 2019 (COVID-19) pandemic presents an unprecedented health crisis to the entire world. As reported, the body mass index (BMI) may play an important role in COVID-19; however, this still remains unclear. The aim of this study was to explore the association between BMI and COVID-19 severity and mortality. **Methods:** The Medline, PubMed, Embase and Web of science were systematically searched until August 2020. Random-effects models and dose-response meta-analysis were used to synthesize the results. Combined odds ratios (ORs) with their 95% confidence intervals (CIs) were calculated, and the effect of covariates were analyzed using subgroup analysis and meta-regression analyses. **Results:** A total of 16 observational studies involving 109,881 patients with COVID-19 were included in the meta-analysis. The pooled results showed that patients with a BMI ≥ 30 kg/m² had a 2.35-fold risk (OR = 2.35, 95%CI = 1.64-3.38, P < 0.001) for critical COVID-19 and a 2.68-fold risk for COVID-19 mortality (OR = 2.68, 95%CI = 1.65-4.37, P < 0.001) compared with patients with a BMI <30 kg/m². Subgroup analysis results showed that patients with obesity and age > 60 years was associated with a significantly increased risk of critical COVID-19 (OR = 3.11, 95%CI = 1.73-5.61, P < 0.001) and COVID-19 mortality (OR = 3.93, 95%CI = 2.18-7.09, P < 0.001). Meta-regression analysis results also showed that age had a significant influence on the association between BMI and COVID-19 mortality (Coef. = 0.036, P = 0.048). Random-effects dose-response meta-analysis showed a linear association between BMI and both critical COVID-19 (Pnon-linearity = 0.242) and mortality (Pnon-linearity = 0.116). The risk of critical COVID-19 and mortality increased by 9%(OR = 1.09, 95%CI = 1.04-1.14, P < 0.001) and 6%(OR = 1.06, 95%CI = 1.02-1.10, P = 0.002) for each 1 kg/m² increase in BMI, respectively. **Conclusions:** Evidence from this meta-analysis suggested that a linear dose-response association between BMI and both COVID-19 severity and mortality. Further, obesity (BMI ≥ 30 kg/m²) was associated with a significantly increased risk of critical COVID-19 and in-hospital mortality of COVID-19.

Publication Type

Journal article.

<300>

Accession Number

20210101465

Author

Asher, A.; Tintle, N. L.; Myers, M.; Lockshon, L.; Bacareza, H.; Harris, W. S.

Title

Blood omega-3 fatty acids and death from COVID-19: a pilot study.

Source

Prostaglandins, Leukotrienes and Essential Fatty Acids; 2021. 166. 51 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Very-long chain omega-3 fatty acids (EPA and DHA) have anti-inflammatory properties that may help reduce morbidity and mortality from COVID-19 infection. We conducted a pilot study in 100 patients to test the hypothesis that RBC EPA+DHA levels (the Omega-3 Index, O3I) would be inversely associated with risk for death by analyzing the O3I in banked blood samples drawn at hospital admission. Fourteen patients died, one of 25 in quartile 4 (Q4) (O3I 5.7%) and 13 of 75 in Q1-3. After adjusting for age and sex, the odds ratio for death in patients with an O3I in Q4 vs Q1-3 was 0.25, $p = 0.07$. Although not meeting the classical criteria for statistical significance, this strong trend suggests that a relationship may indeed exist, but more well-powered studies are clearly needed.

Publication Type

Journal article.

<301>

Accession Number

20210101342

Author

Humphries, N.; Creese, J.; Byrne, J. P.; Connell, J.

Title

COVID-19 and doctor emigration: the case of Ireland.

Source

Human Resources for Health; 2021. 19(29):(3 March 2021). 48 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since the 2008 recession, Ireland has experienced large-scale doctor emigration. This paper seeks to ascertain whether (and how) the COVID-19 pandemic might disrupt or reinforce existing patterns of doctor emigration. Method: This paper draws on qualitative interviews with 31 hospital doctors in Ireland, undertaken in June-July 2020. As the researchers were subject to a government mandated work-from-home order at that time, they utilised Twitter™ to contact potential respondents (snowball sampling); and conducted interviews via Zoom™ or telephone. Findings: Two cohorts of doctors were identified; COVID Returners (N = 12) and COVID Would-be Emigrants (N = 19). COVID Returners are Irish-trained emigrant doctors who returned to Ireland in March 2020, just as global travel ground to a halt. They returned to be closer to home and in response to a pandemic-related recruitment call issued by the Irish government. COVID Would-be Emigrants are hospital doctors considering emigration. Some had experienced pandemic-related disruptions to their emigration plans as a result of travel restrictions and border closures. However, most of the drivers of emigration mentioned by respondents related to underlying problems in the Irish health system rather than to the pandemic, i.e. a culture of medical emigration, poor working conditions and the limited availability of posts in the Irish health system. Discussion/conclusion: This paper illustrates how the pandemic intensified and reinforced, rather than radically altered, the dynamics of doctor emigration from Ireland. Ireland must begin to prioritise doctor retention and return by developing a coherent policy response to the underlying drivers of doctor emigration.

Publication Type

Journal article.

<302>

Accession Number

20210101292

Author

Peres, I. T.; Bastos, L. S. L.; Gelli, J. G. M.; Marchesi, J. F.; Dantas, L. F.; Antunes, B. B. P.; Macaira, P. M.; Baiao, F. A.; Hamacher, S.; Bozza, F. A.

Title

Sociodemographic factors associated with COVID-19 in-hospital mortality in Brazil.

Source

Public Health; 2021. 192:15-20. 21 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objectives: The coronavirus disease 2019 (COVID-19) pandemic has highlighted inequalities in access to healthcare systems, increasing racial disparities and worsening health outcomes in these populations. This study analysed the association between sociodemographic characteristics and COVID-19 in-hospital mortality in Brazil. **Study design:** A retrospective analysis was conducted on quantitative reverse transcription polymerase chain reaction-confirmed hospitalised adult patients with COVID-19 with a defined outcome (i.e. hospital discharge or death) in Brazil. Data were retrieved from the national surveillance system database (SIVEP-Gripe) between February 16 and August 8, 2020. **Methods:** Clinical characteristics, sociodemographic variables, use of hospital resources and outcomes of hospitalised adult patients with COVID-19, stratified by self-reported race, were investigated. The primary outcome was in-hospital mortality. The association between self-reported race and in-hospital mortality, after adjusting for clinical characteristics and comorbidities, was evaluated using a logistic regression model. **Results:** During the study period, Brazil had 3,018,397 confirmed COVID-19 cases and 100,648 deaths. The study population included 228,196 COVID-19-positive adult in-hospital patients with a defined outcome; the median age was 61 years, 57% were men, 35% (79,914) self-reported as Black/Brown and 35.4% (80,853) self-reported as White. The total in-hospital mortality was 37% (85,171/228,196). Black/Brown patients showed higher in-hospital mortality than White patients (42% vs 37%, respectively), were admitted less frequently to the intensive care unit (ICU) (32% vs 36%, respectively) and used more invasive mechanical ventilation (21% vs 19%, respectively), especially outside the ICU (17% vs 11%, respectively). Black/Brown race was independently associated with high in-hospital mortality after adjusting for sex, age, level of education, region of residence and comorbidities (odds ratio = 1.15; 95% confidence interval = 1.09-1.22). **Conclusions:** Among hospitalised Brazilian adults with COVID-19, Black/Brown patients showed higher in-hospital mortality, less frequently used hospital resources and had potentially more severe conditions than White patients. Racial disparities in health outcomes and access to health care highlight the need to actively implement strategies to reduce inequities caused by the wider health determinants, ultimately leading to a sustainable change in the health system.

Publication Type

Journal article.

<303>

Accession Number

20210101291

Author

Kawashima, T.; Nomura, S.; Tanoue, Y.; Yoneoka, D.; Eguchi, A.; Shi, S.; Miyata, H.

Title

The relationship between fever rate and telework implementation as a social distancing measure against the COVID-19 pandemic in Japan.

Source

Public Health; 2021. 192:12-14. 6 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objectives: On March 28, the Japanese government decided on the "Basic Policies for Novel Coronavirus Disease Control" and called on the public to thoroughly implement social distancing measures (i.e., behavioral restrictions to limit the frequency and intensity of human contact), especially telework. **Methods:** We used population-level questionnaire data from a social networking service (SNS), with 275,560 respondents from March 5 to April 6, to evaluate the relationship between telework implementation and the presence of a fever (body temperature higher than 37.5 degrees C) within 1 month as a surrogate indicator of COVID-19 infection, by occupation type and age-group. **Results:** Among company employees, statistical significance was identified in the 15- to 29-year and 30- to 59-year age-groups, showing higher fever rates in the non-teleworker group (for the 15- to 29-year age-group, non-teleworkers: 7.64%; teleworkers: 6.45%; P=0.02; for the 30- to 59-year age-group, non-teleworkers: 3.46%; teleworkers: 3.14%; P=0.02). **Conclusions:** Telework remains a controversial topic in Japan as the government called for emergency measures. Although caution is warranted in interpreting our findings because our data are limited to the voluntary SNS users, they will be essential to push forward with more measures to promote social distancing measures in the midst of Japan's current tense political climate.

Publication Type

Journal article.

<304>

Accession Number

20210101251

Author

Zelner, J.; Trangucci, R.; Narahariseti, R.; Cao, A.; Malosh, R.; Broen, K.; Masters, N.; Delamater, P.

Title

Racial disparities in coronavirus disease 2019 (COVID-19) mortality are driven by unequal infection risks.

Source

Clinical Infectious Diseases; 2020. 72(5):e88-e95. 27 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: As of 1 November 2020, there have been >230 000 deaths and 9 million confirmed and probable cases attributable to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the United States. However, this overwhelming toll has not been distributed equally, with geographic, race/ethnic, age, and socioeconomic disparities in exposure and mortality defining features of the US coronavirus disease 2019 (COVID-19) epidemic. Methods: We used individual-level COVID-19 incidence and mortality data from the state of Michigan to estimate age-specific incidence and mortality rates by race/ethnic group. Data were analyzed using hierarchical Bayesian regression models, and model results were validated using posterior predictive checks. Results: In crude and age-standardized analyses we found rates of incidence and mortality more than twice as high than for Whites for all groups except Native Americans. Blacks experienced the greatest burden of confirmed and probable COVID-19 (age-standardized incidence, 1626/100 000 population) and mortality (age-standardized mortality rate, 244/100 000). These rates reflect large disparities, as Blacks experienced age-standardized incidence and mortality rates 5.5 (95% posterior credible interval [CrI], 5.4-5.6) and 6.7 (95% CrI, 6.4-7.1) times higher than Whites, respectively. We found that the bulk of the disparity in mortality between Blacks and Whites is driven by dramatically higher rates of COVID-19 infection across all age groups, particularly among older adults, rather than age-specific variation in case-fatality rates. Conclusions: This work suggests that well-documented racial disparities in COVID-19 mortality in hard-hit settings, such as Michigan, are driven primarily by variation in household, community, and workplace exposure rather than case-fatality rates.

Publication Type

Journal article.

<305>

Accession Number

20210101125

Author

Burton, J.; Love, H.; Richards, K.; Burton, C.; Summers, S.; Pitman, J.; Easterbrook, L.; Davies, K.; Spencer, P.; Killip, M.; Cane, P.; Bruce, C.; Roberts, A. D. G.

Title

The effect of heat-treatment on SARS-CoV-2 viability and detection.

Source

Journal of Virological Methods; 2021. 290. 30 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The development of safe diagnostic protocols for working with SARS-CoV-2 clinical samples at Biosafety Level 2 (BSL2) requires understanding of the effect of heat-treatment on SARS-CoV-2 viability and downstream RT-PCR sensitivity. In this study heating SARS-CoV-2/England/2/2020 to 56 degrees C and 60 degrees C for 15, 30 and 60 min reduced the virus titre by between 2.1 and 4.9 log₁₀ pfu/mL (as determined by plaque assay). Complete inactivation did not occur and there was significant variability between replicates. Viable virus was detected by plaque assay after heat-treatment at 80 degrees C for 15 or 30 min but not 60 or 90 min. After heat-treatment at 80 degrees C for 60 min infectious virus was only detected by more sensitive virus culture. No viable virus was detected after heating to 80 degrees C for 90 min or 95 degrees C for 1 or 5 min. RT-PCR sensitivity was not compromised by heating to 56 degrees C and 60 degrees C. However, RT-PCR sensitivity was reduced (3 Ct value increase) after heating the virus to 80 degrees C for 30 min or longer, or 95 degrees C for 1 or 5 min. In summary we found that the efficacy of heat-inactivation varies greatly depending on temperature and duration. Local validation of heat-inactivation and its effects downstream is therefore essential for molecular testing.

Publication Type

Journal article.

<306>

Accession Number

20210101123

Author

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Zwirgmaier, K.; Weyh, M.; Kruger, C.; Ehmann, R.; Muller, K.; Wolfel, R.; Stoecker, K.

Title

Rapid detection of SARS-CoV-2 by pulse-controlled amplification (PCA).

Source

Journal of Virological Methods; 2021. 290. 21 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In the current pandemic of SARS-CoV-2, rapid identification of infected individuals is crucial for management and control of the outbreak. However, transport of samples, sample processing and RT-qPCR analysis in laboratories are time-consuming. Here we present a prototype of a novel nucleic acid-based test format - pulse controlled amplification - that allows detection of SARS-CoV-2 directly from up to eight swab samples simultaneously without the need for RNA extraction within 25 min with a sensitivity of 100% for samples with a viral load of 1.6×10^3 copies/l. This new principle might pave the way to rapid and sensitive point of care testing.

Publication Type

Journal article.

<307>

Accession Number

20210101116

Author

Tozetto-Mendoza, T. R.; Kanunfre, K. A.; Vilas-Boas, L. S.; Sanchez Espinoza, E. P.; Paiao, H. G. O.; Rocha, M. C.; Paula, A. V. de; Oliveira, M. S. de; Zampelli, D. B.; Vieira Junior, J. M.; Buss, L.; Costa, S. F.; Sabino, E. C.; Witkin, S. S.; Okay, T. S.; Mendes-Correa, M. C.

Title

Nucleoprotein-based ELISA for detection of SARS-CoV-2 IgG antibodies: could an old assay be suitable for serodiagnosis of the new coronavirus?

Source

Journal of Virological Methods; 2021. 290. 26 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objectives: We evaluated the performance of a nucleoprotein-based enzyme-linked immunosorbent assay (ELISA) for detection of IgG antibodies to SARS-CoV-2. **Methods:** The ELISA was based on serum IgG reactivity to a 46-kDa protein derived from the recombinant SARS-CoV2 nucleoprotein. Assay sensitivity was assessed using serum samples from 134 COVID-19 confirmed cases obtained > 15 days after symptom onset. Specificity was determined by testing sera from 94 healthy controls. Cross-reactivity was evaluated with sera from 96 individuals with previous dengue or zika virus-confirmed infections, with 44 sera from individuals with confirmed infections to other respiratory viruses or with bacterial and fungal infections that cause pneumonia and with 40 sera negative for SARS-CoV-2 nucleoprotein by commercial ELISA kits. **Results:** The majority of subjects were male and 60 years old. Assay sensitivity was 90.3% (95% confidence interval 84.1%-94.2%) and specificity was 97.9% (92.6%-99.4%). There was no cross-reactivity with sera from individuals diagnosed with dengue, zika virus, influenza virus, rhinovirus, adenovirus, respiratory syncytial virus, seasonal coronavirus, Mycobacterium tuberculosis, Staphylococcus (*S. aureus* and coagulase-negative), Streptococcus pneumoniae, Klebsiella pneumoniae and the fungus Aspergillus fumigatus. The level of concordance of our test with results from commercial ELISA kits was 100%. **Conclusion:** The nucleoprotein-based ELISA was specific for detection of IgG anti-nucleoprotein antibodies to SARS-CoV-2. It utilizes a frequently employed low expense assay protocol and is easier to perform than other currently available commercial SARS-CoV2 antibody detection tests.

Publication Type

Journal article.

<308>

Accession Number

20210101111

Author

Murray, A. G.; Ives, S. C.; Smith, R. J.; Moriarty, M.

Title

A preliminary assessment of indirect impacts on aquaculture species health and welfare in Scotland during COVID-19 lockdown.

Source

Veterinary and Animal Science; 2021. 11. 41 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 led to sudden changes in human activities, mainly due to restrictive measures required to suppress the virus. We assess the preliminary evidence for impacts on animal health and welfare in Scottish aquaculture, a key economic activity in remoter areas of the country. We summarise the industry structure, explore pathways of vulnerability to aquatic animal disease within a One Health framework that may be accentuated by impacts of COVID-19, and use basic routine data collection on the key welfare indicators of salmon mortality and parasitic sea lice counts. The indicators were published on schedule and provide no evidence of gross impact on health and welfare, at least for salmon, during the period of intensive lockdown restrictions in Scotland. Longer term effects cannot be ruled out and we do not assess impacts on the economic or social aspects of aquaculture production.

Publication Type

Journal article.

<309>

Accession Number

20210101036

Author

Navin Kumar; Janmohamed, K.; Nyhan, K.; Forastiere, L.; Zhang WeiHong; Kagesten, A.; Uhlich, M.; Velde, S. M. van de; Francis, J. M.; Erausquin, J. T.; Larsson, E. C.; Callander, D.; Scott, J.; Minichiello, V.; Tucker, J. D.

Title

Sexual health and COVID-19: protocol for a scoping review.

Source

Systematic Reviews; 2021. 10(37):(23 January 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Global responses to the COVID-19 pandemic have exposed and exacerbated existing socioeconomic and health inequities that disproportionately affect the sexual health and well-being of many populations, including people of color, ethnic minority groups, women, and sexual and gender minority populations. Although there have been several reviews published on COVID-19 and health disparities across various populations, none has focused on sexual health. We plan to conduct a scoping review that seeks to fill several of the gaps in the current knowledge of sexual health in the COVID-19 era. **Methods:** A scoping review focusing on sexual health and COVID-19 will be conducted. We will search (from January 2020 onwards) CINAHL, Africa-Wide Information, Web of Science Core Collection, Embase, Gender Studies Database, Gender Watch, Global Health, WHO Global Literature on Coronavirus Disease Database, WHO Global Index Medicus, PsycINFO, MEDLINE, and Sociological Abstracts. Grey literature will be identified using Disaster Lit, Google Scholar, governmental websites, and clinical trials registries (e.g., ClinicalTrial.gov, World Health Organization, International Clinical Trials Registry Platform, and International Standard Randomized Controlled Trial Number Registry). Study selection will conform to the Joanna Briggs Institute Reviewers' Manual 2015 Methodology for JBI Scoping Reviews. Only English language, original studies will be considered for inclusion. Two reviewers will independently screen all citations, full-text articles, and abstract data. A narrative summary of findings will be conducted. Data analysis will involve quantitative (e.g., frequencies) and qualitative (e.g., content and thematic analysis) methods. **Discussion:** Original research is urgently needed to mitigate the risks of COVID-19 on sexual health. The planned scoping review will help to address this gap.

Publication Type

Journal article.

<310>

Accession Number

20210101030

Author

Su ZhaoHui; McDonnell, D.; Liang Bin; Kue, J.; Li XiaoShan; Segalo, S.; Advani, S.; Flores, B. E.; Wang Jing

Title

Technology-based health solutions for cancer caregivers to better shoulder the impact of COVID-19: a systematic review protocol.

Source

Systematic Reviews; 2021. 10(43):(01 February 2021). 64 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

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Country of Publication

UK

Abstract

Background: Cancer patients are particularly vulnerable to COVID-19, partially owing to their compromised immune systems and curbed or cut cancer healthcare services caused by the pandemic. As a result, cancer caregivers may have to shoulder triple crises: the COVID-19 pandemic, pronounced healthcare needs from the patient, and elevated need for care from within. While technology-based health interventions have the potential to address unique challenges cancer caregivers face amid COVID-19, limited insights are available. Thus, to bridge this gap, we aim to identify technology-based interventions designed for cancer caregivers and report the characteristics and effects of these interventions concerning cancer caregivers' distinctive challenges amid COVID-19. Methods: A systematic search of the literature will be conducted in PubMed, PsycINFO, CINAHL, and Scopus from the database inception to the end of March 2021. Articles that center on technology-based interventions for cancer caregivers will be included in the review. The search strategy will be developed in consultation with an academic librarian who is experienced in systematic review studies. Titles, abstracts, and full-text articles will be screened against eligibility criteria developed a priori. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses procedures will be followed for the reporting process. Conclusions: COVID-19 has upended cancer care as we know it. Findings of this study can shed light on evidence-based and practical solutions cancer caregivers can utilize to mitigate the unique challenges they face amid COVID-19. Furthermore, results of this study will also offer valuable insights for researchers who aim to develop interventions for cancer caregivers in the context of COVID-19. In addition, we also expect to be able to identify areas for improvement that need to be addressed in order for health experts to more adequately help cancer caregivers weather the storm of global health crises like COVID-19 and beyond.

Publication Type

Journal article.

<311>

Accession Number

20210101028

Author

Bastani, P.; Mohammadpour, M.; Ghanbarzadegan, A.; Kapellas, K.; Loc Giang Do

Title

Global concerns of dental and oral health workers during COVID-19 outbreak: a scope study on the concerns and the coping strategies.

Source

Systematic Reviews; 2021. 10(45):(02 February 2021). 61 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Dental and oral health workers have direct contact with respiratory aerosols of patients during procedures. This study aimed to determine the main concerns of dental and oral health workers globally during COVID-19 outbreaks and the coping strategies that help the resilience of dental and oral healthcare system. Methods: This scoping study was conducted in August 2020. After adjusting the search strategy, a systematic search of five databases (PubMed, ISI Web of Science, Scopus, ProQuest and EMBASE) was conducted. Data was extracted using Microsoft Excel and the contents of retrieved articles were analysed through a qualitative thematic analysis applying MAX QDA10. Results: Most articles were either editorial/letters to the editor/commentary formats (34%), or literature reviews (26%). About half of the articles belonged to three countries of Italy, China and the USA (each 16% and totally 48%). Thematic analysis of included papers led to the identification of four main global concerns and 19 sub-concerns. Economic, ethical, social and professional concerns are among dental and oral health concerns. Other results indicate on three main themes and 13 sub-themes as the coping strategies including patient management, infection control and virtual strategies. Conclusion: Dental and oral health care workers have many concerns relating to COVID-19 including economic, ethical, social and professional factors. Resolution of concerns may involve enhancing coping strategies relating to patient management and infection control strategies as well as using new technologies for virtual contact with the patient without any risk of infection.

Publication Type

Journal article.

<312>

Accession Number

20210100970

Author

Tan QianXiu [Tan, Q. X. R.]; Li WaiTak [Li, W. T. V.]; Shum WingZi; Chu SheungChit; Li HangLong; Shea YatFung; Chung WaiHin [Chung, W. H. T.]

Title

A systematic review and meta-analysis protocol examining the clinical characteristics and epidemiological features of olfactory dysfunction (OD) in coronavirus disease 2019 (COVID-19).

Source

Systematic Reviews; 2021. 10(73):(11 March 2021). 22 ref.

Publisher

BioMed Central Ltd

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Location of Publisher

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Country of Publication

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Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic has caused recurring and major outbreaks in multiple human populations around the world. The plethora of clinical presentations of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been described extensively, of which olfactory dysfunction (OD) was established as an important and common extrapulmonary manifestation of COVID-19 infection. The aim of this protocol is to conduct a systematic review and meta-analysis on peer-reviewed articles which described clinical data of OD in COVID-19 patients. Methods: This research protocol has been prospectively registered with the Prospective Register of Systematic Reviews (PROSPERO; CRD42020196202). CINAHL, ClinicalTrials.gov, Cochrane Central, EMBASE, MEDLINE and PubMed, as well as Chinese medical databases China National Knowledge Infrastructure (CNKI), VIP and WANFANG, will be searched using keywords including 'COVID-19', 'coronavirus disease', '2019-nCoV', 'SARS-CoV-2', 'novel coronavirus', 'anosmia', 'hyposmia', 'loss of smell', and 'olfactory dysfunction'. Systematic review and meta-analysis will be conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and the Meta-analyses Of Observational Studies in Epidemiology (MOOSE) guidelines. Articles will be screened according to pre-specified inclusion and exclusion criteria to extract studies that include new clinical data investigating the effect of COVID-19 on olfactory dysfunction. Included articles will be reviewed in full; data including patient demographics, clinical characteristics of COVID-19-related OD, methods of olfactory assessment and relevant clinical outcomes will be extracted. Statistical analyses will be performed using the Comprehensive Meta-Analysis version 3. Discussion: This systematic review and meta-analysis protocol will aim to collate and synthesise all available clinical evidence regarding COVID-19-related OD as an important neurosensory dysfunction of COVID-19 infection. A comprehensive search strategy and screening process will be conducted to incorporate broad clinical data for robust statistical analyses and representation. The outcome of the systematic review and meta-analysis will aim to improve our understanding of the symptomatology and clinical characteristics of COVID-19-related OD and identify knowledge gaps in its disease process, which will guide future research in this specific neurosensory defect.

Publication Type

Journal article.

<313>

Accession Number

20210100908

Author

Doidge, J. C.; Gould, D. W.; Ferrando-Vivas, P.; Mouncey, P. R.; Thomas, K.; Shankar-Hari, M.; Harrison, D. A.; Rowan, K. M.

Title

Trends in intensive care for patients with COVID-19 in England, Wales, and Northern Ireland.

Source

American Journal of Respiratory and Critical Care Medicine; 2021. 203(5):565-574. 29 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

Rationale: By describing trends in intensive care for patients with coronavirus disease (COVID-19) we aim to support clinical learning, service planning, and hypothesis generation. **Objectives:** To describe variation in ICU admission rates over time and by geography during the first wave of the epidemic in England, Wales, and Northern Ireland; to describe trends in patient characteristics on admission to ICU, first-24-hours physiology in ICU, processes of care in ICU and patient outcomes; and to explore deviations in trends during the peak period. **Methods:** A cohort of 10,741 patients with COVID-19 in the Case Mix Program national clinical audit from February 1 to July 31, 2020, was used. Analyses were stratified by time period (prepeak, peak, and postpeak periods) and geographical region. Logistic regression was used to estimate adjusted differences in 28-day in-hospital mortality between periods. **Measurements and Main Results:** Admissions to ICUs peaked almost simultaneously across regions but varied 4.6-fold in magnitude. Compared with patients admitted in the prepeak period, patients admitted in the postpeak period were slightly younger but with higher degrees of dependency and comorbidity on admission to ICUs and more deranged first-24-hours physiology. Despite this, receipt of invasive ventilation and renal replacement therapy decreased, and adjusted 28-day in-hospital mortality was reduced by 11.8% (95% confidence interval, 8.7%-15.0%). Many variables exhibited u-shaped or n-shaped curves during the peak. **Conclusions:** The population of patients with COVID-19 admitted to ICUs, and the processes of care in ICUs, changed over the first wave of the epidemic. After adjustment for important risk factors, there was a substantial improvement in patient outcomes.

Publication Type

Journal article.

<314>

Accession Number

20210100818

Author

Varotsos, C.; Christodoulakis, J.; Kouremadas, G. A.; Fotaki, E. F.

Title

The signature of the coronavirus lockdown in air pollution in Greece.

Source

Water, Air, and Soil Pollution; 2021. 232(3). 22 ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

The change in atmospheric pollution from a public lockdown in Greece introduced to curb the spread of the COVID-19 is examined based on ground-based and satellite observations. The results showed that in most cases, the change in atmospheric pollution is not statistically significant. It is probably an artifact of the meteorological conditions that contributed significantly to the long-range transport of air pollutants over Greece during the shutdown period.

Publication Type

Journal article.

<315>

Accession Number

20210100780

Author

Su Shan; Shao YiMing; Jiang ShiBo

Title

Human challenge trials to assess the efficacy of currently approved COVID-19 vaccines against SARS-CoV-2 variants.

Source

Emerging Microbes and Infections; 2021. 10(439-441):439-441. 14 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Publication Type

Journal article.

<316>

Accession Number

20210100776

Author

Teymoori-Rad, M.; Marashi, S. M.

Title

Vitamin D and COVID-19: from potential therapeutic effects to unanswered questions.

Source

Reviews in Medical Virology; 2020. 31(2). 121 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Evidence suggests that vitamin D supplementation could potentially be effective either in treatment or prevention of coronavirus disease 2019 (Covid-19). Indeed, several studies and trials have begun to investigate the impact of vitamin D supplementation on patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. In this review, we focus on the potential mechanisms of vitamin D in the pathogenesis of Covid-19. We consider whether deficiency of vitamin D may be one of the underlying biological factors that could explain the excess mortality seen among non-Caucasians. We also raise several important questions which need to be addressed to provide a clear picture of the extent to which vitamin D supplementation may benefit patients with Covid-19, particularly those with underlying risk factors.

Publication Type

Journal article.

<317>

Accession Number

20210100774

Author

Oliver, M. E.; Hinks, T. S. C.

Title

Azithromycin in viral infections.

Source

Reviews in Medical Virology; 2020. 31(2). 137 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Azithromycin (AZM) is a synthetic macrolide antibiotic effective against a broad range of bacterial and mycobacterial infections. Due to an additional range of anti-viral and anti-inflammatory properties, it has been given to patients with the coronaviruses SARS-CoV or MERS-CoV. It is now being investigated as a potential candidate treatment for SARS-CoV-2 having been identified as a candidate therapeutic for this virus by both in vitro and in silico drug screens. To date there are no randomised trial data on its use in any novel coronavirus infection, although a large number of trials are currently in progress. In this review, we summarise data from in vitro, murine and human clinical studies on the anti-viral and anti-inflammatory properties of macrolides, particularly AZM. AZM reduces in vitro replication of several classes of viruses including rhinovirus, influenza A, Zika virus, Ebola, enteroviruses and coronaviruses, via several mechanisms. AZM enhances expression of anti-viral pattern recognition receptors and induction of anti-viral type I and III interferon responses. Of relevance to severe coronavirus-19 disease (COVID-19), which is characterised by an over-exuberant innate inflammatory response, AZM also has anti-inflammatory properties including suppression of IL-1beta, IL-2, TNF and GM-CSF. AZM inhibits T cells by inhibiting calcineurin signalling, mammalian target of rapamycin activity and NFB activation. AZM particularly targets granulocytes where it concentrates markedly in lysosomes, particularly affecting accumulation, adhesion, degranulation and apoptosis of neutrophils. Given its proven safety, affordability and global availability, tempered by significant concerns about antimicrobial stewardship, there is an urgent mandate to perform well-designed and conducted randomised clinical trials.

Publication Type

Journal article.

<318>

Accession Number

20210100764

Author

Loyola, M. B. de; Reis, T. T. A. dos; Oliveira, G. X. L. M. de; Palmeira, J. da F.; Arganaraz, G. A.; Arganaraz, E. R.

Title

Alpha-1-antitrypsin: a possible host protective factor against COVID-19.

Source

Reviews in Medical Virology; 2020. 31(2). 114 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Understanding Covid-19 pathophysiology is crucial for a better understanding of the disease and development of more effective treatments. Alpha-1-antitrypsin (A1AT) is a constitutive tissue protector with antiviral and anti-inflammatory properties. A1AT inhibits SARS-CoV-2 infection and two of the most important proteases in the pathophysiology of Covid-19: the transmembrane serine protease 2 (TMPRSS2) and the disintegrin and metalloproteinase 17 (ADAM17). It also inhibits the activity of inflammatory molecules, such as IL-8, TNF-a, and neutrophil elastase (NE). TMPRSS2 is essential for SARS-CoV-2-S protein priming and viral infection. ADAM17 mediates ACE2, IL-6R, and TNF-a shedding. ACE2 is the SARS-CoV-2 entry receptor and a key component for the balance of the renin-angiotensin system, inflammation, vascular permeability, and pulmonary homeostasis. In addition, clinical findings indicate that A1AT levels might be important in defining Covid-19 outcomes, potentially partially explaining associations with air pollution and with diabetes. In this review, we focused on the interplay between A1AT with TMPRSS2, ADAM17 and immune molecules, and the role of A1AT in the pathophysiology of Covid-19, opening new avenues for investigating effective treatments.

Publication Type

Journal article.

<319>

Accession Number

20210100762

Author

Harapan, H.; Ryan, M.; Yohan, B.; Abidin, R. S.; Nainu, F.; Ahmed Rakib; Israt Jahan; Talha Emran; Irfan Ullah; Panta, K.; Kuldeep Dhama; Sasmono, R. T.

Title

COVID-19 and dengue: double punches for dengue-endemic countries in Asia.

Source

Reviews in Medical Virology; 2020. 31(2). 138 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

The coronavirus disease 2019 (Covid-19) pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is an international public health crisis with devastating effects. In particular, this pandemic has further exacerbated the burden in tropical and subtropical regions of the world, where dengue fever, caused by dengue virus (DENV), is already endemic to the population. The similar clinical manifestations shared by Covid-19 and dengue fever have raised concerns, especially in dengue-endemic countries with limited resources, leading to diagnostic challenges. In addition, cross-reactivity of the immune responses in these infections is an emerging concern, as pre-existing DENV-antibodies might potentially affect Covid-19 through antibody-dependent enhancement. In this review article, we aimed to raise the issue of Covid-19 and dengue fever misdiagnosis, not only in a clinical setting but also with regards to cross-reactivity between SARS-CoV-2 and DENV antibodies. We also have discussed the potential consequences of overlapping immunological cascades between dengue and Covid-19 on disease severity and vaccine development.

Publication Type

Journal article.

<320>

Accession Number

20210100755

Author

Neira, V.; Brito, B.; Agüero, B.; Berrios, F.; Valdes, V.; Gutierrez, A.; Ariyama, N.; Espinoza, P.; Retamal, P.; Holmes, E. C.; Gonzalez-Reiche, A. S.; Khan, Z.; Guchte, A. van de; Jayeeta Dutta; Miorin, L.; Kehrer, T.; Galarce, N.; Almonacid, L. I.; Levican, J.; Bakel, H. van; Garcia-Sastre, A.; Medina, R. A.

Title

A household case evidences shorter shedding of SARS-CoV-2 in naturally infected cats compared to their human owners.

Source

Emerging Microbes and Infections; 2021. 10(376-383):376-383. 33 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been detected in domestic and wild cats. However, little is known about natural viral infections of domestic cats, although their importance for modelling disease spread, informing strategies for managing positive human-animal relationships and disease prevention. Here, we describe the SARS-CoV-2 infection in a household of two human adults and sibling cats (one male and two females) using real-time RT-PCR, an ELISA test, viral sequencing, and virus isolation. On May 5th, 2020, the cat-owners tested positive for SARS-CoV-2. Two days later, the male cat showed mild respiratory symptoms and tested positive. Four days after the male cat, the two female cats became positive, asymptotically. Also, one human and one cat showed antibodies against SARS-CoV-2. All cats excreted detectable SARS-CoV-2 RNA for a shorter duration than humans and viral sequences analysis confirmed human-to-cat transmission. We could not determine if cat-to-cat transmission also occurred.

Publication Type

Journal article.

<321>

Accession Number

20210100752

Author

Li YuZhong; Bi YanWei; Xiao HongJian; Yao YueTing; Liu XiaoJuan; Hu ZhengRong; Duan JinMei; Yang YaoYun; Li ZhiHua; Li YaDong; Zhang Heng; Ding Chen; Yang JianBo; Li HaiWei; He ZhanLong; Liu LongDing; Hu GuangNan; Liu ShuYing; Che YanChun; Wang ShiXia; Li QiHan; Lu Shan; Cun Wei

Title

A novel DNA and protein combination COVID-19 vaccine formulation provides full protection against SARS-CoV-2 in rhesus macaques.

Source

Emerging Microbes and Infections; 2021. 10(342-355):342-355. 60 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The current study aims to develop a safe and highly immunogenic COVID-19 vaccine. The novel combination of a DNA vaccine encoding the full-length Spike (S) protein of SARS-CoV-2 and a recombinant S1 protein vaccine induced high level neutralizing antibody and T cell immune responses in both small and large animal models. More significantly, the co-delivery of DNA and protein components at the same time elicited full protection against intratracheal challenge of SARS-CoV-2 viruses in immunized rhesus macaques. As both DNA and protein vaccines have been proven safe in previous human studies, and DNA vaccines are capable of eliciting germinal center B cell development, which is critical for high-affinity memory B cell responses, the DNA and protein co-delivery vaccine approach has great potential to serve as a safe and effective approach to develop COVID-19 vaccines that provide long-term protection.

Publication Type

Journal article.

<322>

Accession Number

20210100743

Author

Ye ZiWei; Yuan ShuoFeng; Chan FukWoo [Chan, F. W. J.]; Zhang JinXia [Zhang, J. X. A.]; Yu ChingYun; Ong ChonPhin; Yang Dong; Chan ChunYiu [Chan, C. Y. C.]; Tang KaiMing; Cao JianLi; Poon KwokMan [Poon, K. M. V.]; Chan ChungSing [Chan, C. S. C.]; Cai JianPiao; Chu Hin; Yuen KwokYung; Jin DongYan

Title

Beneficial effect of combinational methylprednisolone and remdesivir in hamster model of SARS-CoV-2 infection.

Source

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Effective treatments for coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are urgently needed. Dexamethasone has been shown to confer survival benefits to certain groups of hospitalized patients, but whether glucocorticoids such as dexamethasone and methylprednisolone should be used together with antivirals to prevent a boost of SARS-CoV-2 replication remains to be determined. Here, we show the beneficial effect of methylprednisolone alone and in combination with remdesivir in the hamster model of SARS-CoV-2 infection. Treatment with methylprednisolone boosted RNA replication of SARS-CoV-2 but suppressed viral induction of proinflammatory cytokines in human monocyte-derived macrophages. Although methylprednisolone monotherapy alleviated body weight loss as well as nasal and pulmonary inflammation, viral loads increased and antibody response against the receptor-binding domain of spike protein attenuated. In contrast, a combination of methylprednisolone with remdesivir not only prevented body weight loss and inflammation, but also dampened viral protein expression and viral loads. In addition, the suppressive effect of methylprednisolone on antibody response was alleviated in the presence of remdesivir. Thus, combinational anti-inflammatory and antiviral therapy might be an effective, safer and more versatile treatment option for COVID-19. These data support testing of the efficacy of a combination of methylprednisolone and remdesivir for the treatment of COVID-19 in randomized controlled clinical trials.

Publication Type

Journal article.

<323>

Accession Number

20210100655

Author

Silva-Sobrinho, R. A.; Zilly, A.; Silva, R. M. M. da; Arcoverde, M. A. M.; Deschutter, E. J.; Palha, P. F.; Bernardi, A. S.

Title

Coping with COVID-19 in an international border region: health and economy.

Source

Publisher

Escola de Enfermagem de Ribeirao Preto de la Universidad de Sao Paulo

Location of Publisher

Ribeirao Preto

Country of Publication

Brazil

Abstract

Objective: to analyze how the social isolation measures and closed borders affected the health and economy in an international border region. Method: descriptive cross-sectional study conducted in the western region of Parana, Brazil, using an electronic form created using GoogleR forms. A sample of 2,510 people was addressed. Descriptive analysis and the Chi-square test were performed, with a level of significance established at 5%. This public opinion survey, addressing unidentified participants, is in accordance with Resolutions 466/2012 and 510/2016. Results: the participants were 41.5 years old on average, most were women and worked in the education sector; 41.9% reported that the closing of borders/commercial businesses negatively influenced income; 17.7% reported the possibility of losing their jobs; 89.0% consider that a larger number of people would be sick if the borders/commercial had not been closed; 63.7% believe the health services are not prepared to deal with the pandemic; 74.9% realize that the Brazilian Unified Health System may not have sufficient service capacity; 63.4% reported anxiety; and 75.6% of commercial workers will experience changes in their income level. Conclusion: the closing of international borders and commercial businesses was related to a perception of physical and mental changes, job loss, and decreased income.

Publication Type

Journal article.

<324>

Accession Number

20210100607

Author

Uygun-Can, B.; Acar-Bolat, B.

Title

Clinical properties and diagnostic methods of COVID-19 infection in pregnancies: meta-analysis.

Source

BioMed Research International; 2020. 2020(1708267). 41 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

We aimed to summarize reliable medical evidence by the meta-analysis of all published retrospective studies that examined data based on the detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by clinical symptoms, molecular (RT-PCR) diagnosis, and characteristic CT imaging features in pregnant women. The MEDLINE, PubMed, Scopus, ISI Web of Science, ClinicalKey, and CINAHL databases were used to select the studies. Then, 384 articles were received, including the studies until 01/May/2020. As a result of the full-text evaluation, 12 retrospective articles covering all the data related were selected. A total of 181 pregnant cases with SARS-CoV-2 infections were included in the meta-analysis within the scope of these articles. According to the results, the incidence of fever was 38.1% (95% CI: 14.2-65%) and cough was 22% (95% CI: 10.8-35.2%) among all clinical features of pregnant cases with SARS-CoV-2 infection. So, fever and cough are the most common symptoms in pregnant cases with SARS-CoV-2 infection, and 91.8% (95% CI: 76.7-99.9%) of RT-PCR results are positive. Moreover, abnormal CT incidence is 97.9% (95% CI: 94.2-99.9%) positive. No case was death. However, as this virus spreads globally, it should not be overlooked that the incidence will increase in pregnant women and maybe in the risky group. RT-PCR and CT can be used together in an accurate and safe diagnosis. In conclusion, these findings will provide important guidance for current studies regarding the clinical features and correct detection of SARS-CoV-2 infection in pregnant women, as well as whether it will create emergency tables that will require the use of a viral drug.

Publication Type

Journal article.

<325>

Accession Number

20210100563

Author

Kamali, M.; Sadati, A. K.; Khademi, M. R.; Ghahramani, S.; Zarei, L.; Ghaemi, S. Z.; Tabrizi, R.; Akbari, M.; Shokrpour, N.; Mani, A.; Heydari, S. T.; Lankarani, K. B.

Title

Burnout among nurses during coronavirus disease 2019 outbreak in Shiraz.

Source

Galen Medical Journal; 2020. 9(e1956). 38 ref.

Publisher

Salvia Medical Sciences Ltd. in cooperation with SalviaPub

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The function of healthcare workers, particularly nursing staff, in taking care of coronavirus disease 2019 (COVID-19) patients, cannot be overemphasized. As the pandemic lasts, burnout among the nursing staff needs to be considered as an important challenge. This was aimed to assess the nurses' burnout and factors affecting this variable. Materials and Methods: In this cross-sectional study, Maslach Burnout Inventory was completed by 261 nurses in Shiraz hospitals (Iran) in April 2020. This questionnaire addresses different aspects, including emotional exhaustion, personal achievement, and depersonalization, to determine the intensity of perceived burnout among nurses during the outbreak. Results: Our data demonstrated that the nurses' burnout in Shiraz hospitals during the COVID-19 pandemic was high (64.6%). Emotional exhaustion and depersonalization were observed in 63.6 and 53.3 percent of the participants, respectively. Moreover, the rate of successful personal achievement among these nurses was >97%. Work experience <10 years ($P=0.016$), hospital ward ($P=0.044$), the number of deaths observed by nurses during the COVID-19 pandemic ($P<0.001$), and the total number of shifts during the COVID-19 pandemic ($P=0.006$) had a positive correlation with emotional exhaustion. Conclusion: Workload and stress resulting from the COVID-19 outbreak seem to be one of the major causes of emotional exhaustion in nurses. The emotional exhaustion among nurses must be considered in epidemics, such as COVID-19.

Publication Type

Journal article.

<326>

Accession Number

20210100560

Author

Hu YanMei; Meng XiangZhi; Zhang FuShun; Xiang Yan; Wang Jun

Title

The in vitro antiviral activity of lactoferrin against common human coronaviruses and SARS-CoV-2 is mediated by targeting the heparan sulfate co-receptor.

Source

Emerging Microbes and Infections; 2021. 10(317-330):317-330. 60 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Coronavirus disease 2019 (COVID-19) is an ongoing pandemic that lacks effective therapeutic interventions. SARS-CoV-2 infects ACE2-expressing cells and gains cell entry through either direct plasma membrane fusion or endocytosis. Recent studies have shown that in addition to ACE2, heparan sulfate proteoglycans (HSPGs) also play an important role in SARS-CoV-2 cell attachment by serving as an attachment factor. Binding of viral spike protein to HSPGs leads to the enrichment of local concentration for the subsequent specific binding with ACE2. We therefore hypothesize that blocking the interactions between viral spike protein and the HSPGs will lead to inhibition of viral replication. In this study, we report our findings of the broad-spectrum antiviral activity and the mechanism of action of lactoferrin (LF) against multiple common human coronaviruses as well as SARS-CoV-2. Our study has shown that LF has broad-spectrum antiviral activity against SARS-CoV-2, HCoV-OC43, HCoV-NL63, and HCoV-229E in cell culture, and bovine lactoferrin (BLF) is more potent than human lactoferrin. Mechanistic studies revealed that BLF binds to HSPGs, thereby blocking viral attachment to the host cell. The antiviral activity of BLF can be antagonized by the HSPG mimetic heparin. Combination therapy experiment showed that the antiviral activity of LF is synergistic with remdesivir in cell culture. Molecular modelling suggests that the N-terminal positively charged region in BLF (residues 17-41) confers the binding to HSPGs. Overall, LF appears to be a promising drug candidate for COVID-19 that warrants further investigation.

Publication Type

Journal article.

<327>

Accession Number

20210100474

Author

Delbue, S.; D'Alessandro, S.; Signorini, L.; Dolci, M.; Pariani, E.; Bianchi, M.; Fattori, S.; Modenese, A.; Galli, C.; Eberini, I.; Ferrante, P.

Title

Isolation of SARS-CoV-2 strains carrying a nucleotide mutation, leading to a stop codon in the ORF 6 protein.

Source

Emerging Microbes and Infections; 2021. 10(252-255):252-255. 12 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was isolated from the oro/pharyngeal swabs of two Italian COVID-19 patients, physicians in a COVID-19 division hospital, with different courses of the disease. The complete genome sequences show that the two isolates belong to the B.1.1 lineage, but contain a nucleotide mutation in the ORF6, leading to a stop codon and to the deletion of 6 amino acids in the C terminus. This deletion was unique, compared to the currently available sequences deposited in the GISAID and GenBank database. It did not affect the in vitro viral replication, neither the neutralizing activities of the patients' antibodies. Based on homology analysis with other Coronaviruses, the two isolated lacked the ORF6 aminoacidic portion responsible for the inhibition of the antiviral Interferon (IFN)-based host response. IFN seems to have a dual role of in SARS-CoV-2 infected patients: not only antiviral activity, but also a detrimental role in case of excessive production. A deletion in the SARS-CoV-2 ORF6 protein might have a specific, still unknown role in the viral pathogenesis.

Publication Type

Journal article.

<328>

Accession Number

20210100467

Author

Zhao ZhenYu; Lu KeFeng; Mao BinLi; Liu Shi; Trilling, M.; Huang AiLong; Lu MengJi; Lin Yong

Title

The interplay between emerging human coronavirus infections and autophagy.

Source

Emerging Microbes and Infections; 2021. 10(196-205):196-205. 77 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Following outbreaks of severe acute respiratory syndrome coronavirus (SARS-CoV) and the Middle East respiratory syndrome coronavirus (MERS-CoV) in 2002 and 2012, respectively, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the third highly pathogenic emerging human coronavirus (hCoV). SARS-CoV-2 is currently causing the global coronavirus disease 2019 (COVID-19) pandemic. CoV infections in target cells may stimulate the formation of numerous double-membrane autophagosomes and induce autophagy. Several studies provided evidence that hCoV infections are closely related to various cellular aspects associated with autophagy. Autophagy may even promote hCoV infection and replication. However, so far it is unclear how hCoV infections induce autophagy and whether the autophagic machinery is necessary for viral propagation. Here, we summarize the most recent advances concerning the mutual interplay between the autophagic machinery and the three emerging hCoVs, SARS-CoV, MERS-CoV, and SARS-CoV-2 and the model system mouse hepatitis virus. We also discuss the applicability of approved and well-tolerated drugs targeting autophagy as a potential treatment against COVID-19.

Publication Type

Journal article.

<329>

Accession Number

20210100003

Author

Zhang JiShou; Xu Yao; Shen Bo; He Hua; Liu MingXiao; Zhao MengMeng; Liu JianFang; Xu ShuWan; Pan Wei; Ye Jing; Wang Zhen; Ye Di; Liu MengLin; Li Dan; Luo Zhen; Feng YongQi; Wang MengLong; Wan Jun

Title

The association between obesity and severity in patients with coronavirus disease 2019: a retrospective, single-center study, Wuhan.

Source

International Journal of Medical Sciences (Sydney); 2021. 18(8):1768-1777. 38 ref.

Publisher

Ivyspring International Publisher Pty Ltd

Location of Publisher

Sydney

Country of Publication

Australia

Abstract

Aim: In other respiratory infectious diseases, obesity may be associated with a poor outcome. For coronavirus disease 2019 (COVID-19), the association between obesity and severity or prognosis requires further analysis. **Methods:** This was a retrospective, single-center study. Hospitalized patients were recruited in Renmin Hospital of Wuhan University from January 2, 2020 to February 20, 2020. The data of

body mass index (BMI) was obtained from follow-up of surviving patients. According to BMI, normal weight was defined as 18.5-23.9 kg/m², overweight as 24.0-27.9 kg/m² and obesity as > 28.0 kg/m². Results: A total of 463 patients were enrolled, of which 242 (52.3%) patients were in the normal weight group; 179 (38.7%) were in the overweight group; and 42 (9.1%) were in the obesity group. Compared to the normal group, obese patients were more likely to have a higher heart rate; lower finger oxygen saturation; higher levels of white blood cells, neutrophil counts, basophil counts, intravenous glucose, triacylglycerol, uric acid, alanine aminotransferase, creatine kinase-MB, CD19+ cell counts and percentage; and lower levels of monocyte percentage, high density lipoprotein and CD3+ cell percentage. In addition, the proportions of hypertension (21.5% vs. 42.6%) and severe+critical illness (47.8 vs. 81.0%) were significantly higher in the obesity group than those in normal group. However, no significant differences were observed between the normal and obesity groups in critical illness, organ damage and defined endpoint (mechanical ventilation or intensive care unit). Multiple logistic regression showed that obesity increased the risk of developing severe+critical illness (Odd ratio 3.586, 95% CI 1.550-8.298, P=0.003) in patients with COVID-19, and did not affect the risk of critical illness, organ damage and endpoints. Overweight did not affect the risk of severity, organ damage or endpoint in patients with COVID-19. Conclusion: Obesity may be a risk factor for developing severity in patients with COVID-19.

Publication Type

Journal article.

<330>

Accession Number

20210099652

Author

Benbrahim, Z.; Mula-Hussain, L.; Al-Shamsi, H. O.; El-Saghir, N.; Al-Asiri, M.; Al-Bahrani, B.; Al-Nassar, M.; Bounedjar, A.; Fahed, Z.; Khatib, S.; Khorshid, O.; Labidi, S.; Mellas, N.; Saleh, A.; Abdulrahman Jazieh

Title

National approaches to managing cancer care: responses of countries in the MENA region to the COVID-19 pandemic.

Source

ecancermedicalsecience; 2021. 15(1189). 30 ref.

Publisher

ecancer Global Foundation

Location of Publisher

Bristol

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic presents serious challenges to cancer care because of the associated risks from the infection itself and the disruption of care delivery. Therefore, many professional societies have published recommendations to help manage patients with cancer during the current pandemic. The objective of our study is to assess the national responses of Middle East North Africa (MENA) countries in terms of publishing relevant guidelines and analyse various components of these guidelines. Methods: A survey based on the preliminary review of the literature regarding cancer care adaptations has been developed and then completed by a group of oncologists from the following Arab countries affected by the pandemic: Algeria, Egypt, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia, Syria, Tunisia, United Arab Emirates and Yemen. The survey inquired about COVID-19 cases, national recommendations regarding general measures of COVID-19 prevention and patient care in oncology as well as their implementation about cancer care adaptations during the pandemic. Results: Analysis of the COVID-19 pandemic-related guidelines revealed at least 30 specific recommendations that we categorised into seven essential components. All included countries had national guidelines except one country. Estimated full compliances with all specific category recommendations ranged from 30% to 69% and partial compliance ranged from 23% to 61%. Conclusion: There is a very good response and preparedness in the Arab Middle East and North Africa region surveyed. However, there are inconsistencies in the various components of the guidelines across the region, which reflects the evolving status of the pandemic in each country as well as the lack of clear evidence-based guidelines for many of the issues in question. There is a need for a clear framework on essential components that should be included in these guidelines to assure providing the best guidance to the oncology community.

Publication Type

Journal article.

<331>

Accession Number

20210098982

Author

Kwok, K. T. T.; Rooij, M. M. T. de; Sinartio, F. F.; Smit, L. A. M.; Koopmans, M. P. G.; Phan, M. V. T.

Title

Genome sequence of a minacovirus strain from a farmed mink in the Netherlands.

Source

Microbiology Resource Announcements; 2021. 10(8). 15 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

We report the genome sequence of a Minacovirus strain identified from a fecal sample from a farmed mink (*Neovison vison*) in The Netherlands that was tested negative for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) using real-time PCR (RT-PCR). The viral genome sequence was obtained using agnostic deep sequencing.

Publication Type

Journal article.

<332>

Accession Number

20210098760

Author

Apiratwarakul, K.; Songserm, W.; Bhudhisawasdi, V.; Wachirachiaranon, P.

Title

Use of emergency medical services: experience 100 days after first case of COVID-19.

Source

Journal of the Medical Association of Thailand; 2021. 104(2 Suppl. 1):5-7.

Publisher

Medical Association of Thailand

Location of Publisher

Bangkok

Country of Publication

Thailand

Abstract

Background: The spread of the novel coronavirus 2019 (COVID-19), emergency medical services (EMS) work flow to be different from the normal situation such as avoid advanced airways management that perform aerosol generating. However, no studies examining EMS operation have been conducted at Srinagarind Hospital. **Background:** To compare EMS operation time and procedures during COVID-19 spreading and routine period. **Materials and Methods:** This cross-sectional study examined all cases in which EMS were dispatched from Srinagarind Hospital during 13th January to 21st April 2020 compared with last year. Data were collected from the Srinagarind Hospital EMS operation database and hospital information database system. **Results:** Five hundred forty-five EMS operations were examined. The mean age of the patients in 2020 was 50.4+6.2 years, and 70.9% (n = 195) were male. The average times from 1669 center call receipt to arrival on scene (response time) for 2019 and 2020 were 12.44+4.12 minutes and 7.32+2.40 minutes, respectively (p = 0.016). The nebulizer mask procedure was performed in 16.1% of cases in 2019 group compared with 7.1% in the 2020 group (p<0.001). **Conclusion:** COVID-19 pandemic in

Thailand effect EMS operation in age group of patients, operation time, type of patients, response time and procedures in airway and breathing.

Publication Type

Journal article.

<333>

Accession Number

20210098256

Author

Tam, P. C. K.; Ly, K. M.; Kernich, M. L.; Spurrier, N.; Lawrence, D.; Gordon, D. L.; Tucker, E. C.

Title

Detectable severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in human breast milk of a mildly symptomatic patient with coronavirus disease 2019 (COVID-19).

Source

Clinical Infectious Diseases; 2020. 72(1):128-130. 11 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

SARS-CoV-2 is a novel coronavirus and causative pathogen to the pandemic illness COVID-19. Although RNA has been detected in various clinical samples, no reports to date have documented SARS-CoV-2 in human milk. This case report describes an actively breastfeeding patient with COVID-19 infection with detectable viral RNA in human milk.

Publication Type

Journal article.

<334>

Accession Number

20210097316

Author

Karpenko, L. I.; Rudometov, A. P.; Sharabrin, S. V.; Shcherbakov, D. N.; Borgoyakova, M. B.; Bazhan, S. I.; Volosnikova, E. A.; Rudometova, N. B.; Orlova, L. A.; Pyshnaya, I. A.; Zaitsev, B. N.; Volkova, N. V.; Azaev, M. Sh.; Zaykovskaya, A. V.; Pyankov, O. V.; Ilyichev, A. A.

Title

Delivery of mRNA vaccine against SARS-CoV-2 using a polyglucin:spermidine conjugate.

Source

Vaccines; 2021. 9(2). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

One of the key stages in the development of mRNA vaccines is their delivery. Along with liposome, other materials are being developed for mRNA delivery that can ensure both the safety and effectiveness of the vaccine, and also facilitate its storage and transportation. In this study, we investigated the polyglucin:spermidine conjugate as a carrier of an mRNA-RBD vaccine encoding the receptor binding domain (RBD) of the SARS-CoV-2 spike protein. The conditions for the self-assembling of mRNA-PGS complexes were optimized, including the selection of the mRNA:PGS charge ratios. Using dynamic and electrophoretic light scattering it was shown that the most monodisperse suspension of nanoparticles was formed at the mRNA:PGS charge ratio equal to 1:5. The average hydrodynamic particles diameter was determined, and it was confirmed by electron microscopy. The evaluation of the zeta potential of the investigated complexes showed that the particles surface charge was close to the zero point. This may indicate that the positively charged PGS conjugate has completely packed the negatively charged mRNA molecules. It has been shown that the packaging of mRNA-RBD into the PGS envelope leads to increased production of specific antibodies with virus-neutralizing activity in immunized BALB/c mice. Our results showed that the proposed polycationic polyglucin:spermidine conjugate can be considered a promising and safe means to the delivery of mRNA vaccines, in particular mRNA vaccines against SARS-CoV-2.

Publication Type

Journal article.

<335>

Accession Number

20210097286

Author

Ditekemena, J. D.; Nkamba, D. M.; Mutwadi, A.; Mavoko, H. M.; Fodjo, J. N. S.; Luhata, C.; Obimpeh, M.; Hees, S. van; Nachege, J. B.; Colebunders, R.

Title

COVID-19 vaccine acceptance in the Democratic Republic of Congo: a cross-sectional survey.

Source

Vaccines; 2021. 9(2). 34 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

We investigated the level of willingness for COVID-19 vaccination in the Democratic Republic of Congo (DRC). Data were collected between 24 August 2020 and 8 September 2020 through an online survey. A total of 4131 responses were included; mean age of respondents was 35 years (standard deviation: 11.5); 68.4% were females; 71% had elementary or secondary school education. One fourth (24.1%) were convinced that COVID-19 did not exist. Overall, 2310 (55.9%) indicated they were willing to be vaccinated. In a multivariable regression model, belonging to the middle and high-income category (OR = 1.85, CI: 1.46-2.35 and OR = 2.91, CI: 2.15-3.93, respectively), being tested for COVID-19 (OR = 4.71, CI: 3.62-6.12; $p < 0.001$), COVID-19 community vaccine acceptance (OR = 14.45, CI: 2.91-71.65; $p = 0.001$) and acknowledging the existence of COVID-19 (OR = 6.04, CI: 4.42-8.23; $p < 0.001$) were associated with an increased willingness to be vaccinated. Being a healthcare worker was associated with a decreased willingness for vaccination (OR = 0.46, CI: 0.36-0.58; $p < 0.001$). In conclusion, the current willingness for COVID-19 vaccination among citizens of the DRC is too low to dramatically decrease community transmission. Of great concern is the low intention of immunization among healthcare workers. A large sensitization campaign will be needed to increase COVID-19 vaccine acceptance.

Publication Type

Journal article.

<336>

Accession Number

20210096983

Author

Kakoudakis, K. I.; Papadoulaki, K.

Title

Social tourism in Greece: a brief history of development from the interwar years to the COVID-19 era.

Source

Social tourism: global challenges and approaches; 2021. 5-17. many ref.

Publisher

CABI

Location of Publisher

Wallingford

Country of Publication

UK

Abstract

This chapter illustrates the process of social tourism development in Greece, from the interwar years until the present day. The chapter first sets the discussion within the context of the country's turbulent political, social and economic background, throughout most of the past century, which has exercised significant influence on the development of Greek tourism in general, and social tourism specifically. It then identifies and presents two main phases of social tourism development, highlighting important initiatives and key players that contributed to the incremental evolution of social tourism programmes in Greece, and also events that impeded their implementation and smooth running. Specific emphasis is given to the past four decades, since this time period has largely shaped the contemporary form of Greek social tourism programmes. Therefore, the chapter explicates the close linkages between the establishment of the modern Greek welfare state in the early 1980s, and the development of social tourism as we know it today. The chapter concludes with a brief discussion on the developmental process of contemporary Greek social tourism over time, and the important socioeconomic implications of its current practice in the aftermath of the Greek financial crisis, and in the midst of the refugee crisis in Europe, and the Covid-19 pandemic.

Publication Type

Book chapter.

<337>

Accession Number

20210094188

Author

Wang ZhongLei; Yang LiYan

Title

Chinese herbal medicine: fighting SARS-CoV-2 infection on all fronts.

Source

Journal of Ethnopharmacology; 2021. 270. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Ethnopharmacological relevance: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection causes coronavirus disease 2019 (COVID-19), a highly pathogenic virus that has spread rapidly across the entire world. There is a critical need to develop safe and effective drugs, especially broad-spectrum antiviral and organ protection agents in order to treat and prevent this dangerous disease. It is possible that Chinese herbal medicine may play an essential role in the treatment of patients with SARS-CoV-2 infection. Aim of the review: We aim to review the use of Chinese herbal medicine in the treatment of COVID-19 both in vitro and in clinical practice. Our goal was to provide a better understanding of the potential therapeutic effects of Chinese herbal medicine and to establish a "Chinese protocol" for the treatment of COVID-19. Materials and methods: We systematically reviewed published research relating to traditional Chinese herbal medicines and the treatment of SARS-CoV-2 from inception to the 6th January 2021 by screening a range of digital databases (Web of Science, bioRxiv, medRxiv, China National Knowledge Infrastructure, X-MOL, Wanfang Data, Google Scholar, PubMed, Elsevier, and other resources) and public platforms relating to the management of clinical trials. We included the active ingredients of Chinese herbal medicines, monomer preparations, crude extracts, and formulas for the treatment of COVID-19. Results: In mainland China, a range of Chinese herbal medicines have been recognized as very promising anti-SARS-CoV-2 agents, including active ingredients (quercetagenin, osajin, tetrandrine, proscillaridin A, and dihydromyricetin), monomer preparations (xiyanping injection, matrine-sodium chloride injection, diammonium glycyrrhizinate enteric-coated capsules, and sodium aescinate injection), crude extracts (Scutellariae Radix extract and garlic essential oil), and formulas (Qingfei Paidu decoction, Lianhuaqingwen capsules, and Pudilan Xiaoyan oral liquid). All these agents have potential activity against SARS-CoV-2 and have attracted significant attention due to their activities both in vitro and in clinical practice. Conclusions: As a key component of the COVID-19 treatment regimen, Chinese herbal medicines have played an irreplaceable role in the treatment of SARS-CoV-2 infection. The "Chinese protocol" has already demonstrated clear clinical importance. The use of Chinese herbal medicines that are capable of inhibiting SARS-Cov-2 infection may help to address this immediate unmet clinical need and may be attractive to other countries that are also seeking new options for effective COVID-19 treatment. Our analyses suggest that countries outside of China should also consider protocols involving Chinese herbal medicines combat this fast-spreading viral infection.

Publication Type

Journal article.

<338>

Accession Number

20210094138

Author

Li YuAn; Chu FuHao; Li Ping; Johnson, N.; Li Tao; Wang Yan; An RongXian; Wu DanTong; Chen JieNa; Su ZeQi; Gu XiaoHong; Ding Xia

Title

Potential effect of Moxing Shigan decoction against coronavirus disease 2019 (COVID-19) revealed by network pharmacology and experimental verification.

Source

Journal of Ethnopharmacology; 2021. 271. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Ethnopharmacological relevance: Since the occurrence of coronavirus disease 2019 (COVID-19) in Wuhan, China in December 2019, COVID-19 has been quickly spreading out to other provinces and countries. Considering that traditional Chinese medicine (TCM) played an important role during outbreak of SARS and H1N1, finding potential alternative approaches for COVID-19 treatment is necessary before vaccines are developed. According to previous studies, Moxing Shigan decoction (MXSGD) present a prominent antiviral effect and is often used to treat pulmonary diseases. Furthermore, we collected 115 open prescriptions for COVID-19 therapy from the National Health Commission, State Administration of TCM and other organizations, MXSGD was identified as the key formula. However, the underlying molecular mechanism of MXSGD against COVID-19 is still unknown. Aim of the study: The present study aimed to evaluate the therapeutic mechanism of MXSGD against COVID-19 by network pharmacology and in vitro experiment verification, and screen the potential components which could bind to key targets of COVID-19 via molecular docking method. Materials and methods: Multiple open-source databases related to TCM or compounds were employed to screen active ingredients and potential targets of MXSGD. Network pharmacology analysis methods were used to initially predict the antiviral and anti-inflammatory effects of MXSGD against COVID-19. IL-6 induced rat lung epithelial type II cells (RLE-6TN) damage was established to explore the anti-inflammatory damage activity of MXSGD. After MXSGD intervention, the expression level of related proteins and their phosphorylation in the IL-6 mediated JAK-STAT signaling pathway were detected by Western blot. Molecular docking technique was used to further identify the potential substances which could bind to three key targets (ACE2, Mpro and RdRp) of COVID-19. Results: In this study, 105 active ingredients and 1025 candidate targets were selected for MXSGD, 83 overlapping targets related to MXSGD and COVID-19 were identified, and the protein-protein interaction (PPI) network of MXSGD against COVID-19 was constructed. According to the results of biological enrichment analysis, 63 significant KEGG pathways were enriched, and most of them were related to signal transduction, immune system and virus infection. Furthermore, according the relationship between signal pathways, we confirmed MXSGD could effectively inhibit IL-6 mediated JAK-STAT signal pathway related protein expression level, decreased the protein expression levels of p-JAK2, p-STAT3, Bax and Caspase 3, and increased the protein expression level of Bcl-2, thereby inhibiting RLE-6TN cells damage. In addition, according to the LibDock scores screening results, the components with strong potential affinity (Top 10)

with ACE2, Mpro and RdRp are mainly from glycyrrhiza uralensis (Chinese name: Gancao) and semen armeniacae amarum (Chinese name: Kuxingren). Among them, amygdalin was selected as the optimal candidate component bind to all three key targets, and euchrenone, glycyrrhizin, and glycyrol also exhibited superior affinity interactions with ACE2, Mpro and RdRp, respectively. Conclusion: This work explained the positive characteristics of multi-component, multi-target, and multi-approach intervention with MXSGD in combating COVID-19, and preliminary revealed the antiviral and anti-inflammatory pharmacodynamic substances and mechanism of MXSGD, which might provide insights into the vital role of TCM in the prevention and treatment of COVID-19.

Publication Type

Journal article.

<339>

Accession Number

20210093945

Author

Smreczak, M.; Orłowska, A.

Title

SARS-CoV-2 in animals: natural and experimental infections. [Polish]

Source

Medycyna Weterynaryjna; 2021. 77(4):167-175. 31 ref.

Publisher

Polskie Towarzystwo Nauk Weterynaryjnych

Location of Publisher

Lublin

Country of Publication

Poland

Abstract

COVID 19 is the first pandemic of the 21st century caused by the SARS-CoV-2 virus belonging to the Coronaviridae family. The current pandemic has caused an enormous public health threat leading to the death of thousands of infected people. Reports of positive SARS-CoV-2 results in domestic, farmed and wildlife animals have led to concern among animal owners that animals could spread the virus to humans. The aim of this paper is to summarize information on natural and experimental infections with SARS-CoV-2 in animals. The virus can cross the species barrier, but it is usually transmitted from humans to animals. There is no unquestionable evidence of virus transmission between different animal species or from animals to humans. Experimental studies on the susceptibility of particular animal species to SARS-CoV-2 infection have so far shown different degrees of susceptibility to infection in cats, dogs, ferrets, hamsters, fruit bats, raccoon dogs, and primates. Pigs and poultry, on the other hand, were resistant to infection.

There is still a great need to improve the knowledge of SARS-CoV-2 infections in animals, the associated risks and the potential role of animals in the ongoing COVID-19 pandemic.

Publication Type

Journal article.

<340>

Accession Number

20210091693

Author

Hoffman, C. L.

Title

The experience of teleworking with dogs and cats in the United States during COVID-19.

Source

Animals; 2021. 11(2). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In Spring of 2020, the novel coronavirus (SAR-CoV-2) prompted an unprecedented number of individuals across the United States to begin working from home. Prior research has identified both positive and negative impacts of teleworking on employee well-being, and this study built on that research to explore perceptions regarding how companion animals factor into the teleworking experience. Individuals who had experience working from home and from their employer's office completed an online survey about those experiences. Participants reported spending more quality time with their companion animals and family members when they worked from home. Furthermore, when working from home, individuals with dogs were more likely than those without dogs to report they socialized with other people, got a healthy amount of physical activity, and took at least one 15-min walk during the workday. Some participants, particularly those in households containing both dogs and cats, indicated that their pets created distractions during the workday. Future studies can build on this research by investigating whether the findings persist once the novel coronavirus is no longer a threat, and by paying close attention to the characteristics of pets, owners, and household dynamics that may influence the effects of pet ownership on the teleworking experience.

Publication Type

Journal article.

<341>

Accession Number

20210090899

Author

Pol, A. C. van de; Boeijen, J. A.; Venekamp, R. P.; Platteel, T.; Damoiseaux, R. A. M. J.; Kortekaas, M. F.; Velden, A. W. van der

Title

Impact of the COVID-19 pandemic on antibiotic prescribing for common infections in the Netherlands: a primary care-based observational cohort study.

Source

Antibiotics; 2021. 10(2). 17 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In 2020, the COVID-19 pandemic brought dramatic changes in the delivery of primary health care across the world, presumably changing the number of consultations for infectious diseases and antibiotic use. We aimed to assess the impact of the pandemic on infections and antibiotic prescribing in Dutch primary care. All patients included in the routine health care database of the Julius General Practitioners' Network were followed from March through May 2019 (n = 389,708) and March through May 2020 (n = 405,688). We extracted data on consultations for respiratory/ear, urinary tract, gastrointestinal and skin infections using the International Classification of Primary Care (ICPC) codes. These consultations were combined in disease episodes and linked to antibiotic prescriptions. The numbers of infectious disease episodes (total and those treated with antibiotics), complications, and antibiotic prescription rates (i.e., proportion of episodes treated with antibiotics) were calculated and compared between the study periods in 2019 and 2020. Fewer episodes were observed during the pandemic months than in the same months in 2019 for both the four infectious disease entities and complications such as pneumonia, mastoiditis and pyelonephritis. The largest decline was seen for gastrointestinal infections (relative risk (RR), 0.54; confidence interval (CI), 0.51 to 0.58) and skin infections (RR, 0.71; CI, 0.67 to 0.75). The number of episodes treated with antibiotics declined as well, with the largest decrease seen for respiratory/ear infections (RR, 0.54; CI, 0.52 to 0.58). The antibiotic prescription rate for respiratory/ear infections declined from 21% to 13% (difference -8.0% (CI, -8.8 to -7.2)), yet the prescription rates for other infectious disease entities remained similar or increased slightly. The decreases in primary care infectious disease episodes and antibiotic use were most pronounced in weeks 15-19, mid-COVID-19 wave, after an initial peak in respiratory/ear infection presentation in week 11, the first week of lock-down. In conclusion, our findings indicate that the COVID-19

pandemic has had profound effects on the presentation of infectious disease episodes and antibiotic use in primary care in the Netherlands. Consequently, the number of infectious disease episodes treated with antibiotics decreased. We found no evidence of an increase in complications.

Publication Type

Journal article.

<342>

Accession Number

20210090046

Author

Esteves, N. S.; Brito, M. A. de; Sobarzo Soto, D. A.; Muller, V. T.; Aedo-Munoz, E.; Brito, C. J.; Miarka, B.

Title

Effects of the COVID 19 pandemic on the mental health of professional soccer teams: epidemiological factors associated with state and trait anxiety.

Source

Journal of Physical Education and Sport; 2020. 20(Suppl. 5):3038-3045. 22 ref.

Publisher

University of Pitesti

Location of Publisher

Arges

Country of Publication

Romania

Abstract

This study aims to verify associated factors with trait and state anxiety in professional soccer teams during the COVID-19 epidemic. The sample was composed of 529 athletes, coaches, and professional soccer teams' physical trainers during the COVID-19 epidemic. From this amount, 214 were classified with trait-anxiety, and 315 were classified with state-anxiety using the State-Trait Anxiety Inventory (STAI). This study is an epidemiological and cross-sectional study. We applied an observational method, and we performed a remote measurement. The measurement was made via online questionnaires in male and female individuals working on soccer teams (soccer professionals or athletes) who could be affected by anxiety during social isolation in the COVID-19 epidemic. Each questionnaire was composed of sociodemographic questions, self-perceived performance, and State-Trait Anxiety Inventory (STAI). Descriptive data are presented as percentage/absolute frequency. Factor analysis was used to reduce many variables into fewer factors of each anxiety group (state and trait) to verify which variables are associated with the COVID-19 pandemic anxiety state, p.05. Factor analysis of the trait anxiety group indicated a significant correlation (p 0001). The trait anxiety group's components correlated 0.43 and 0.84, while the state anxiety demonstrated a correlation between 0.52 and 0.996. The present results highlight the importance of

cognitive behavior therapy for professional soccer teams. Its core is cognitive restructuring using the ABC model (antecedents-behavior-consequences). Mental errors and maladaptive behaviors are identified and worked upon considering sociodemographic factors such as gender and schooling levels.

Publication Type

Journal article.

<343>

Accession Number

20210088936

Author

Yang Liu; Alamgir, M.; Yin XiaoXu; Wang Qing; Cao JingJiang; Wang JianXiu; Liu Han; Li Yan; Tao Juan

Title

Changes in compliance and knowledge of infection prevention and control practices following the COVID-19 outbreak: a retrospective study of 197 nonfrontline healthcare workers.

Source

Dermatologic Therapy; 2020. 34(1). 6 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

This article conducted a survey to investigate if HCWs were sufficiently knowledgeable about IPC practices and adequately trained in emergency pandemic response. In April 2020, 236 self-administered questionnaires were distributed to eight hospitals designated for managing COVID-19 patients in Hubei Province, China. The questionnaire surveyed the knowledge of HCWs, training frequency, and adherence to IPC policies under different settings: preoutbreak, postoutbreak/prefrontline deployment, and postfrontline deployment. Individual scores were recorded on a scale of 1 to 10, with 10 indicating superior knowledge and compliance. In response to the outbreak, healthcare facilities in China are actively conducting IPC trainings of staff to ensure robust compliance with policies, therefore contributing to the enhancement of postoutbreak IPC awareness. Our study suggested that nonfrontline HCWs' knowledge regarding proper use of PPE and protocols for quarantine and isolation zones need further improvement. In the future, nonfrontline HCWs should be trained adequately in relevant knowledge and skills,6 such that they may safely engage in clinical duties during current and future pandemics. Though the retrospective and subjective nature of our study are its limitations, we learned some important insights. Practical experience at the frontlines resulted in significant improvements in knowledge regarding prevention

strategies, highlighting the benefit of clinical practice in raising awareness. Furthermore, HCWs reported practical experience to be of great benefit in improving compliance; lending support to the role of field training in the preparedness of HCWs' emergency response to pandemic.

Publication Type

Correspondence.

<344>

Accession Number

20210085662

Author

Drezner, J. A.; Drezner, S. M.; Magner, K. N.; Ayala, J. T.

Title

COVID-19 surveillance in youth soccer during small group training: a safe return to sports activity.

Source

Sports Health; 2021. 13(1):15-17. 6 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Publication Type

Journal article.

<345>

Accession Number

20210085451

Author

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Meek, C. L.; Lindsay, R. S.; Scott, E. M.; Aiken, C. E.; Myers, J.; Reynolds, R. M.; Simmons, D.; Yamamoto, J. M.; McCance, D. R.; Murphy, H. R.

Title

Approaches to screening for hyperglycaemia in pregnant women during and after the COVID-19 pandemic.

Source

Diabetic Medicine; 2021. 38(1). 31 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Aim To evaluate the diagnostic and prognostic performance of alternative diagnostic strategies to oral glucose tolerance tests, including random plasma glucose, fasting plasma glucose and HbA1c, during the COVID-19 pandemic.; **Methods** Retrospective service data (Cambridge, UK; 17 736 consecutive singleton pregnancies, 2004-2008; 826 consecutive gestational diabetes pregnancies, 2014-2019) and 361 women with 1 gestational diabetes risk factor (OPHELIA prospective observational study, UK) were included. Pregnancy outcomes included gestational diabetes (National Institute of Health and Clinical Excellence or International Association of Diabetes and Pregnancy Study Groups criteria), diabetes in pregnancy (WHO criteria), Caesarean section, large-for-gestational age infant, neonatal hypoglycaemia and neonatal intensive care unit admission. Receiver-operating characteristic curves and unadjusted logistic regression were used to compare random plasma glucose, fasting plasma glucose and HbA1c performance.; **Results** Gestational diabetes diagnosis was significantly associated with random plasma glucose at 12 weeks [area under the receiver-operating characteristic curve for both criteria 0.81 (95% CI 0.79-0.83)], fasting plasma glucose [National Institute of Health and Clinical Excellence: area under the receiver-operating characteristic curve 0.75 (95% CI 0.65-0.85); International Association of Diabetes and Pregnancy Study Groups: area under the receiver-operating characteristic curve 0.92 (95% CI 0.85-0.98)] and HbA1c at 28 weeks' gestation [National Institute of Health and Clinical Excellence: 0.83 (95% CI 0.75-0.90); International Association of Diabetes and Pregnancy Study Groups: 0.84 (95% CI 0.77-0.91)]. Each measure predicts some, but not all, pregnancy outcomes studied. At 12 weeks, ~5% of women would be identified using random plasma glucose 8.5 mmol/l (sensitivity 42%; specificity 96%) and at 28 weeks using HbA1c 39 mmol/mol (sensitivity 26%; specificity 96%) or fasting plasma glucose 5.2-5.4 mmol/l (sensitivity 18-41%; specificity 97-98%).; **Conclusions** Random plasma glucose at 12 weeks, and fasting plasma glucose or HbA1c at 28 weeks identify women with hyperglycaemia at risk of suboptimal pregnancy outcomes. These opportunistic laboratory tests perform adequately for risk stratification when oral glucose tolerance testing is not available.

Publication Type

Journal article.

<346>

Accession Number

20210083002

Author

Shanmugaraj Gowrishankar; Sankar Muthumanickam; Arumugam Kamaladevi; Chandrasekar Karthika; Ravi Jothi; Pandi Boomi; Dharuman Maniazhagu; Pandian, S. K.

Title

Promising phytochemicals of traditional Indian herbal steam inhalation therapy to combat COVID-19 - an in silico study. (Special Issue: COVID-19 and treatments: particular emphasis on potential toxic effects.)

Source

Food and Chemical Toxicology; 2021. 148. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: COVID-19, the presently prevailing global public health emergency has culminated in international instability in economy. This unprecedented pandemic outbreak pressingly necessitated the trans-disciplinary approach in developing novel/new anti-COVID-19 drugs especially, small molecule inhibitors targeting the seminal proteins of viral etiological agent, SARS-CoV-2. Methods: Based on the traditional medicinal knowledge, we made an attempt through molecular docking analysis to explore the phytochemical constituents of three most commonly used Indian herbs in 'steam inhalation therapy' against well recognized viral receptor proteins. Results: A total of 57 phytochemicals were scrutinized virtually against four structural protein targets of SARS-CoV-2 viz. 3CLpro, ACE-2, spike glycoprotein and RdRp. Providentially, two bioactives from each of the three plants i.e. apigenin-o-7-glucuronide and ellagic acid from Eucalyptus globulus; eudesmol and viridiflorene from Vitex negundo and; vasicolinone and anisotine from Justicia adhatoda were identified to be the best hit lead molecules based on interaction energies, conventional hydrogen bonding numbers and other non-covalent interactions. On comparison with the known SARS-CoV-2 protease inhibitor -lopinavir and RdRp inhibitor -remdesivir, apigenin-o-7-glucuronide was found to be a phenomenal inhibitor of both protease and polymerase, as it strongly interacts with their active sites and exhibited remarkably high binding affinity. Furthermore, in silico drug-likeness and ADMET prediction analyses clearly evidenced the usability of the identified bioactives to develop as drug against COVID-19. Conclusion: Overall, the data of the present study exemplifies that the phytochemicals from selected traditional herbs having significance in steam inhalation therapy would be promising in combating COVID-19.

Publication Type

Journal article.

<347>

Accession Number

20210079372

Author

Guo LiPeng; Liu SiXu; Yang Qin; Liu HongYang; Xu LuLu; Hao YuHua; Zhang XiaoQing

Title

Effect of thymoquinone on acute kidney injury induced by sepsis in balb/c mice.

Source

BioMed Research International; 2020. 2020(1594726). 36 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Acute kidney injury (AKI) is a common complication of sepsis and has also been observed in some patients suffering from the new coronavirus pneumonia COVID-19, which is currently a major global concern. Thymoquinone (TQ) is one of the most active ingredients in *Nigella sativa* seeds. It has a variety of beneficial properties including anti-inflammatory and antioxidative activities. Here, we investigated the possible protective effects of TQ against kidney damage in septic BALB/c mice. Eight-week-old male BALB/c mice were divided into four groups: control, TQ, cecal ligation and puncture (CLP), and TQ+CLP. CLP was performed after 2 weeks of TQ gavage. After 48 h, we measured the histopathological alterations in the kidney tissue and the serum levels of creatinine (CRE) and blood urea nitrogen (BUN). We also evaluated pyroptosis (NLRP3, caspase-1), apoptosis (caspase-3, caspase-8), proinflammatory (TNF- α , IL-1 β , and IL-6)-related protein and gene expression levels. Our results demonstrated that TQ inhibited CLP-induced increased serum CRE and BUN levels. It also significantly inhibited the high levels of NLRP3, caspase-1, caspase-3, caspase-8, TNF- α , IL-1 β , and IL-6 induced by CLP. Furthermore, NF- κ B protein level was significantly decreased in the TQ+CLP group than in the CLP group. Together, our results indicate that TQ may be a potential therapeutic agent for sepsis-induced AKI.

Publication Type

Journal article.

<348>

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Accession Number

20210076552

Author

Ivasciuc, I. S.

Title

Augmented reality and facial recognition technologies. Building bridges between the hospitality industry and tourists during pandemic.

Source

Bulletin of the Transilvania University of Brasov, Series V - Economic Sciences; 2020. 13(2):75-92. 49 ref.

Publisher

Transilvania University Press

Location of Publisher

Brasov

Country of Publication

Romania

Abstract

The huge crisis that the world is facing today, COVID-19 pandemic, reshaped the business-as-usual way of working and planning. The purpose of this research is to identify how emerging new technologies, such as augmented reality and facial recognition, used in AR Media application (FutureSocialWeb Project) can contribute to increasing the competitiveness of tourism companies in the context of COVID. Secondary research methodology was adopted while data were collected through a comprehensive literature review. This review utilized journals, newspaper articles, United Nations World Tourism Organization statistics, up to date governmental data, and website materials on COVID-19 impact over tourism industry. In addition, we used literature review concerning augmented reality and facial recognition technologies to emphasize that the future of tourism around the world is already highly depend on how we forward innovation in the industry. Further on, the article stresses several development opportunities for the AR Media FutureWeb application, to better respond to hospitality industry digitization needs. The results of the study were also approached from a managerial point of view.

Publication Type

Journal article.

<349>

Accession Number

20210074609

Author

Mahdy, M. A. A.; Younis, W.; Ewaida, Z.

Title

An overview of SARS-CoV-2 and animal infection.

Source

Frontiers in Veterinary Science; 2020. 6(December). 120 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

A novel coronavirus has been reported as the causative pathogen of the Coronavirus disease 2019 (COVID-19) outbreak in Wuhan city, China in December 2019. Due to the rapid spread of the virus worldwide, it has been announced as a pandemic by the World Health Organization (WHO). Hospitalized patients in Wuhan were associated with the Huanan seafood wholesale market where live animals, such as poultry, bats, snakes, frogs, rabbits, marmots, and hedgehogs are sold in that market which suggests a possible zoonotic infection. It was suggested that bat is the natural host of SARS-CoV-2, but the intermediate host is still unclear. It is essential to identify the potential intermediate host to interrupt the transmission chain of the virus. Pangolin is a highly suspected candidate as an intermediate host for SARS-CoV-2. Recently, SARS-CoV-2 infection has been reported in cats, dogs, tigers, and lions. More recently SARS-CoV-2 infection affected minks severely and zoonotic transfer with a variant SARS-CoV-2 strain evidenced in Denmark, Netherlands, USA, and Spain suggesting animal-to-human and animal-to-animal transmission within mink farms. Furthermore, experimental studies documented the susceptibility of different animal species to SARS-CoV-2, such as mice, golden hamsters, cats, ferrets, non-human primates, and treeshrews. It is also essential to know the possibility of infection for other animal species. This short review aims to provide an overview on the relation between severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection and animals.

Publication Type

Journal article.

<350>

Accession Number

20210063421

Author

Anacleto, A.; Araujo Bornancin, A. P. de; Mendes, S. H. C.; Scheuer, L.

Title

Between flowers and fears: the new coronavirus pandemic (COVID-19) and the flower retail trade.

Source

Ornamental Horticulture; 2021. 27(1):26-32. 16 ref.

Publisher

Sociedade Brasileira de Floricultura e Plantas Ornamentais

Location of Publisher

Campinas

Country of Publication

Brazil

Abstract

In order to support a better understanding of the current scenario of the crisis installed by the New Coronavirus (SARS-CoV-2: COVID-19) in the flower retail trade, it is presented a descriptive exploratory research carried out between April and May 2020 with 30 flower shop managers located in the Southern region of Brazil. The results showed that the most significant impacts were the drop in the number of customers, which reduced the company's income when compared to the values sold before the pandemic, and that the pandemic scenario generated a 45.3% reduction in financial transactions on average. Among the flower shops in this survey, 70% of flower shops were closed for an average of 21.4 days, when they were reopened with restrictions on attendance related to hours or the number of people inside the stores. The e-commerce and social media were the main tools to confront this situation, and the most used Apps were WhatsApp and Instagram. But other actions such as discounting on purchases by quantity, free delivery and marketing in the surrounding were also registered. Among the possible complementary actions in order to face this crisis and which can have positive effects, it is highlighted the online courses directed to the trade of gardening kits, the adoption of the Just In Time (JIT) methodology that can result in partnerships with local producers in order to reduce inventory costs and purchase prices, and the organization of collective purchasing groups to bargain prices with wholesalers, as well as the reduction of transportation and operational costs at Veiling in Holambra.

Publication Type

Journal article.

<351>

Accession Number

20210061929

Author

Itani, O. S.; Hollebeek, L. D.

Title

Light at the end of the tunnel: visitors' virtual reality (versus in-person) attraction site tour-related behavioral intentions during and post-COVID-19.

Source

Tourism Management; 2021. 84.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Consumer behavior is changing as a result of the COVID-19 pandemic, thus compelling attraction sites to find new ways of offering safe tours to visitors. Based on protection motivation theory, we develop and test a model that examines key drivers of visitors' COVID-19-induced social distancing behavior and its effect on their intent to use virtual reality-based (vs. in-person) attraction site tours during and post-COVID-19. Our analyses demonstrate that visitor-perceived threat severity, response efficacy, and self-efficacy raise social distancing behavior. In turn, social distancing increases (decreases) visitors' intent to use virtual reality (in-person) tours during the pandemic. We find social distancing to boost visitors' demand for advanced virtual tours and to raise their advocacy intentions. Our results also reveal that social distancing has no effect on potential visitors' intent to use virtual reality vs. in-person tours post-the pandemic. We conclude by discussing vital implications that stem from our analyses.

Publication Type

Journal article.

<352>

Accession Number

20210059088

Author

Loewenson, R.; D'Ambruoso, L.; Duong Minh Duc; Hjermann, R.; Lichuma, W.; Mason, E.; Nixon, E.; Rudolph, N.; Villar, E.

Title

Equitable recovery from COVID-19: bring global commitments to community level.

Source

BMJ Global Health; 2021. 6(1). 21 ref.

Publisher

BMJ Publishing Group

Location of Publisher

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London

Country of Publication

UK

Abstract

High level speakers at the December 2020 United Nations General Assembly pointed to the growing inequalities and stress to health, social, economic and democratic systems caused by COVID-19, calling for a range of collective interest driven responses and measures for a sustainable recovery. The pandemic, lockdown and other responses, along with underfunded, poorly prepared and overstretched public sector social and health systems in many countries worsened many dimensions of family, women's, child and adolescent health and well-being that were already facing deficits, generating a rising health and social debt in communities, the true scale and long-term consequences of which are as yet unknown, especially for the most marginalised in society. Rather than 'getting back to normal', recovery and 'reset' demands change to tackle the inequalities, conditions, services, socioeconomic and environmental policies that made people susceptible and vulnerable to COVID-19. While economic recovery should not replicate the features of the global economy that are generating pandemic and other crises, for global aspirations to translate into benefit for communities, families, young people and children, an equitable recovery should include significant investment in: (1) universal, public sector, primary health care-oriented health services; (2) redistributive, universal rights-based and life course based social protection; and (3) people, especially in early childhood and in youth, as drivers of change. Who designs the 'reset' influences the change, and within countries and internationally, opportunities must be provided for meaningful public engagement as a critical driver of an equitable recovery.

Publication Type

Journal article.

<353>

Accession Number

20210058115

Author

Stanimirovic', D.; Matetic, V.

Title

Can the COVID-19 pandemic boost the global adoption and usage of eHealth solutions?

Source

Journal of Global Health; 2020. 10(2). 10 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

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Country of Publication

UK

Abstract

Considering the events since the publication of the first strategic document involving healthcare digitalisation in 2005, the implementation of eHealth solutions from 2016 onwards represents an important milestone in the history of the Slovenian healthcare system. It seems that the Covid-19 epidemic has done more to raise awareness and usage of eHealth solutions in a very short period of time than any other initiative before, be it of a political, legislative, administrative, or financial character. It seems that the COVID-19 epidemic has done more to raise awareness and usage of eHealth solutions in a very short period of time than any other initiative before, be it of a political, legislative, administrative, or financial character. Given this alarming fact, it should be thoroughly examined and discussed what we did wrong, or what we did not do right, in having failed to intensify the use of eHealth solutions and convince users of the manifold benefits offered by digital solutions in the pre-pandemic era. The reasons for this undoubtedly go back to the lack of political will, insufficient stakeholder commitment, the absence of clearly defined sectoral policies and compelling goals for users with different motivating rationales, and a lack of training and education of users (health care professionals and patients). In addition to the outlined factors, the wide-ranging advocacy of eHealth and digitalisation, which is one of the fundamental principles in promoting national public health initiatives, has certainly failed.

Publication Type

Journal article.

<354>

Accession Number

20210058062

Author

Chu, K.; Reddy, C. L.; Makasa, E.

Title

The collateral damage of the COVID-19 pandemic on surgical health care in sub-Saharan Africa.

Source

Journal of Global Health; 2020. 10(2). 19 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Surgical conditions constitute a significant portion of the burden of disease in Sub-Saharan Africa (SSA) and a lack of access to safe, affordable, and timely surgical care is a significant driver of avoidable morbidity and mortality. The preparedness response to the COVID-19 pandemic has increased the barriers to access emergency and essential surgical care (EESC) in SSA, where such care was already inaccessible to most, or delivered with suboptimal quality. Despite a huge and evolving unmet surgical need in SSA-and the indispensable role of surgery to attain SSA health targets-surgical health care services in SSA are amongst the most inadequate globally in access and quality. The collateral damage of COVID-19 pandemic on surgical health care in SSA will compound an already dire state and are likely to produce enduring consequences for population health, the economy and broader sustainable development; these consequences will be difficult to reverse. The additional barriers to access to care for EESC could result in a tsunami of operative needs in the coming months and increases in avoidable morbidity and mortality. Efforts to increase the surgical workforce have been diminished through limitations in training. Funded research through international collaborative networks to strengthen fragile surgical health care systems and political prioritisation have also been interrupted.

Publication Type

Journal article.

<355>

Accession Number

20210058061

Author

Amita Sudhir; Nachiket Mor

Title

A primary care alternative to a hospital-based approach to COVID-19 in India.

Source

Journal of Global Health; 2020. 10(2). 10 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Oxygen therapy in primary care settings holds the key to an effective COVID-19 response in India. A primary care focused COVID-19 response has the potential to strengthen overall long-term health systems

capacity in developing countries. Oxygen concentrators are portable, and once the need for using them for COVID patients has passed, they can be repurposed to ambulances, clinics, and even home health settings for a host of other diseases causing hypoxia. If oxygen cylinders are used, maximizing that supply chain will continue to be of benefit for the treatment of respiratory illnesses for years to come. If the pandemic drags on for months to years, oxygen centers could also become screening points for other diseases likely to be neglected during the pandemic, such as tuberculosis, or foci for immunization campaigns for ongoing endemic or epidemic illnesses beyond COVID.

Publication Type

Journal article.

<356>

Accession Number

20210058060

Author

Zhu DongShan; Mishra, S. R.; Virani, S. S.

Title

A way to track governments' response and people's mobility changes in response to COVID-19 pandemic.

Source

Journal of Global Health; 2020. 10(2). 9 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Governments around the globe have been taking a wide range of physical distancing measures in response to the COVID-19 outbreak, such as school closure, workplace closure, cancellations of mass gatherings and stay at home orders. However, it's hard to compare the measures implemented in different countries directly. First, a same measure might be implemented in different countries with different degree and intensity. Also, citizens' acceptability of the measure differs across countries. Trajectory of Stringency Index reflects the speed and strength of a country's response, while trajectories of mobility changes reflect citizens' degree of compliance to the governments' recommendations. Combining the Stringency Index and mobility reports is a good way to compare the physical measures implemented in different countries and their effectiveness on curbing COVID-19 spread.

Publication Type

Journal article.

<357>

Accession Number

20210058058

Author

Ozaki, A.; Sawano, T.; Saito, H.; Tanimoto, T.; Tsubokura, M.

Title

Will initial consultation patterns among undiagnosed cancer patients be the same after this COVID-19 pandemic? Experiences from the 2011 triple disaster in Fukushima, Japan.

Source

Journal of Global Health; 2020. 10(2). 9 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Prevailing discussions with regard to cancer in the COVID-19 pandemic have primarily focused on patients already diagnosed with cancer and short-term health effects among these populations, but arguments on undiagnosed cancer patients (ie, before cancer diagnosis) and/or their long-term health consequences are similarly important. When considering undiagnosed cancer patients during the COVID-19 pandemic, we believe that our experiences in Fukushima would help further develop our discussions. We have been involved in care and research on cancer patients in Fukushima following the 2011 triple disaster (earthquake, tsunami, and nuclear accident) of the Great East Japan Earthquake, witnessing how long-term health effects have developed since the onset of this complex disaster. Arguably, the radiation disaster and the pandemic would indeed be seemingly different; however, COVID-19 is caused by an intangible pathogen with relatively unknown effects, which has some similarities with radioactive substances in their influence on human behavior as both would make people isolate themselves from others.

Publication Type

Journal article.

<358>

Accession Number

20210058050

Author

Abhimanyu Vasudeva; Patel, T. K.

Title

Alcohol consumption: an important epidemiological factor in COVID-19?

Source

Journal of Global Health; 2020. 10(2). 12 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Alcohol-induced changes in pulmonary defense could increase the risk of acquiring SARS-Cov-2 infections and associated ARDS. Alcohol consumption should be explored as a risk factor for COVID-19 disease and its complications. Changes in drinking habits may have profound implications for its prevention. We hypothesize that consumption of alcohol would lead to an increased risk of developing SARS-C0v-2 infections as well as severe illness.

Publication Type

Journal article.

<359>

Accession Number

20210058047

Author

Chan Lai [Chan, L. G.]; Kuan, B.

Title

Mental health and holistic care of migrant workers in Singapore during the COVID-19 pandemic.

Source

Journal of Global Health; 2020. 10(2). 10 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

This paper describes a collaborative model between a Non-Governmental Organization and other governmental and healthcare stakeholders in addressing mental health and holistic care of migrant workers, as well as how the model evolved as more real-time experience about this population's needs and responses were gained.

Publication Type

Journal article.

<360>

Accession Number

20210054703

Author

Swechya Neupane

Title

Fighting the COVID-19 pandemic: an ophthalmologist's experience in an intensive care unit at the all India Institute of Medical Sciences.

Source

Indian Journal of Ophthalmology; 2020. 68(7):1482-1482. 2 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The aim of the study was to narrate a ophthalmologist's experience during the COVID-19 pandemic. COVID-19 is a contagious acute respiratory infectious disease that has emerged as a pandemic affecting over 83,000 people in India and over four and a half million people worldwide today. All India Institute of Medical Sciences (AIIMS), New Delhi, one of the best medical institutions in India, had anticipated significant rise in number of cases in future and set up a separate Intensive Care Unit (ICU) for COVID-19 positive patients with arrangement of best facilities for patient care. AIIMS had declared 25 percent of the resident doctors from each department to be trained and deployed for COVID-19-affected patients after a training session.

Publication Type

Correspondence.

<361>

Accession Number

20210051728

Author

He Jie; Mao Yan; Morrison, A. M.; Coca-Stefaniak, J. A.

Title

On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19.

Source

International Journal of Contemporary Hospitality Management; 2021. 33(1):346-366.

Publisher

Emerald Publishing

Location of Publisher

Bingley

Country of Publication

UK

Abstract

Purpose: This paper aims to investigate the influence of socially- responsible human resource management (SRHRM) on employee fears of external threats during the COVID-19 outbreak, based on social support and event system theories. COVID-19 caused sharp profit declines and bankruptcies of hotels, restaurants and travel agencies. In addition, employees faced threats to their health and job security. How to overcome employee anxieties and fears about the negative impacts of this crisis and promote psychological recovery is worthy of attention from researchers and practitioners. This research

investigated the impacts of SRHRM on employee fears through organizational trust, with the COVID-19 pandemic playing a moderating role between SRHRM and employee fears. Design/methodology/approach: The hypotheses were tested through multiple linear regression analysis based on a survey of 408 employees in hospitality and tourism firms in China. Qualitative data were also gathered through interviews with selected managers. Findings: The results showed that SRHRM had a negative influence on employee fears of external threats by enhancing trust in their organizations. In addition, the strength of the COVID-19 pandemic positively moderated the effect of SRHRM on employee fears. When the pandemic strength was more robust, the negative effects of SRHRM on employee fears were more significant. Research limitations/implications: This research illustrated the contribution of SRHRM in overcoming employee fears of external threats in the context of COVID-19. It shed light on the organizational contribution of SRHRM to hospitality and tourism employee psychological recovery during the crisis. Originality/value: This research explored strategic HRM by examining the effects of SRHRM on employee fears in the midst of a severe crisis, specifically COVID-19. The moderation effect of event strength and mediation effect of organizational trust were tested. It is of great value for hospitality and tourism firms to foster employee psychological recovery during a crisis such as COVID-19.

Publication Type

Journal article.

<362>

Accession Number

20210045365

Author

Jankelova, N.; Misun, J.

Title

Key competencies of agricultural managers in the acute stage of the COVID-19 crisis.

Source

Agriculture; 2021. 11(1). 79 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The acute phase of the COVID-19 crisis exacerbated the need for managerial skills of agricultural managers, provoked another wave of discussion on content of managerial competencies in times of crisis, and revealed a significant research gap. The main goal of our study is to identify the impact of

competencies of agricultural crisis managers on the performance of employees in the acute phase of the crisis, when the performance was influenced by their subjective perception and evaluation of their working conditions, satisfaction and safety. We used statistical mediation to examine the connections and deeper relationships between several variables. The hypothesis of dependence between competencies of crisis management and performance of employees, mediated by information sharing, teamwork and cognitive diversity, has been confirmed. Partial mediation has been identified, when only part of the effect is mediated by the mediator variables, however the substantial one. The remaining, smaller part is transmitted directly. Employees' performance in an acute crisis phase can be influenced by competent crisis management and enhance its effect through information sharing and teamwork support. The cognitive diversity of crisis management did not prove significant in our study. The emphasis is on consistency and the resulting sense of security and safety.

Publication Type

Journal article.

<363>

Accession Number

20210039894

Author

Coluccia, B.; Agnusdei, G. P.; Miglietta, P. P.; Leo, F. de

Title

Effects of COVID-19 on the Italian agri-food supply and value chains.

Source

Food Control; 2021. 123. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The spread of COVID-19 has not only led to many deaths but also to social and economic downturn globally. The study represents an exhaustive compilation of relevant macroeconomic data regarding the status of the agri-food sector from a demand side perspective and an overview of the food product producer and consumer prices after the shock. Its main purpose is to assess the resilience level of the agri-food sector to the coronavirus pandemic, analyzing its effect on commodity prices and focusing on the supply and value chain. The results highlight that fresh and perishable products, whose production or harvest took place during the first wave of COVID-19, have suffered price level effects, while storable

products have not registered significant impacts. This phenomenon is mainly due to the vulnerability of the harvest and production phases, which affected fresh and perishable products supply, and to the resilience of transports and logistics, which instead ensured the supply of storable products to the final consumer. Especially in case of future pandemic waves, the implications and information deriving from the present analysis could support researchers, policy makers and managers, serving as an assessment tool to build suitable strategies for the whole agri-food supply chain and thus ensure sector resilience during these unprecedented times.

Publication Type

Journal article.

<364>

Accession Number

20210036296

Author

Ornek, K.; Temel, E.; Asikgarip, N.; Kocamis, O.

Title

Localized retinal nerve fiber layer defect in patients with COVID-19.

Source

Arquivos Brasileiros de Oftalmologia; 2020. 83(6):562-563. 9 ref.

Publisher

Conselho Brasileiro de Oftalmologia

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

This article evaluated the effect of COVID-19 infection on the peripapillary retinal nerve fiber layer (pRNFL) using spectral-domain optical coherence tomography (SD-OCT). A total of 32 eyes from 32 patients with COVID-19 (Group 1) and 34 eyes from 34 healthy subjects (Group 2) were included. All patients in Group 1 were positive for COVID-19 following real-time reverse transcriptase-polymerase chain reaction from nasopharyngeal swabs. No significant difference in age and gender had been observed between both groups, while slit-lamp examination was normal for all cases. Accordingly, a significant difference in the inferonasal sector had been observed between both groups. The RNFL of the retina contains the non-myelinated axons of retinal ganglion cells that form the optic nerve. Depending on the physiological parameters of RNFL, localized defects are usually more frequent in the temporal inferior fundus region and temporal superior region. The study found a significant thinning in the inferonasal sector in patients with COVID-19. However, none of patients had coexisting retinopathy or optic nerve changes and a history of

optic neuropathy or glaucoma. The findings suggest that subclinical damage may occur in patients with COVID-19, which may be localised rather than diffuse axonal loss. To best of their knowledge, this has been the first study to compare pRNFL thickness between patients with COVID-19 and healthy controls. As such, localised RNFL defects that can be assessed by noninvasive SD-OCT imaging may be added to the retinal features of COVID-19.

Publication Type

Correspondence.

<365>

Accession Number

20210028009

Author

Sese, L.; Yann Nguyen; Leprieur, E. G.; Annesi-Maesano, I.; Cavalin, C.; Bouille, J. G. de; Demestier, L.; Dhote, R.; Tandjaoui-Lambiotte, Y.; Bauvois, A.; Pepin, M.; Curac, S.; Beaune, S.; Duchemann, B.; Nunes, H.

Title

Impact of socioeconomic status in patients hospitalised for COVID-19 in the Greater Paris area.

Source

European Respiratory Journal; 2020. 56(6). 16 ref.

Publisher

European Respiratory Society

Location of Publisher

Sheffield

Country of Publication

UK

Abstract

Individual precarity seems to be associated with the initial severity of COVID-19 in hospitalised patients under the age of 70 years. Low socioeconomic status may contribute to the excess mortality observed in the poorest district of Greater Paris. This article selected patients hospitalised for COVID-19 at Avicenne Academic Hospital, in SSD and at Beaujon and Ambroise Pare Hospitals, two academic hospitals located in the Hauts-de-Seine (HDS) district. HDS is a wealthy district of Greater Paris, with more hospital beds (56.7 versus 42.5 per 10,000 inhabitants) and intensive care unit (ICU) beds (429 versus 244) than SSD for an equivalent number of inhabitants (1.6 million). No predictive factors of initial severity were found in the overall population. In the subgroup of patients under 70 years of age (n=62), the predictive factors of severity were age, high EPICES score (p=0.014), being retired (p=0.027), and an absence of private insurance coverage (p=0.042). On multivariate analysis, age and EPICES score were independently associated to an increased risk of initial severity, with an odds ratio of 1.099 (95% CI 1.038-1.178; p=0.003), and 1.029 (95% CI 1.003-1.059; p=0.033) per EPICES score point, respectively. This is the first study to show

that precarity is associated with the initial severity of COVID-19 in hospitalised patients under 70 years old. Moreover, patients hospitalised in SSD, the poorest district in Greater Paris, were 10 years younger than patients hospitalised in the HDS district for the same distribution of initial severity.

Publication Type

Correspondence.

<366>

Accession Number

20210027752

Author

Mart, M. F.; Norfolk, S. G.; Flemmons, L. N.; Stokes, J. W.; Bacchetta, M. D.; Trindade, A. J.; Casey, J. D.; Semler, M. W.; Ely, E. W.; Noto, M. J.

Title

Pneumomediastinum in acute respiratory distress syndrome from COVID-19.

Source

American Journal of Respiratory and Critical Care Medicine; 2020. 203(2):237-238. 5 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

This case report describes the clinical course and management of five patients with pneumomediastinum of 92 critically ill, mechanically ventilated adults with ARDS from COVID-19 at our institution from 1 March 2020, through 31 August, 2020. No patient had pneumothorax or required tube thoracostomy at diagnosis, suggesting alveolar rupture occurred without disruption of visceral pleura. Pneumomediastinum developed between 24 hours before and 9 days after initiation of mechanical ventilation without evidence of tracheal injury or the use of recruitment maneuvers. Patients received low-Vt ventilation targeting plateau pressures <30 cm H₂O to minimize driving pressure, with sedation and/or paralysis used to reduce initial high respiratory effort and limit dyssynchrony. The cumulative incidence (5.4%) of pneumomediastinum without pneumothorax falls between incidences reported in other series. All patients later developed other barotrauma days after initial diagnosis, including two patients who developed pneumopericardium and one who developed pneumoperitoneum with severe subcutaneous emphysema from the neck to the pelvis. Four of the five patients died during hospitalization, with the remaining patient being discharged alive.

Publication Type

<367>

Accession Number

20210027731

Author

Ferrero, F.; Ossorio, M. F.; Torres, F. A.; Debaisi, G.

Title

Impact of the COVID-19 pandemic in the paediatric emergency department attendances in Argentina.

Source

Archives of Disease in Childhood; 2020. 106(2):e5-e5. 3 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Recently it has been brought to attention the decline in paediatric emergency department (ED) attendance since the start of the pandemic. Isba et al reported in two hospitals in Manchester (UK) a decrease of more than 30% in paediatric ED attendance in January and February 2020 in relation to the same months in 2019. To address this issue, we compared the number of weekly visits of children and young people (<18 years) to the ED of a third-level paediatric hospital in the City of Buenos Aires during the first 5 months (January to May) of 2019 and 2020. When comparing both years, we found that the number of visits to the ED in January and February was similar in both years (January: 6453 vs 6110; -5.3% and February: 6474 vs 7284; +12.5%). However, in March the attendance fell to 38.5%, in April 77.2% and in May 88.6%. Analysing the complete series of weekly attendance, the decrease becomes obvious as of the 12th week. In Argentina, the lockdown was announced as of 20 March 2020 (week 12).

Publication Type

Correspondence.

<368>

Accession Number

20210027022

Author

Perier, F.; Tuffet, S.; Maraffi, T.; Alcalá, G.; Victor, M.; Haudebourg, A. F.; Prost, N. de; Amato, M.; Carreaux, G.; Dessap, A. M.

Title

Effect of positive end-expiratory pressure and proning on ventilation and perfusion in COVID-19 acute respiratory distress syndrome.

Source

American Journal of Respiratory and Critical Care Medicine; 2020. 202(12):1713-1717. 8 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

The objective of this study was to describe the physiological effects of PEEP and prone position on respiratory mechanics, ventilation, and pulmonary perfusion in patients with C-ARDS. Among 41 patients with C-ARDS admitted during the study period, 9 completed full explorations and could be analysed (8 male; age, 53 [50-60] yr; body mass index, 33.1 [29.8-35.6] kg/m²; PaO₂/FiO₂, 133 [96-140] mm Hg). Ventilation was predominantly ventral at low PEEP and dorsal at high PEEP, and the anteroposterior gradient got inversed with the increase in PEEP. This inversion was mainly driven by ventral hyperdistention (as suggested by the decrease in ventral compliance and the increase in driving pressure, end-inspiratory transpulmonary pressure, and stress index at higher PEEP). Lung perfusion was predominant in the dorsal areas regardless of the PEEP level, but the increase in PEEP reduced CO and further decreased absolute ventral perfusion. Increased PEEP also reduced the proportion of ventral severe dead space and dorsal severe shunt. Prone positioning and, to a lesser extent, increased PEEP shifted ventilation from ventral to dorsal regions in patients with C-ARDS but did not change perfusion, which remained predominantly dorsal, resulting in better VA/Q matching.

Publication Type

Correspondence.

<369>

Accession Number

20210002822

Author

Parra-Lara, L. G.; Martinez-Arboleda, J. J.; Isaza-Pierotti, D. F.; Rosso, F.

Title

Effect estimation of hydroxychloroquine for COVID-19: a secondary analysis of an open label non-randomized clinical trial.

Source

International Journal of Antimicrobial Agents; 2021. 57(1). 3 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The aim of the article was to discuss the synergistic effect of hydroxychloroquine in combination with azithromycin to cure infection and treating transmission of SARS-CoV-2 in patients with COVID-19. The sample population for this study according to previously defined inclusion and exclusion criteria was selected from hospitalized patients in a healthcare facility located in Marseille, France. Only people that tested positive RT-PCR for SARS-CoV-2 from nasopharyngeal samples were included and followed for 14 days. Treatment arm was compared to supportive care. The primary endpoint was defined as the proportion of negative RT-PCR at day 6 post inclusion. Secondary aims were defined to describe changes in viral load over time, clinical course and side effects. To test for statistically significant differences between the two groups, depending on the nature of the variables, Pearson's chi-square test or Fisher's exact test, and Student's t-test were performed. Results showed significant differences between the two groups regarding the primary endpoint, where 70% of patients in the hydroxychloroquine group tested negative for RT-PCR at day 6 and only 12.5% patients did so in the control group. The incidence of the chloroquine exposed group was 0.7 and the incidence of the unexposed was 0.3125%. The RRR was 1.24, the RAR was 0.3875 CI 95% (0.0843-0.6907) and NNT was 2.5806 CI 95% (1.4478-11.8594). According to the previously mentioned findings, it can be interpreted that by treating ~3 patients with hydroxychloroquine, the result of a positive PCR for COVID-19 can be decreased in one case. However, its wide confidence interval is striking. These findings are a starting point and a light for the COVID-19 pandemic that to date affects 180 countries and who has claimed the lives of more than 42,139 people worldwide. More randomized studies are required to establish more robust results soon.

Publication Type

Correspondence.

<370>

Accession Number

20203559208

Author

Jalali, M. S.; DiGennaro, C.; Sridhar, D.

Title

Transparency assessment of COVID-19 models.

Source

Lancet Global Health; 2020. 8(12):e1459-e1460. 10 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

To systematically evaluate the transparency of COVID-19 models, we reviewed a sample of models that have earned global attention and been referenced in governmental public health efforts. We first collected models that included a methods report from the US Centers for Disease Control and Prevention's compilation, then identified the most-referenced models through Google Scholar and the PlumX News Mentions metric. This search took place on June 13, 2020, and resulted in the identification of 29 models. Each of the 27 criteria were satisfied by an average of 22 (76%) of 29 models in our sample. Eight criteria were satisfied by more than 90% of the models, but most criteria were satisfied by a much smaller percentage of models (appendix p 1). For example, seven (24%) of 29 models did not report the equations used, nine (31%) did not report their estimated parameters, 13 (45%) did not share all of their longitudinal data, and 15 (52%) did not report their code (appendix p 2). Only four articles (14%) satisfied more than 90% of our transparency checklist items. This evaluation shows that models that are not fully transparent can still posit analytical insights and inform policy. Rather than presenting recommendations at face value, modellers must ensure that their claims are independently verifiable. The scientific and modelling communities need to make transparency the norm, rather than the exception. Otherwise, they risk losing the faith of policy makers and the public.

Publication Type

Correspondence.

<371>

Accession Number

20203552334

Author

Metcalf, C. J. E.; Viboud, C.; Spiro, D. J.; Grenfell, B. T.

Title

Using serology with models to clarify the trajectory of the SARS-CoV-2 emerging outbreak.

Source

Trends in Immunology; 2020. 41(10):849-851. 11 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The aim of the article was to present a direct estimation of the susceptible fraction by using serology or other immunological measures to identify the proportion of the population that is susceptible could greatly clarify the understanding of epidemic dynamics and control. By using data on reported numbers of cases or deaths, mathematical models allow estimation of infectious disease parameters such as the magnitude of transmission, or duration of infection that will govern the time course of the outbreak. This is achieved by identifying the combinations of parameters that result in a projected numbers of cases (or deaths) that best matches the observed. However, cases are generally under-reported, infections may vary in terms of their detectability (i.e., children may be less symptomatic), and case definitions may change over the epidemic time course. While testing of active infections is and should remain a priority, more widely available serological data will provide powerful discrimination between different sets of parameters and plausible epidemic trajectories. Increasingly, serological tests are becoming available, enabling the identification of individuals bearing antibodies suggestive of past infection; this can allow us to complete our window into the drivers of outbreaks beyond a measure of infection, to include susceptible and recovered individuals. As serology becomes more widespread in our efforts to meet the current pandemic, there is significant potential to lay the foundations towards making serology a routine part of public health. This could enhance various aspects of vigilance, from situational awareness of vaccine preventable infections to pandemic preparedness.

Publication Type

Journal article.

<372>

Accession Number

20203550675

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Author

Gomez-Ochoa, S. A.; Franco, O. H.

Title

COVID-19: facts and failures, a tale of two worlds.

Source

European Journal of Epidemiology; 2020. 35(11):991-994. 37 ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

This commentary discusses the scenarios of two different countries: Denmark and the United States, by analysing the results from two studies recently published in the European Journal of Epidemiology, highlighting the different approaches taken to manage the pandemic by the two governments, and subsequently, the results so far. Although how the disease takes place and spreads depends largely in the nature of the disease as well as the healthcare system, population characteristics and policies formulated, it's been commonly reported that around 20% of all cases tend to require hospitalisation, while 5-10% of the cases might require intensive care treatment. However, alongside the direct impact of the virus, lockdowns pose a critical challenge for populations mental health and could have severely harmed the nations' economies, causing, for example, a fall of the United Kingdom's GDP by 20.4% in April 2020 and an increase in the United States (U.S.) unemployment rate of around 200%. This cocktail of unfortunate events has pushed citizens of many countries to the limit, looking for answers to the high cost the society has paid during this pandemic, and opposing further restrictive measures even violently as recently observed in European nations facing a second wave. The observed differences between these two developed nations have a multi-factorial origin, including geographical aspects such as Denmark's peninsular condition and its low population density. The government's early lockdown and border closing and the Danish health care system's high quality and equity may have been crucial for achieving this success in pandemic control. On the other hand, the lack of timely preventive measures implementation by the U.S. federal government and the deep racial/ethnic inequities in the healthcare system access and overall health status has led to the actual situation in which, the spread of COVID-19 across the country seems beyond control.

Publication Type

Journal article.

<373>

Accession Number

20203550539

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Author

Chhetri, J. K.; Chan, P.; Arai, H.; Park, S. C.; Sriyani Gunaratne, P.; Setiati, S.; Assantachai, P.

Title

Prevention of COVID-19 in older adults: a brief guidance from the international association for gerontology and geriatrics (IAGG) Asia/Oceania region.

Source

Journal of Nutrition, Health & Aging; 2020. 24(5):471-472. 10 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

The aim of the article was to propose the mnemonic COVID-IAGG-AO as a basic guidance to prevent COVID-19 in older adults. Rationale for the COVID-IAGG-AO guidance: Older people are known to have poor immune system thus largely susceptible to the infection. Proper sleep, getting proper food and exercise may help to maintain the immunity in old age and prevent frailty (i.e., a geriatric syndrome with added vulnerability to stressors). One of the most convenient ways to prevent COVID-19 infection is physical distancing from others, but it may lead to loneliness and increase the risk of depression. Being optimistic or being mentally resilient one can avoid such mental problems during a crisis. Another way of keeping a healthy mental status is by keeping constant social interaction through means of communication such as the internet and other media tools. Getting enough sunlight in the morning may provide Vitamin D which may reduce the risk of infection in older adults with suboptimal levels of Vitamin D(10). Many older people are known to have some comorbidities and should be careful in taking their routine medication even in isolation. They should ask the help of family members/caregivers to get their daily needs including medical supplies. Online shopping may be used if available. In the case of respiratory symptoms such as shortness of breath, chest pain, continuous fever or cough, fatigue and having decreased awareness emergency services should be called or one should visit the hospital emergency room. Last but not least is to disinfect one's hand when possible using sanitizer or soap so as to stop the spread of the virus. It is advised that all healthcare workers, family members and caregivers of older people in the Asia-Oceania region to actively implement COVID-IAGG-AO as a basic guidance to prevent the infection of COVID-19 in the older population.

Publication Type

Journal article.

<374>

Accession Number

20203534991

Author

Massano, D.; Cosma, L.; Garolla, M.; Sainati, L.; Biffi, A.

Title

Hospital-based home care for children with cancer during the COVID-19 pandemic in northeastern Italy.

Source

Pediatric Blood & Cancer; 2020. 67(12). 4 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

This paper describes the experience of an integrated project of telehealth and hospital-based home care (HBHC) for noncritical patients in active anticancer treatment in a tertiary care pediatric oncology center in Tunisia during the COVID-19 pandemic. Between March and April 2020, a total of 44 patients were enrolled in these activities. Different procedures were performed at the patients' domicile, including 138 blood tests, 18 chemotherapy infusions (vincristine and cytarabine), removal of a peripherally inserted central catheter, 104 oncological clinical examinations and 153 telemedicine consultations. The use of new technologies such as video calling allowed real-time interventions to meet the objective of care provisions. Home-based activities and telemedicine allowed a decrease in the number of hospital visits of about 15% (mean value), with peaks of 25% in the two most critical weeks of the pandemic. The satisfaction rate of the families has been very high. A questionnaire based on a 1.5 Likert scale showed a mean score of 4.9. The cost of the activity was 7300 per month in March and April, equivalent to 53 per access. This experience confirmed that telemedicine integrated with HBHC represents an effective alternative to hospital access. Large-scale practice of this approach could also broadly change the daily practice once the pandemic is over.

Publication Type

Correspondence.

<375>

Accession Number

20203520345

Author

Guo Yan; Li YiRan; Monroe-Wise, A.; Yeung SaiChing [Yeung, S. C. J.]; Huang YiXiang

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Title

A dynamic residential community-based quarantine strategy: China's experience in fighting COVID-19.

Source

Infection Control and Hospital Epidemiology; 2020. 41(11):1363-1364. 5 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

This paper discusses implemented quarantine strategy in China effective in controlling COVID-19 epidemic. This strategy required residents to stay home and required to use an electronic pass system with traceable personal information to gain entry to residential areas, work places, and public transportation, and body temperature was screened by thermal scanning at the entrances. Once new cases were identified, health professionals and volunteers followed-up, treated, and isolated the patient and those in close contact. Experience drawn from China's quarantine strategy. First, the quarantine strategy was strictly implemented nationwide at a community level. Strong governmental support is required to strengthen the community, and training is needed to foster policy implementation. Second, the quarantine strategy was dynamic and was adjustable based on the evolving situations, from stay-home quarantine to movement with updated health monitoring. Third, a large team of professional and technical support traced, identified, treated, and isolated patients and their close contacts. These strategies ensured early diagnosis and treatment, thus bringing the COVID-19 pandemic under control in China.

Publication Type

Correspondence.

<376>

Accession Number

20203516808

Author

Murray, M. T.; Riggs, M. A.; Engelthaler, D. M.; Johnson, C.; Watkins, S.; Longenberger, A.; Brett-Major, D. M.; Lowe, J.; Broadhurst, M. J.; Ladva, C. N.; Villanueva, J. M.; Adam MacNeil; Qari, S.; Kirking HannahL.; Cherry, M.; Khan, A. S.

Title

Mitigating a COVID-19 outbreak among major league baseball players - United States, 2020.

Source

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Morbidity and Mortality Weekly Report; 2020. 69(42):1542-1546. 10 ref.

Publisher

Epidemiology Program Office, Centers for Disease Control and Prevention (CDC)

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

Mass gatherings have been implicated in higher rates of transmission of SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19), and many sporting events have been restricted or canceled to limit disease spread. Based on current CDC COVID-19 mitigation recommendations related to events and gatherings, Major League Baseball (MLB) developed new health and safety protocols before the July 24 start of the 2020 season. In addition, MLB made the decision that games would be played without spectators. Before a three-game series between teams A and B, the Philadelphia Department of Public Health was notified of a team A player with laboratory-confirmed COVID-19; the player was isolated as recommended. During the series and the week after, laboratory-confirmed COVID-19 was diagnosed among 19 additional team A players and staff members and one team B staff member. Throughout their potentially infectious periods, some asymptomatic team A players and coaches, who subsequently received positive SARS-CoV-2 test results, engaged in on-field play with teams B and C. No on-field team B or team C players or staff members subsequently received a clinical diagnosis of COVID-19. Certain MLB health and safety protocols, which include frequent diagnostic testing for rapid case identification, isolation of persons with positive test results, quarantine for close contacts, mask wearing, and social distancing, might have limited COVID-19 transmission between teams.

Publication Type

Journal article.

<377>

Accession Number

20210100870

Author

Ramsha Kamran; Kiran Saba; Saima Azam

Title

Impact of COVID-19 on Pakistani dentists: a nationwide cross sectional study.

Source

BMC Oral Health; 2021. 21(59):(10 February 2021). 22 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 outbreak which developed into a public health crisis has raised concerns regarding infection control among health care workers particularly dentists all over the world. The aim of this survey was to assess awareness, fear and compliance with practice modification according to CDC guidelines during COVID-19 pandemic among Pakistani dentists. Methods: A cross-sectional study was conducted using an online survey questionnaire. The questionnaire was designed on Google Forms and was distributed among all seven regions of Pakistan through social media and WhatsApp after carrying out the reliability analysis. Statistical analysis was performed using SPSS 20.0. Question wise analysis using frequencies and percentages was done. Pearson correlation and Kruskal Wallis test was applied to check association of awareness level with qualification and workplace setting. Results: A total of 313 dentists participated and submitted the form online from all regions of Pakistan. The response rate was quite satisfactory as Pakistan was under an official lockdown and most of the hospitals/clinics were either closed or operating with minimum staff. Most of the dentists were well aware of the CDC guidelines. However, 75% of the dentists were afraid of getting infected and 88% of them were anxious while providing treatment. Sixty-eight percent of them were avoiding aerosol generating procedures and only 28% were using rubber dam isolation. Regional analysis was also done and areas of poor compliance were identified. Only 38.5% dentists in Balochistan were using N95 masks and none of the dentists (0%) were using rubber dam isolation. A large number of dentists (80.9%) were afraid and wanted to close their dental practice in Khyber Pakhtunkhwa. Furthermore, a positive correlation was seen between the designation and awareness level ($p = 0.01$). Similarly, significant correlation ($p = 0.03$) was seen between qualification and workplace setting. Conclusion: The results of the study can help devise strategies to ensure adherence with infection control guidelines in regions with poor compliance. Initiation of awareness programs to help overcome fear and train the faculty and staff in the targeted areas would greatly contribute towards reducing the spread of infection and thus lowering the healthcare burden in a third world country like Pakistan.

Publication Type

Journal article.

<378>

Accession Number

20210100466

Author

Moustaqil, M.; Ollivier, E.; Chiu, H. P.; Tol, S. van; Rudolffi-Soto, P.; Stevens, C.; Bhumkar, A.; Hunter, D. J. B.; Freiberg, A. N.; Jacques, D.; Lee, B.; Sierecki, E.; Gambin, Y.

Title

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SARS-CoV-2 proteases PLpro and 3CLpro cleave IRF3 and critical modulators of inflammatory pathways (NLRP12 and TAB1): implications for disease presentation across species.

Source

Emerging Microbes and Infections; 2021. 10(178-195):178-195. 85 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The genome of SARS-CoV-2 encodes two viral proteases (NSP3/papain-like protease and NSP5/3C-like protease) that are responsible for cleaving viral polyproteins during replication. Here, we discovered new functions of the NSP3 and NSP5 proteases of SARS-CoV-2, demonstrating that they could directly cleave proteins involved in the host innate immune response. We identified 3 proteins that were specifically and selectively cleaved by NSP3 or NSP5: IRF-3, and NLRP12 and TAB1, respectively. Direct cleavage of IRF3 by NSP3 could explain the blunted Type-I IFN response seen during SARS-CoV-2 infections while NSP5 mediated cleavage of NLRP12 and TAB1 point to a molecular mechanism for enhanced production of cytokines and inflammatory response observed in COVID-19 patients. We demonstrate that in the mouse NLRP12 protein, one of the recognition site is not cleaved in our in-vitro assay. We pushed this comparative alignment of IRF-3 and NLRP12 homologs and show that the lack or presence of cognate cleavage motifs in IRF-3 and NLRP12 could contribute to the presentation of disease in cats and tigers, for example. Our findings provide an explanatory framework for indepth studies into the pathophysiology of COVID-19.

Publication Type

Journal article.

<379>

Accession Number

20210100272

Author

Kalin, A.; Javid, B.; Knight, M.; Inada-Kim, M.; Greenhalgh, T.

Title

Direct and indirect evidence of efficacy and safety of rapid exercise tests for exertional desaturation in COVID-19: a rapid systematic review.

Source

Systematic Reviews; 2021. 10(77):(16 March 2021). 53 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Even when resting pulse oximetry is normal in the patient with acute Covid-19, hypoxia can manifest on exertion. We summarise the literature on the performance of different rapid tests for exertional desaturation and draw on this evidence base to provide guidance in the context of acute Covid-19. Main research questions: 1. What exercise tests have been used to assess exertional hypoxia at home or in an ambulatory setting in the context of Covid-19 and to what extent have they been validated? 2. What exercise tests have been used to assess exertional hypoxia in other lung conditions, to what extent have they been validated and what is the applicability of these studies to acute Covid-19? Method: AMED, CINAHL, EMBASE MEDLINE, Cochrane and PubMed using LitCovid, Scholar and Google databases were searched to September 2020. Studies where participants had Covid-19 or another lung disease and underwent any form of exercise test which was compared to a reference standard were eligible. Risk of bias was assessed using QUADAS 2. A protocol for the review was published on the Medrxiv database. Results: Of 47 relevant papers, 15 were empirical studies, of which 11 described an attempt to validate one or more exercise desaturation tests in lung diseases other than Covid-19. In all but one of these, methodological quality was poor or impossible to fully assess. None had been designed as a formal validation study (most used simple tests of correlation). Only one validation study (comparing a 1-min sit-to-stand test [1MSTST] with reference to the 6-min walk test [6MWT] in 107 patients with interstitial lung disease) contained sufficient raw data for us to calculate the sensitivity (88%), specificity (81%) and positive and negative predictive value (79% and 89% respectively) of the 1MSTST. The other 4 empirical studies included two predictive studies on patients with Covid-19, and two on HIV-positive patients with suspected pneumocystis pneumonia. We found no studies on the 40-step walk test (a less demanding test that is widely used in clinical practice to assess Covid-19 patients). Heterogeneity of study design precluded meta-analysis. Discussion: Exertional desaturation tests have not yet been validated in patients with (or suspected of having) Covid-19. A stronger evidence base exists for the diagnostic accuracy of the 1MSTST in chronic long-term pulmonary disease; the relative intensity of this test may raise safety concerns in remote consultations or unstable patients. The less strenuous 40-step walk test should be urgently evaluated.

Publication Type

Journal article.

<380>

Accession Number

20210100201

Author

Shirani, F.; Khorvash, F.; Arab, A.

Title

Review on selected potential nutritional intervention for treatment and prevention of viral infections: possibility of recommending these for Coronavirus 2019.

Source

International Journal of Food Properties; 2020. 23(1):1722-1736. 138 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

An outbreak of a novel coronavirus (COVID-19) infection has posed significant threats to international health and the economy. The role of nutrition in supporting the immune system is well-established. A wealth of mechanistic and clinical documents shows that vitamins, including vitamins A, B2, B3, B6, B12, C, D, E, and folate; trace elements, including zinc and selenium; probiotics and prebiotics; alpha lipoic acid; omega-3 fatty acids and herbal supplements including curcumin, ginger, Echinacea, garlic, green tea, cinnamon, and ginseng play important and complementary roles in supporting the immune system. Inadequate intake and status of these nutrients are widespread, leading to a decrease in resistance to infections and as a consequence an increase in disease burden. Against this background the following conclusions are made: (1) supplementation with the above micronutrients, omega-3 fatty acids, and probiotics is a safe, effective, and low-cost strategy to help support optimal immune function; (2) supplementation above the Recommended Dietary Allowance (RDA), but within recommended upper safety limits, for specific nutrients such as vitamins C, D, and selenium is warranted; and (3) public health officials are encouraged to include nutritional strategies in their recommendations to improve public health.

Publication Type

Journal article.

<381>

Accession Number

20210100015

Author

Ermias Sisay Chanie; Dejen Getaneh Feleke; Sheganew Fetene; Agimasie Tigabu; Sintayehu Asnakew; Tegenaw Tiruneh; Mekie, M.; Gashaw Walle Ayehu; Wubet Alebachew Bayih

Title

Level of preparedness for COVID-19 and its associated factors among frontline healthcare providers in south Gondar public hospitals, Northwest Ethiopia, 2020: a multicenter cross-sectional study.

Source

BioMed Research International; 2021. 2021(6627430). 22 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Although the efforts at global and national levels have attempted to decrease the COVID-19 pandemic, the low level of preparedness among healthcare providers is a challenge mainly in developing countries. Hence, this study is aimed at assessing the level of preparedness for COVID-19 and its associated factors among frontline healthcare providers in South Gondar public hospitals, northwest Ethiopia. **Methods and Materials:** A hospital-based cross-sectional study was conducted among 207 selected healthcare providers who were working in South Gondar public hospital from July 08 to August 29, 2020. A pretested structured questionnaire was used to collect data. The healthcare providers were selected through simple random sampling techniques. Both bivariable and multivariable logistic regressions with a 95% confidence interval were fitted with 95% CI to establish the associated factors with a low level of preparedness. A value < 0.05 was considered statistically significant. **Results:** The overall level of preparedness among healthcare providers for COVID-19 was found to be 41.3% (95% CI: 37.4, 44.7). Only 81 (40.1%) healthcare providers had prepared for telling their family and friends if they are infected with COVID-19. Besides, only 23.8% of healthcare providers obtained alcohol-based hand sanitizer in every patient room. Factors associated with a low level of preparedness include being male (AOR = 2.5, 95% CI: 1.22-4.94), unmarried (AOR = 3.4, 95% CI: 1.44-8.00), and working experience less than five years (AOR = 3.4, 95% CI: 1.29-9.09). **Conclusion:** The level of preparedness among frontline healthcare providers towards COVID-19 was found to be very low. In the future, more emphasis should be placed on healthcare providers who are male, unmarried, and had working experience of lower than five years to decrease the burden of the COVID-19 pandemic.

Publication Type

Journal article.

<382>

Accession Number

20210100007

Author

Zhang XiaoBo; Gao Rui; Zhou ZuBing; Tang XueHua; Lin JingJing; Wang Long; Zhou Xin; Shen Tao

Title

A network pharmacology based approach for predicting active ingredients and potential mechanism of Lianhuaqingwen capsule in treating COVID-19.

Source

International Journal of Medical Sciences (Sydney); 2021. 18(8):1866-1876. 84 ref.

Publisher

Ivyspring International Publisher Pty Ltd

Location of Publisher

Sydney

Country of Publication

Australia

Abstract

The outbreak of severe respiratory disease caused by SARS-CoV-2 has led to millions of infections and raised global health concerns. Lianhuaqingwen capsule (LHQW-C), a traditional Chinese medicine (TCM) formula widely used for respiratory diseases, shows therapeutic efficacy in the application of coronavirus disease 2019 (COVID-19). However, the active ingredients, drug targets, and the therapeutic mechanisms of LHQW-C in treating COVID-19 are poorly understood. In this study, an integrating network pharmacology approach including pharmacokinetic screening, target prediction (targets of the host and targets from the SARS-CoV-2), network analysis, GO enrichment analysis, KEGG pathway enrichment analysis, and virtual docking were conducted. Finally, 158 active ingredients in LHQW-C were screen out, and 49 targets were predicted. GO function analysis revealed that these targets were associated with inflammatory response, oxidative stress reaction, and other biological processes. KEGG enrichment analysis indicated that the targets of LHQW-C were highly enriched to several immune response-related and inflammation-related pathways, including the IL-17 signaling pathway, TNF signaling pathway, NF-kappa B signaling pathway, and Th17 cell differentiation. Moreover, four key components (quercetin, luteolin, wogonin, and kaempferol) showed a high binding affinity with SARS-CoV-2 3-chymotrypsin-like protease (3CL pro). The study indicates that some anti-inflammatory ingredients in LHQW-C probably modulate the inflammatory response in severely ill patients with COVID-19.

Publication Type

Journal article.

<383>

Accession Number

20210099860

Author

Jiang Hua; Zhang JianCheng; Zeng Jun; Wang Lu; Wang Yu; Lu CharlesDamien; Deng Lei; Deng HongFei; Wang Kai; Sun MingWei; Zhou Ping; Yuan Ting; Chen Wei

Title

Gut, metabolism and nutritional support for COVID-19: experiences from China.

Source

Burns & Trauma; 2020. 8(tkaa048). 50 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

There is little research that focuses on the relationship between the gut, metabolism, nutritional support and COVID-19. As a group of Chinese physicians, nutritionists and scientists working on the frontline treating COVID-19 patients, we aim to integrate our experiences and the current clinical evidence to address this pressing issue in this article. Based on our clinical observations and available evidence, we recommend the following practice. Firstly, the Nutritional Risk Screening 2002 tool should be used routinely and periodically; for patients with a score 3, oral nutritional supplements should be given immediately. Secondly, for patients receiving the antiviral agents lopinavir/ritonavir, gastrointestinal side effects should be monitored for and timely intervention provided. Thirdly, for feeding, the enteral route should be the first choice. In patients undergoing mechanical ventilation, establishing a jejunal route as early as possible can guarantee the feeding target being achieved if gastric dilatation occurs. Fourthly, we suggest a permissive underfeeding strategy for severe/critical patients admitted to the intensive care unit during the first week of admission, with the energy target no more than 20 kcal/kg/day (for those on mechanical ventilation, this target may be lowered to 10-15 kcal/kg/day) and the protein target around 1.0-1.2 g/kg/day. If the inflammatory condition is significantly alleviated, the energy target may be gradually increased to 25-30 kcal/kg/day and the protein target to 1.2-1.5 g/kg/day. Fifthly, supplemental parenteral nutrition should be used with caution. Lastly, omega-3 fatty acids may be used as immunoregulators, intravenous administration of omega-3 fatty emulsion (10 g/day) at an early stage may help to reduce the inflammatory reaction.

Publication Type

Journal article.

<384>

Accession Number

20210099655

Author

Abad-Licham, M.; Astigueta, J.; Laberiano Fernandez, C.; Chavez Torres, H.; Maquera Torres, G.; Figueroa, E.; Bardales, R.

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Title

Interventional cytopathology and cancer in Peru: how to act during COVID-19?

Source

ecancermedicalscience; 2020. 14(1152). 29 ref.

Publisher

ecancer Global Foundation

Location of Publisher

Bristol

Country of Publication

UK

Abstract

The worldwide health crisis due to SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) has affected all healthcare systems. Low- and middle-income countries have needed to establish health strategies to combat the pandemic, many of which have collaterally affected the diagnosis and treatment of other illnesses. One of these other illnesses is cancer, which in Peru represents the primary cause of mortality. In recent decades, interventional cytopathology with fine-needle biopsy techniques has emerged as a minimally invasive, rapid, economical and effective procedure for diagnosing and staging cancer. However, in the current health context, it is confronted by the challenge of continuing to function in spite of the pandemic. This article reviews the existing literature on interventional cytopathology, the risk of infection from SARS-CoV-2 and biosafety and provides recommendations for carrying out said procedures for the benefit of the patient and the safety of healthcare staff.

Publication Type

Journal article.

<385>

Accession Number

20210099574

Author

Maestro, S.; Cordoba, K. M.; Olague, C.; Argemi, J.; Avila, M. A.; Gonzalez-Aseguinolaza, G.; Smerdou, C.; Fontanellas, A.

Title

Heme oxygenase-1 inducer hemin does not inhibit SARS-CoV-2 virus infection.

Source

Biomedicine & Pharmacotherapy; 2021. 137. 23 ref.

Publisher

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Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

Antiviral agents with different mechanisms of action could induce synergistic effects against SARS-CoV-2 infection. Some reports suggest the therapeutic potential of the heme oxygenase-1 (HO-1) enzyme against virus infection. Given that hemin is a natural inducer of the HO-1 gene, the aim of this study was to develop an in vitro assay to analyze the antiviral potency of hemin against SARS-CoV-2 infection. A SARS-CoV-2 infectivity assay was conducted in Vero-E6 and Calu-3 epithelial cell lines. The antiviral effect of hemin, and chloroquine as a control, against SARS-CoV-2 virus infection was quantified by RT-qPCR using specific oligonucleotides for the N gene. Chloroquine induced a marked reduction of viral genome copies in kidney epithelial Vero-E6 cells but not in lung cancer Calu-3 cells. Hemin administration to the culture medium induced a high induction in the expression of the HO-1 gene that was stronger in Vero-E6 macaque-derived cells than in the human Calu-3 cell line. However, hemin treatment did not modify SARS-CoV-2 replication, as measured by viral genome quantification 48 h post-infection for Vero-E6 and 72 h post-infection for the Calu-3 lineages. In conclusion, although exposure to hemin induced strong HO-1 up-regulation, this effect was unable to inhibit or delay the progression of SARS-CoV-2 infection in two epithelial cell lines susceptible to infection.

Publication Type

Journal article.

<386>

Accession Number

20210099566

Author

An XueDong; Zhang YueHong; Duan LiYun; Jin De; Zhao ShengHui; Zhou RongRong; Duan YingYing; Lian FengMei; Tong XiaoLin

Title

The direct evidence and mechanism of traditional Chinese medicine treatment of COVID-19.

Source

Biomedicine & Pharmacotherapy; 2021. 137. 164 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

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Issy-les-Moulineaux

Country of Publication

France

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the third coronavirus causing serious human disease to spread across the world in the past 20 years, after SARS and Middle East respiratory syndrome. As of mid-September 2020, more than 200 countries and territories have reported 30 million cases of coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2, including 950,000 deaths. Supportive treatment remains the mainstay of therapy for COVID-19. The World Health Organization reported that four candidate drugs, including remdesivir, are ineffective or have little effect on COVID-19. According to China News, 90% of Chinese patients with COVID-19 use traditional Chinese medicine (TCM), with an effectiveness rate of 80%, and no deterioration in patient condition. We have compiled the direct evidence of TCM treatment for COVID-19 as of December 31, 2020. We describe the advantages of TCM in the treatment of COVID-19 based on clinical evidence and the required methods for its clinical use. TCM can inhibit virus replication and transcription, prevent the combination of SARS-CoV-2 and the host, and attenuate the cytokine storm and immune deficiency caused by the virus infection. The cooperation of many countries is required to establish international guidelines regarding the use of TCM in patients with severe COVID-19 from other regions and of different ethnicities. Studies on the psychological abnormalities in patients with COVID-19, and medical staff, is lacking; it is necessary to provide a complete chain of evidence to determine the efficacy of TCM in the related prevention, treatment, and recovery. This study aims to provide a reference for the rational use of TCM in the treatment of COVID-19.

Publication Type

Journal article.

<387>

Accession Number

20210099485

Author

Bazotte, R. B.; Hirabara, S. M.; Serdan, T. A. D.; Gritte, R. B.; Souza-Siqueira, T.; Gorjao, R.; Masi, L. N.; Antunes, M. M.; Cruzat, V.; Pithon-Curi, T. C.; Curi, R.

Title

4-aminoquinoline compounds from the Spanish flu to COVID-19.

Source

Biomedicine & Pharmacotherapy; 2021. 135. 84 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

In 1918, quinine was used as one of the unscientifically based treatments against the H1N1 virus during the Spanish flu pandemic. Originally, quinine was extracted from the bark of Chinchona trees by South American natives of the Amazon forest, and it has been used to treat fever since the seventeenth century. The recent COVID-19 pandemic caused by Sars-Cov-2 infection has forced researchers to search for ways to prevent and treat this disease. Based on the antiviral potential of two 4-aminoquinoline compounds derived from quinine, known as chloroquine (CQ) and hydroxychloroquine (HCQ), clinical investigations for treating COVID-19 are being conducted worldwide. However, there are some discrepancies among the clinical trial outcomes. Thus, even after one hundred years of quinine use during the Spanish flu pandemic, the antiviral properties promoted by 4-aminoquinoline compounds remain unclear. The underlying molecular mechanisms by which CQ and HCQ inhibit viral replication open up the possibility of developing novel analogs of these drugs to combat COVID-19 and other viruses.

Publication Type

Journal article.

<388>

Accession Number

20210099451

Author

Anyaehe, U. E.; Muoghalu, O. N.; Eyichukwu, G. O.; Edomwonyi, E. O.; Onuminya, J. E.

Title

The impact of COVID-19 pandemic on orthopedic practice in Nigeria.

Source

International Journal of Medicine and Health Development; 2021. 26(2):103-108. 16 ref.

Publisher

College of Medicine, University of Nigeria

Location of Publisher

Enugu

Country of Publication

Nigeria

Abstract

Background: COVID-19 pandemic is a global emerging viral disease caused by SARS- COV-2, 2019. It is a respiratory disease first reported in China in December 2019. It impacts on global health, economic, and social life with tremendous challenges. This study evaluates the impact of COVID-19 pandemic on orthopedic practice in Nigeria. Materials and Methods: A cross-sectional electronic survey of the impact of COVID-19 pandemic on orthopedic practice among orthopedic surgeons in Nigeria was done. The demographic characteristics, attitudes of orthopedic surgeons, available infrastructures, equipment, and the impact of COVID-19 pandemic on their practices were assessed. Results: A total of 87 respondents participated. The age of respondents ranged between 30 and 70 years with most involved being between 41 and 50 years age group (51.72%). Males constituted 96.5%. Majority, 47 (54%), of the respondents were not satisfied with the level of preparedness of their hospitals for COVID-19 pandemic. There was inadequate laboratory testing for COVID-19, personal protective equipment (PPE), and water supply. Elective surgical services were suspended and only emergency surgical interventions were allowed in many of their hospitals. Though the outpatient clinics were open, services were scaled down in the majority of hospitals to reduce workloads and maximize the use of scarce hospital consumables and resources. Conclusion: The impact of COVID-19 on orthopedic practice in Nigeria is huge with many unresolved challenges, absence of laid down protocols, basic equipment, testing materials, and PPE required for the management of COVID-19 pandemic. We recommend that the government provides adequate facilities and resources in hospitals to ensure optimal care during this pandemic.

Publication Type

Journal article.

<389>

Accession Number

20210099397

Author

Wouters, O. J.; Shadlen, K. C.; Salcher-Konrad, M.; Pollard, A. J.; Larson, H. J.; Teerawattananon, Y.; Jit, M.

Title

Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment.

Source

Lancet (British edition); 2021. 397(10278):1023-1034. 108 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

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The COVID-19 pandemic is unlikely to end until there is global roll-out of vaccines that protect against severe disease and preferably drive herd immunity. Regulators in numerous countries have authorised or approved COVID-19 vaccines for human use, with more expected to be licensed in 2021. Yet having licensed vaccines is not enough to achieve global control of COVID-19: they also need to be produced at scale, priced affordably, allocated globally so that they are available where needed, and widely deployed in local communities. In this Health Policy paper, we review potential challenges to success in each of these dimensions and discuss policy implications. To guide our review, we developed a dashboard to highlight key characteristics of 26 leading vaccine candidates, including efficacy levels, dosing regimens, storage requirements, prices, production capacities in 2021, and stocks reserved for low-income and middle-income countries. We use a traffic-light system to signal the potential contributions of each candidate to achieving global vaccine immunity, highlighting important trade-offs that policy makers need to consider when developing and implementing vaccination programmes. Although specific datapoints are subject to change as the pandemic response progresses, the dashboard will continue to provide a useful lens through which to analyse the key issues affecting the use of COVID-19 vaccines. We also present original data from a 32-country survey (n=26 758) on potential acceptance of COVID-19 vaccines, conducted from October to December, 2020. Vaccine acceptance was highest in Vietnam (98%), India (91%), China (91%), Denmark (87%), and South Korea (87%), and lowest in Serbia (38%), Croatia (41%), France (44%), Lebanon (44%), and Paraguay (51%).

Publication Type

Journal article.

<390>

Accession Number

20210099302

Author

O'Flynn, D.; Lawler, J.; Yusuf, A.; Parle-McDermott, A.; Harold, D.; Cloughlin, T. M.; Holland, L.; Regan, F.; White, B.

Title

A review of pharmaceutical occurrence and pathways in the aquatic environment in the context of a changing climate and the COVID-19 pandemic.

Source

Analytical Methods; 2021. 13(5):575-594. 193 ref.

Publisher

Royal Society of Chemistry

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Active pharmaceutical ingredients (APIs) are increasingly being identified as contaminants of emerging concern (CECs). They have potentially detrimental ecological and human health impacts but most are not currently subject to environmental regulation. Addressing the life cycle of these pharmaceuticals plays a significant role in identifying the potential sources and understanding the environmental impact that pharmaceuticals may have in surface waters. The stability and biological activity of these "micro-pollutants" can lead to a pseudo persistence, with ensuing unknown chronic behavioural and health-related effects. Research that investigates pharmaceuticals predominantly focuses on their occurrence and effect within surface water environments. However, this review will help to collate this information with factors that affect their environmental concentration. This review focuses on six pharmaceuticals (clarithromycin, ciprofloxacin, sulfamethoxazole, venlafaxine, gemfibrozil and diclofenac), chosen because they are heavily consumed globally, have poor removal rates in conventional activated sludge wastewater treatment plants (CAS WWTPs), and are persistent in the aquatic environment. Furthermore, these pharmaceuticals are included in numerous published prioritisation studies and/or are on the Water Framework Directive (WFD) "Watch List" or are candidates for the updated Watch List (WL). This review investigates the concentrations seen in European Union (EU) surface waters and examines factors that influence final concentrations prior to release, thus giving a holistic overview on the source of pharmaceutical surface water pollution. A period of 10 years is covered by this review, which includes research from 2009-2020 examining over 100 published studies, and highlighting that pharmaceuticals can pose a severe risk to surface water environments, with each stage of the lifecycle of the pharmaceutical determining its concentration. This review additionally highlights the necessity to improve education surrounding appropriate use, disposal and waste management of pharmaceuticals, while implementing a source directed and end of pipe approach to reduce pharmaceutical occurrence in surface waters.

Publication Type

Journal article.

<391>

Accession Number

20210099284

Author

Hoier, A. T. Z. B.; Chaaban, N.; Andersen, B. V.

Title

Possibilities for maintaining appetite in recovering COVID-19 patients.

Source

Foods; 2021. 10(2). 72 ref.

Publisher

MDPI AG

Location of Publisher

Basel

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Country of Publication

Switzerland

Abstract

COVID-19 and sequelae thereof are known to cause chemosensory dysfunction, posing a risk for intake and adequate nutrition for recovery. The overall objective of this study was to investigate the subjective strategies for maintaining appetite applied by patients recovering from COVID-19. The study included 19 in-depth interviews, focusing on patients suffering from long-term effects of COVID-19. The results were analysed using a thematic analysis for qualitative data. Results on strategies for maintaining appetite included four key themes: (1) a focus on well-functioning senses, (2) a focus on familiar foods, (3) a focus on the eating environment, and (4) a focus on post-ingestive well-being. It was found that factors prior to, during and after food intake, as well as the context, could influence desire to eat and pleasure related to food intake. As ageusia and anosmia make characterization of food difficult, being able to recognize and memorize its flavour was important to engage in consumption. Under normal circumstances, the hedonic value of food relies predominantly on the flavour of foods. When suffering from chemosensory dysfunction, shifting focus towards the texture of food, including trigeminal stimulation during consumption, were beneficial for maintaining appetite and food-related pleasure. Furthermore, a focus on the holistic satisfying feelings of choosing healthy food, as well as a focus on other people's enjoyment during meals were reported to boost well-being around food intake. The study elaborated our understanding of the complex consequences of COVID-19, and can be applied in health promoting initiatives targeted patients recovering from COVID-19.

Publication Type

Journal article.

<392>

Accession Number

20210099129

Author

Scacchi, A.; Catozzi, D.; Boietti, E.; Bert, F.; Siliquini, R.

Title

COVID-19 lockdown and self-perceived changes of food choice, waste, impulse buying and their determinants in Italy: QuarantEat, a cross-sectional study.

Source

Foods; 2021. 10(2). 49 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Data about self-perceived food choice (FC) changes and their determinants during COVID-19 lockdowns are limited. This study investigated how the Italian lockdown affected self-perceived food purchases (FP), occurrence of impulse buying (IB), household food waste production (HFWP) and their determinants. A web-based cross-sectional survey was distributed in May 2020, collecting an opportunistic sample of the Italian population. A total of 1865 (70% females) people were enrolled, the median age was 29 (IQR 16.0). Most of the sample increased overall FP (53.4%), food consumption (43.4%), reduced HFWP (53.7%) and halved the prevalence of IB (20.9%) compared to the period before the lockdown (42.5%). Baking ingredients, fresh vegetables, fresh fruit and chocolate had the largest sales increase by individuals, while bakery products, fresh fish and salted snacks purchases highly decreased. Increased FP was associated with the occurrence of IB (adjOR 2.48, $p < 0.001$) and inversely associated with not having worked during lockdown (adjOR 0.71, $p = 0.003$). Multivariable logistic regressions revealed occurrence of IB was associated with low perceived dietary quality (adjOR 2.22, $p < 0.001$), resulting at risk, according to the Emotional Overeating Questionnaire (EOQ, adjOR 1.68, $p < 0.001$), and inversely associated with decreased HFWP (adjOR 0.73, $p < 0.012$). Reduced HFWP was associated with higher perceived dietary quality (adjOR 2.27, $p < 0.001$) and negatively associated with low score at WHO-5 Well-Being Index (adjOR 0.72, $p = 0.002$). The Italian lockdown highly affected FC behaviours, leading to positive and sustainable habits towards food purchase and consumption. Public health interventions are needed to keep these new positive effects and avoid negative consequences in case of future lockdowns.

Publication Type

Journal article.

<393>

Accession Number

20210099107

Author

Pedreira, A.; Taskin, Y.; Garcia, M. R.

Title

A critical review of disinfection processes to control SARS-CoV-2 transmission in the food industry.

Source

Foods; 2021. 10(2). 104 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Industries of the food sector have made a great effort to control SARS-CoV-2 indirect transmission, through objects or surfaces, by updating cleaning and disinfection protocols previously focused on inactivating other pathogens, as well as food spoilage microorganisms. The information, although scarce at the beginning of the COVID-19 pandemic, has started to be sufficiently reliable to avoid over-conservative disinfection procedures. This work reviews the literature to propose a holistic view of the disinfection process where the decision variables, such as type and concentration of active substances, are optimised to guarantee the inactivation of SARS-CoV-2 and other usual pathogens and spoilage microorganisms while minimising possible side-effects on the environment and animal and human health.

Publication Type

Journal article.

<394>

Accession Number

20210098992

Author

Kim Hyunju; Paul, A.

Title

Automated contact tracing: a game of big numbers in the time of COVID-19.

Source

Journal of the Royal Society Interface; 2021. 18(175). 7 ref.

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

One of the more widely advocated solutions for slowing down the spread of COVID-19 has been automated contact tracing. Since proximity data can be collected by personal mobile devices, the natural proposal has been to use this for automated contact tracing providing a major gain over a manual implementation. In this work, we study the characteristics of voluntary and automated contact tracing and its effectiveness for mapping the spread of a pandemic due to the spread of SARS-CoV-2. We highlight the

infrastructure and social structures required for automated contact tracing to work. We display the vulnerabilities of the strategy to inadequate sampling of the population, which results in the inability to sufficiently determine significant contact with infected individuals. Of crucial importance will be the participation of a significant fraction of the population for which we derive a minimum threshold. We conclude that relying largely on automated contact tracing without population-wide participation to contain the spread of the SARS-CoV-2 pandemic can be counterproductive and allow the pandemic to spread unchecked. The simultaneous implementation of various mitigation methods along with automated contact tracing is necessary for reaching an optimal solution to contain the pandemic.

Publication Type

Journal article.

<395>

Accession Number

20210098776

Author

Sanjeev Gupta; Jalles, J. T.

Title

Can COVID-19 induce governments to implement tax reforms in developing countries?

Source

Working Paper - Centre for Global Development; 2021. (567):34 pp. 43 ref.

Publisher

Center for Global Development

Location of Publisher

Washington

Country of Publication

USA

Abstract

We estimate that the short to medium-term fiscal impact of previous pandemics has been significant in 170 countries (including low-income countries) during the 2000-2018 period. The impact has varied, with pandemics affecting government expenditures more than revenues in advanced economies, while the converse applies to developing countries. Using a subset of 45 developing countries for which tax reform data are available, we find that past pandemics have propelled countries to implement tax reforms, particularly in corporate income taxes, excises and property taxation. Pandemics do not drive revenue administration reforms.

Publication Type

Bulletin.

<396>

Accession Number

20210098765

Author

Taimkao, S.; Tiamkao, S.

Title

Tele-neurology during the COVID-19 pandemic as a solution for bridging the healthcare gap.

Source

Journal of the Medical Association of Thailand; 2021. 104(2 Suppl. 1):94-96.

Publisher

Medical Association of Thailand

Location of Publisher

Bangkok

Country of Publication

Thailand

Abstract

Due to the COVID-19 outbreak in Thailand, patients were unable to be examined, to receive follow-up treatments, or to receive medication in the normal ways that they previously had. As a result, Srinagarind Hospital of the Faculty of Medicine at Khon Kaen University established a home delivery system for those patients, who needed to be continuously treated. Two types of services were made available: (1) Patients were able to make a request on the Facebook page of 'Drug delivery' or on the Line application: @Dr. Somsak, and (2) the physicians phoned the patients in order to assess symptoms and to provide treatment based on the symptoms and severity of the disease. Regarding neurological patients in Thailand, most patients; such as people with epilepsy (PWE) are most often treated by general practitioners in community hospitals or by internist or pediatricians in provincial hospitals. Only a small percentage of PWE are actually treated by neurologists or pediatric neurologists. The Epilepsy Clinic of Srinagarind Hospital has, therefore, developed a service system for the out-patient department in which the physicians call the patients in order to assess their symptoms and to provide continued treatment to those individuals with PWE so that status epilepticus, which arises from drug deficiency, can be prevented. Consequently, the Integrated Epilepsy Research Group has developed a tele-medicine system for PWE, who are treated in the Epilepsy Clinic. Moreover, the newly developed service system will continue to be used to treat patients with neurological diseases in order to resolve the problem of gaining access to neurological doctors.

Publication Type

Journal article.

<397>

Accession Number

20210098725

Author

Barik, S. K.; Dhar, S. S.; Majumdar, S. K. D.; Parida, D. K.

Title

Tweaking of radiation and chemotherapy schedules is the new normal during the COVID-19 crisis: perspective from oncologists at a tertiary care health institute.

Source

ecancermedicalsecience; 2021. 15(1177). 18 ref.

Publisher

ecancer Global Foundation

Location of Publisher

Bristol

Country of Publication

UK

Abstract

Patients with cancer are at a higher risk of infection with Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-COV-2) than the general population. In India, it has become a significant health problem of utmost importance, and India's Government has issued health advisories. Lockdown brought many unforeseen problems for patients and hospitals, leading to confusion and chaos. The aim of this article is to identify various issues related to our hospital, follow-up, nutrition, treatment and psychosocial issues. Multiple changes were made in the hospital, departmental and treatment policy for cancer patients' convenience and safety. As India is in the peak of COVID-19, these types of modifications and modifications of treatment schedules will be the 'New Normal'.

Publication Type

Journal article.

<398>

Accession Number

20210098724

Author

Kutluk, M. T.; Ahmed, F.; Kirazli, M.; Bajin, I. Y.; Mungen, E.; Ekinçi, S.; Yildiz, F.

Title

The effect of the COVID-19 pandemic on paediatric cancer care: lessons learnt from a major paediatric oncology department in Turkey.

Source

ecancermedalscience; 2021. 15(1172). 56 ref.

Publisher

ecancer Global Foundation

Location of Publisher

Bristol

Country of Publication

UK

Abstract

The COVID-19 pandemic has disrupted cancer care. An audit at a major Paediatric Oncology Department in Turkey was performed to determine its impact on paediatric cancer care. A comparison was made among the number of daily paediatric cancer patients, diagnostic and treatment procedures. The data for the 'COVID-19 period' (10 March to 31 October 2020) were compared with the corresponding 'prior year control period' (10 March to 31 October 2019). Moreover, presentation delay (duration between first symptoms to healthcare visit) was calculated for new cases. The findings indicate that the mean 34.7 outpatients per day during 'COVID-19 period' was significantly lower than the 'prior year control period' (52.2). There were 17.7 inpatients per day during the 'COVID-19 period' which was significantly lower than 23.8 inpatients per day during the 'prior year control period'. Significant reduction in the daily mean number of patients undergoing chemotherapy, radiotherapy, surgery and imaging studies during the 'COVID-19 period' was also evident. A negative trend in the diagnosis of new paediatric cancers was evident with 128 new cancer cases during the 'COVID-19 period', whereas the corresponding number was 212 for the 'prior year control period'. The presentation delay (median 31 days) remain unchanged during the 'COVID-19 period'. The findings suggest significant damage to paediatric cancer care during the COVID-19 pandemic. Appropriate obligatory actions by oncology societies and policymakers can minimise longer term negative impacts.

Publication Type

Journal article.

<399>

Accession Number

20210098602

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Author

Soltani, S.; Zakeri, A.; Zandi, M.; Kesheh, M. M.; Tabibzadeh, A.; Dastranj, M.; Faramarzi, S.; Didehdar, M.; Hafezi, H.; Hosseini, P.; Farahani, A.

Title

The role of bacterial and fungal human respiratory microbiota in COVID-19 patients.

Source

BioMed Research International; 2021. 2021(6670798). 159 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Recently, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the etiologic agent of coronavirus disease 2019 (COVID-19), has led to a worldwide pandemic with millions of infected patients. Alteration in humans' microbiota was also reported in COVID-19 patients. The alteration in human microbiota may contribute to bacterial or viral infections and affect the immune system. Moreover, human's microbiota can be altered due to SARS-CoV-2 infection, and these microbiota changes can indicate the progression of COVID-19. While current studies focus on the gut microbiota, it seems necessary to pay attention to the lung microbiota in COVID-19. This study is aimed at reviewing respiratory microbiota dysbiosis among COVID-19 patients to encourage further studies on the field for assessment of SARS-CoV-2 and respiratory microbiota interaction.

Publication Type

Journal article.

<400>

Accession Number

20210098479

Author

Neufurth, M.; Wang XiaoHong; Wang ShunFeng; Schroder, H. C.; Muller, W. E. G.

Title

Caged dexamethasone/quercetin nanoparticles, formed of the morphogenetic active inorganic polyphosphate, are strong inducers of MUC5AC.

Source

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Marine Drugs; 2021. 19(2). 95 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Inorganic polyphosphate (polyP) is a widely distributed polymer found from bacteria to animals, including marine species. This polymer exhibits morphogenetic as well as antiviral activity and releases metabolic energy after enzymatic hydrolysis also in human cells. In the pathogenesis of the coronavirus disease 2019 (COVID-19), the platelets are at the frontline of this syndrome. Platelets release a set of molecules, among them polyP. In addition, the production of airway mucus, the first line of body defense, is impaired in those patients. Therefore, in this study, amorphous nanoparticles of the magnesium salt of polyP (Mg-polyP-NP), matching the size of the coronavirus SARS-CoV-2, were prepared and loaded with the secondary plant metabolite quercetin or with dexamethasone to study their effects on the respiratory epithelium using human alveolar basal epithelial A549 cells as a model. The results revealed that both compounds embedded into the polyP nanoparticles significantly increased the steady-state-expression of the MUC5AC gene. This mucin species is the major mucus glycoprotein present in the secreted gel-forming mucus. The level of gene expression caused by quercetin or with dexamethasone, if caged into polyP NP, is significantly higher compared to the individual drugs alone. Both quercetin and dexamethasone did not impair the growth-supporting effect of polyP on A549 cells even at concentrations of quercetin which are cytotoxic for the cells. A possible mechanism of the effects of the two drugs together with polyP on mucin expression is proposed based on the scavenging of free oxygen species and the generation of ADP/ATP from the polyP, which is needed for the organization of the protective mucin-based mucus layer.

Publication Type

Journal article.

<401>

Accession Number

20210098445

Author

Portegijs, E.; Keskinen, K. E.; Tuomola, E. M.; Hinrichs, T.; Saajanaho, M.; Rantanen, T.

Title

Older adults' activity destinations before and during COVID-19 restrictions: from a variety of activities to mostly physical exercise close to home.

Source

Health and Place; 2021. 68. 48 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The aim was to study various types of older adult's activity destinations (counts, frequency of visitation, and distance from home) in the pre-COVID-19 era, and to study prospectively how COVID-19-related regulations limiting mobility affected these. Using a map-based questionnaire, 75-85-year-old participants reported activity destinations, that is, any destinations for physical exercise, destinations facilitating one's outdoor mobility, and destinations for other activities, which they had visited several times during the past month. At baseline, a variety of activity destinations was reported, but during COVID-19, destinations reported markedly declined in number, they were reported predominantly for physical exercise, and they were located closer to home.

Publication Type

Journal article.

<402>

Accession Number

20210098244

Author

Armstrong, W. S.; Agwu, A. L.; Barrette, E. P.; Ignacio, R. B.; Chang, J. J.; Colasanti, J. A.; Floris-Moore, M.; Haddad, M.; MacLaren, L.; Weddle, A.

Title

Innovations in human immunodeficiency virus (HIV) care delivery during the coronavirus disease 2019 (COVID-19) pandemic: policies to strengthen the ending the epidemic initiative - a policy paper of the infectious diseases society of America and the HIV medicine association.

Source

Clinical Infectious Diseases; 2021. 72(1):9-14. 34 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

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Country of Publication

UK

Abstract

The goal of the Ending the HIV Epidemic Initiative is to reduce new infections in the United States by 90% by 2030. Success will require fundamentally changing human immunodeficiency virus (HIV) prevention and care delivery to engage more persons with HIV and at risk of HIV in treatment. While the coronavirus disease 2019 (COVID-19) pandemic reduced in-person visits to care facilities and led to concern about interruptions in care, it also accelerated growth of alternative options, bolstered by additional funding support. These included the use of telehealth, medication delivery to the home, and increased flexibility facilitating access to Ryan White HIV/AIDS Program services. While the outcomes of these programs must be studied, many have improved accessibility during the pandemic. As the pandemic wanes, long-term policy changes are needed to preserve these options for those who benefit from them. These new care paradigms may provide a roadmap for progress for those with other chronic health issues as well.

Publication Type

Journal article.

<403>

Accession Number

20210098164

Author

Natalia Latif, B.; Sartika RatuAyuDewi; Widiartha FaNi

Title

Hypercholesterolemia as a dominant factor of central obesity among adult patients at Bojong Gede Public Health Center, Bogor Regency, Indonesia.

Source

Mediterranean Journal of Nutrition and Metabolism; 2021. 14(1):69-77.

Publisher

IOS Press

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The prevalence of central obesity has been increasing rapidly in recent decades. Central obesity, measured by waist circumference, is the most dangerous type of obesity since it is closely related to chronic diseases,

metabolic complications, and high COVID-19 infection rates. The objective of this study was to identify the dominant factor of central obesity among the adult population. The study used secondary data from a 2017 cross-sectional study conducted at Bojong Gede Public Health Center, Bogor Regency, Indonesia. A total of 85 men and women aged 25-64 years old were selected through purposive sampling and included in the analysis. The association between risk factors and central obesity were measured through chi-square bivariate analysis and multiple logistic regression multivariate analysis using IBM SPSS application version 22. The prevalence of central obesity was 70.6%. The results showed that sex (women), total blood cholesterol level (hypercholesterolemia), energy, protein, fat, and carbohydrate intake (>110%personal nutritional needs) were significantly associated with central obesity (p-value < 0.05). Hypercholesterolemia was the most dominant risk factor for central obesity (p-value = 0.032; OR = 4.21; 95%CI = 1.131-15.667) adjusted for confounders.

Publication Type

Journal article.

<404>

Accession Number

20210097973

Author

Morais, A. H. de A.; Aquino, J. de S.; Silva-Maia, J. K. da; Vale, S. H. de L.; Maciel, B. L. L.; Passos, T. S.

Title

Nutritional status, diet and viral respiratory infections: perspectives for severe acute respiratory syndrome coronavirus 2.

Source

British Journal of Nutrition; 2021. 125(8):851-862. 137 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

COVID-19, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was recognised by the WHO as a pandemic in 2020. Host preparation to combat the virus is an important strategy to avoid COVID-19 severity. Thus, the relationship between eating habits, nutritional status and their effects on the immune response and further implications in viral respiratory infections is an important topic discussed in this review. Malnutrition causes the most diverse alterations in the immune system, suppressing of the immune response and increasing the susceptibility to infections such as SARS-CoV-2. On the other hand,

obesity induces low-grade chronic inflammation caused by excess adiposity, which increases angiotensin-converting enzyme 2. It decreases the immune response favouring SARS-CoV-2 virulence and promoting respiratory distress syndrome. The present review highlights the importance of food choices considering their inflammatory effects, consequently increasing the viral susceptibility observed in malnutrition and obesity. Healthy eating habits, micronutrients, bioactive compounds and probiotics are strategies for COVID-19 prevention. Therefore, a diversified and balanced diet can contribute to the improvement of the immune response to viral infections such as COVID-19.

Publication Type

Journal article.

<405>

Accession Number

20210097930

Author

Ran Li; Chen XuYu; Wang Ying; Wu WenWen; Zhang Ling; Tan XiaoDong

Title

Risk factors of healthcare workers with coronavirus disease 2019: a retrospective cohort study in a designated hospital of Wuhan in China. (COVID special issue #2.)

Source

Clinical Infectious Diseases; 2020. 71(16):2218-2221. 12 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Coronavirus Disease 2019 (COVID-19), which originated in Wuhan, China, has caused many healthcare workers (HCWs) to be infected. Seventy-two HCWs manifested with acute respiratory illness were retrospectively enrolled to analyze the risk factors. The high-risk department, longer duty hours, and suboptimal hand hygiene after contacting with patients were linked to COVID-19.

Publication Type

Journal article.

<406>

Accession Number

20210097922

Author

Katsidzira, L.; Gwaunza, L.; Hakim, J. G.

Title

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) epidemic in Zimbabwe: quo vadis? (COVID special issue #2.)

Source

Clinical Infectious Diseases; 2020. 71(16):2180-2183. 25 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The trajectory and impact of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic in sub-Saharan Africa are unclear, but they are seemingly varied between different countries, with most reporting low numbers. We use the situation in Zimbabwe to build an argument that the epidemic is likely to be attenuated in some countries with similar socioeconomic and cultural structures. However, even an attenuated epidemic may overwhelm weak health systems, emphasizing the importance of prevention. These prevention strategies should be tailored to the unique social and cultural networks of individual countries, which may facilitate the spread of SARS-CoV-2. It is also equally important to maintain services for the major infectious diseases in the region, such as tuberculosis and malaria. A breakdown of treatment and prevention services for these conditions may even overshadow the projected morbidity and mortality from coronavirus disease 2019 (COVID-19).

Publication Type

Journal article.

<407>

Accession Number

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20210097913

Author

Zheng LiChun; Wang Xiang; Zhou ChongChong; Liu Qin; Li Shuang; Sun Qin; Wang MengJia; Zhou Qian; Wang WenMei

Title

Analysis of the infection status of healthcare workers in Wuhan during the COVID-19 outbreak: a cross-sectional study. (COVID special issue #2.)

Source

Clinical Infectious Diseases; 2020. 71(16):2109-2113. 22 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Healthcare workers (HCWs) at the frontline are facing a substantial risk of infection during the coronavirus disease 2019 (COVID-19) outbreak. Methods: We acquired information and data on general information on and infection and death status of HCWs in Wuhan during the COVID-19 outbreak and completed statistical analyses. Results: We obtained the data on 2457 infected cases among HCWs in Wuhan, China. More than half of the infected individuals were nurses (52.06%), whereas 33.62% of infected cases were doctors and 14.33% of cases were medical staff. In particular, the case infection rate of nurses (2.22%) was remarkably higher than that of doctors (1.92%). Most infected cases among HCWs were female (72.28%). A majority of the infected HCWs (89.26%) came from general hospitals, followed by specialized hospitals (5.70%) and community hospitals (5.05%). The case infection rate of HCWs (2.10%) was dramatically higher than that of non-HCWs (0.43%). The case fatality rate of HCWs (0.69%) was significantly lower than that of non-HCWs (5.30%). Conclusions: The infection risk of HCWs is clearly higher than that of non-HCWs. HCWs play an essential role in fighting the pandemic. The analysis of the infection status of HCWs is essential to attract enough attention from the public, provide effective suggestions for government agencies, and improve protective measures for HCWs.

Publication Type

Journal article.

<408>

Accession Number

20210097876

Author

Samiran Mondal; Abhijit Karmakar; Tamanna Mallick; Begum, N. A.

Title

Exploring the efficacy of naturally occurring biflavone based antioxidants towards the inhibition of the SARS-CoV-2 spike glycoprotein mediated membrane fusion.

Source

Virology; 2021. 556:133-139. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Molecular docking studies were done to show the inhibitory effect of two naturally occurring biflavone based anti-HIV agents, hinokiflavone and robustaflavone against the SARS-CoV-2 spike (S) protein mediated attack on the human ACE2 receptors via membrane fusion mechanism. Nefamostat, a FDA approved drug, well-known as a serine protease inhibitor for MERS-CoV infection, was used as the reference compound. Both the biflavones, showed potential as inhibitors for SARS-CoV-2 S protein-mediated viral entry. The binding affinities of these naturally occurring biflavones for RBD-S2 subunit protein of SARS-CoV-2 were explored for the first time. Such binding affinities play a critical role in the virus-cell membrane fusion process. These biflavones are able to interact more strongly with the residues of heptad repeat 1 and 2 (HR1 and HR2) regions of S2 protein of SARS-CoV-2 compared to nefamostat, and thus, these biflavones can effectively block the formation of six-helix bundle core fusion structure (6-HB) leading to the inhibition of virus-target cell-membrane fusion.

Publication Type

Journal article.

<409>

Accession Number

20210097872

Author

Stauff, C. B.; Lien, C. Z.; Selvaraj, P.; Liu, S.; Wang, T. T.

Title

The G614 pandemic SARS-CoV-2 variant is not more pathogenic than the original D614 form in adult Syrian hamsters.

Source

Virology; 2021. 556:96-100. 12 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Dynamic tracking of variant frequencies among viruses circulating in the global pandemic has revealed the emergence and dominance of a D614G mutation in the SARS-CoV-2 spike protein. To address whether pandemic SARS-CoV-2 G614 variant has evolved to become more pathogenic, we infected adult hamsters (>10 months old) with two natural SARS-CoV-2 variants carrying either D614 or G614 spike protein to mimic infection of the adult/elderly human population. Hamsters infected by the two variants exhibited comparable viral loads and pathology in lung tissues as well as similar amounts of virus shed in nasal washes. Altogether, our study does not find that naturally circulating D614 and G614 SARS-CoV-2 variants differ significantly in pathogenicity in hamsters.

Publication Type

Journal article.

<410>

Accession Number

20210097868

Author

Ratcliff, J.; Simmonds, P.

Title

Potential APOBEC-mediated RNA editing of the genomes of SARS-CoV-2 and other coronaviruses and its impact on their longer term evolution.

Source

Virology; 2021. 556:62-72. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Members of the APOBEC family of cytidine deaminases show antiviral activities in mammalian cells through lethal editing in the genomes of small DNA viruses, herpesviruses and retroviruses, and potentially those of RNA viruses such as coronaviruses. Consistent with the latter, APOBEC-like directional CU transitions of genomic plus-strand RNA are greatly overrepresented in SARS-CoV-2 genome sequences of variants emerging during the COVID-19 pandemic. A CU mutational process may leave evolutionary imprints on coronavirus genomes, including extensive homoplasmy from editing and reversion at targeted sites and the occurrence of driven amino acid sequence changes in viral proteins. If sustained over longer periods, this process may account for the previously reported marked global depletion of C and excess of U bases in human seasonal coronavirus genomes. This review synthesizes the current knowledge on APOBEC evolution and function and the evidence of their role in APOBEC-mediated genome editing of SARS-CoV-2 and other coronaviruses.

Publication Type

Journal article.

<411>

Accession Number

20210097859

Author

Nacheha, J. B.; Grimwood, A.; Mahomed, H.; Fatti, G.; Preiser, W.; Kallay, O.; Mbala, P. K.; Muyembe, J. J. T.; Rwagasore, E.; Nsanzimana, S.; Ngamije, D.; Condo, J.; Noormahomed, E. V.; Reid, M.; Lukeni, B.; Suleman, F.; Mteta, A.; Zumla, A.; Sidat, M.

Title

From easing lockdowns to scaling up community-based coronavirus disease 2019 screening, testing, and contact tracing in Africa - shared approaches, innovations, and challenges to minimize morbidity and mortality.

Source

Clinical Infectious Diseases; 2020. 72(2):327-331. 16 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The arrival of coronavirus disease 2019 (COVID-19) on the African continent resulted in a range of lockdown measures that curtailed the spread of the infection but caused economic hardship. African countries now face difficult choices regarding easing of lockdowns and sustaining effective public health control measures and surveillance. Pandemic control will require efficient community screening, testing, and contact tracing; behavioral change interventions; adequate resources; and well-supported, community-based teams of trained, protected personnel. We discuss COVID-19 control approaches in selected African countries and the need for shared, affordable, innovative methods to overcome challenges and minimize mortality. This crisis presents a unique opportunity to align COVID-19 services with those already in place for human immunodeficiency virus, tuberculosis, malaria, and non communicable diseases through mobilization of Africa's interprofessional healthcare workforce. By addressing the challenges, the detrimental effect of the COVID-19 pandemic on African citizens can be minimized.

Publication Type

Journal article.

<412>

Accession Number

20210097765

Author

Wesley Milks, M.; Sandeep Sahay; Benza, R. L.; Farber, H. W.

Title

Risk assessment in patients with pulmonary arterial hypertension in the era of COVID 19 pandemic and the telehealth revolution: state of the art review.

Source

Journal of Heart and Lung Transplantation; 2021. 40(3):172-182. 60 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Patients affected by pulmonary arterial hypertension (PAH) benefit from intensive, continuous clinical monitoring to guide escalation of treatments that carry the potential to improve survival and quality of life. During the coronavirus disease 2019 pandemic, the need for physical distancing has fueled the expeditious expansion of various telehealth modalities, which may apply in a unique manner to individuals with PAH. Performance of objective risk assessments in patients with PAH remotely via telemedical visits and other telehealth mechanisms is unprecedented and not yet rigorously validated. The uniquely high risk for rapid deterioration in patients with PAH demands a high degree of sensitivity to detect changes in functional assessments. In this review, several telehealth modalities for potential utilization in risk assessment and treatment titration in patients with PAH are explored, yet additional study is needed for their validation with the pre-pandemic care paradigm.

Publication Type

Journal article.

<413>

Accession Number

20210097323

Author

Akatsu, H.

Title

Exploring the effect of probiotics, prebiotics, and postbiotics in strengthening immune activity in the elderly.

Source

Vaccines; 2021. 9(2). 68 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Vaccination is the easiest way to stimulate the immune system to confer protection from disease. However, the inefficacy of vaccination in the elderly, especially those under nutritional control such as individuals receiving artificial nutrition after cerebral infarction or during dementia, has led to the search for an adjuvant to augment the acquired immune response in this population. The cross-talk between the gut microbiota and the host immune system is gaining attention as a potential adjuvant for vaccines. Probiotics, prebiotics, and postbiotics, which are commonly used to modulate gut health, may enhance the immune response and the effectiveness of vaccination in the elderly. This review summarizes the use of

these gut modulators as adjuvants to boost both the innate and acquired immune responses in the elderly under nutritional control. Although the clinical evidence on this topic is limited and the initial findings await clarification through future studies with large sample sizes and proper study designs, they highlight the necessity for additional research in this field, especially in light of the ongoing COVID-19 pandemic, which is disproportionately affecting the elderly.

Publication Type

Journal article.

<414>

Accession Number

20210097317

Author

Yang YongPing; Shi Wei; Abiona, O. M.; Nazzari, A.; Olia, A. S.; Ou Li; Phung, E.; Stephens, T.; Tsybovsky, Y.; Verardi, R.; Wang ShuiShu; Werner, A.; Yap, C.; Ambrozak, D.; Bylund, T.; Liu, T.; Nguyen, R.; Wang LingShu; Zhang BaoShan; Zhou TongQing; Chuang GwoYu; Graham, B. S.; Mascola, J. R.; Corbett, K. S.; Kwong, P. D.

Title

Newcastle disease virus-like particles displaying prefusion-stabilized SARS-CoV-2 spikes elicit potent neutralizing responses.

Source

Vaccines; 2021. 9(2). 57 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic highlights an urgent need for vaccines that confer protection from SARS-CoV-2 infection. One approach to an effective COVID-19 vaccine may be through the display of SARS-CoV-2 spikes on the surface of virus-like particles, in a manner structurally mimicking spikes on a native virus. Here we report the development of Newcastle disease virus-like particles (NDVLPs) displaying the prefusion-stabilized SARS-CoV-2 spike ectodomain (S2P). Immunoassays with SARS-CoV-2-neutralizing antibodies revealed the antigenicity of S2P-NDVLP to be generally similar to that of soluble S2P, and negative-stain electron microscopy showed S2P on the NDVLP surface to be displayed with a morphology corresponding to its prefusion conformation. Mice immunized with S2P-NDVLP showed substantial neutralization titers (geometric mean ID50 = 386) two weeks after prime immunization, significantly higher than those elicited by a molar equivalent amount of soluble S2P (geometric mean ID50 = 17). Neutralizing titers at Week 5,

two weeks after a boost immunization with S2P-NDVLP doses ranging from 2.0 to 250 g, extended from 2125 to 4552, and these generally showed a higher ratio of neutralization versus ELISA than observed with soluble S2P. Overall, S2P-NDVLP appears to be a promising COVID-19 vaccine candidate capable of eliciting substantial neutralizing activity.

Publication Type

Journal article.

<415>

Accession Number

20210097293

Author

Chandrasekar, S. S.; Phanse, Y.; Hildebrand, R. E.; Hanafy, M.; Wu ChiaWei; Hansen, C. H.; Osorio, J. E.; Suresh, M.; Talaat, A. M.

Title

Localized and systemic immune responses against SARS-CoV-2 following mucosal immunization.

Source

Vaccines; 2021. 9(2). 55 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The rapid transmission of SARS-CoV-2 in the USA and worldwide necessitates the development of multiple vaccines to combat the COVID-19 global pandemic. Previously, we showed that a particulate adjuvant system, quill-A-loaded chitosan (QAC) nanoparticles, can elicit robust immunity combined with plasmid vaccines when used against avian coronavirus. Here, we report on the immune responses elicited by mucosal homologous plasmid and a heterologous immunization strategy using a plasmid vaccine and a Modified Vaccinia Ankara (MVA) expressing SARS-CoV-2 spike (S) and nucleocapsid (N) antigens. Only the heterologous intranasal immunization strategy elicited neutralizing antibodies against SARS-CoV-2 in serum and bronchoalveolar lavage of mice, suggesting a protective vaccine. The same prime/boost strategy led to the induction of type 1 and type 17 T-cell responses and polyfunctional T-cells expressing multiple type 1 cytokines (e.g., IFN-, TNF, IL-2) in the lungs and spleens of vaccinated mice. In contrast, the plasmid homologous vaccine strategy led to the induction of local mono and polyfunctional T-cells secreting IFN-. Outcomes of this study support the potential of QAC-nano vaccines to elicit significant mucosal immune responses against respiratory coronaviruses.

Publication Type

Journal article.

<416>

Accession Number

20210097289

Author

Bettini, E.; Locci, M.

Title

SARS-CoV-2 mRNA vaccines: immunological mechanism and beyond.

Source

Vaccines; 2021. 9(2). 83 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To successfully protect against pathogen infection, a vaccine must elicit efficient adaptive immunity, including B and T cell responses. While B cell responses are key, as they can mediate antibody-dependent protection, T cells can modulate B cell activity and directly contribute to the elimination of pathogen-infected cells. In the unprecedented race to develop an effective vaccine for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of the respiratory disease coronavirus disease 2019 (COVID-19), messenger RNA (mRNA) vaccines have emerged as front runners thanks to their capacity for rapid development and ability to drive potent adaptive immune responses. In this review article, we provide an overview of the results from pre-clinical studies in animal models as well as clinical studies in humans that assessed the efficacy of SARSCoV- 2 mRNA vaccines, with a primary focus on adaptive immune responses post vaccination.

Publication Type

Journal article.

<417>

Accession Number

20210097285

Author

Sallam, M.

Title

COVID-19 vaccine hesitancy worldwide: a concise systematic review of vaccine acceptance rates.

Source

Vaccines; 2021. 9(2). 103 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Utility of vaccine campaigns to control coronavirus 2019 disease (COVID-19) is not merely dependent on vaccine efficacy and safety. Vaccine acceptance among the general public and healthcare workers appears to have a decisive role in the successful control of the pandemic. The aim of this review was to provide an up-to-date assessment of COVID-19 vaccination acceptance rates worldwide. A systematic search of the peer-reviewed English survey literature indexed in PubMed was done on 25 December 2020. Results from 31 peer-reviewed published studies met the inclusion criteria and formed the basis for the final COVID-19 vaccine acceptance estimates. Survey studies on COVID-19 vaccine acceptance rates were found from 33 different countries. Among adults representing the general public, the highest COVID-19 vaccine acceptance rates were found in Ecuador (97.0%), Malaysia (94.3%), Indonesia (93.3%) and China (91.3%). However, the lowest COVID-19 vaccine acceptance rates were found in Kuwait (23.6%), Jordan (28.4%), Italy (53.7), Russia (54.9%), Poland (56.3%), US (56.9%), and France (58.9%). Only eight surveys among healthcare workers (doctors and nurses) were found, with vaccine acceptance rates ranging from 27.7% in the Democratic Republic of the Congo to 78.1% in Israel. In the majority of survey studies among the general public stratified per country (29/47, 62%), the acceptance of COVID-19 vaccination showed a level of 70%. Low rates of COVID-19 vaccine acceptance were reported in the Middle East, Russia, Africa and several European countries. This could represent a major problem in the global efforts to control the current COVID-19 pandemic. More studies are recommended to address the scope of COVID-19 vaccine hesitancy. Such studies are particularly needed in the Middle East and North Africa, Sub-Saharan Africa, Eastern Europe, Central Asia, Middle and South America. Addressing the scope of COVID-19 vaccine hesitancy in various countries is recommended as an initial step for building trust in COVID-19 vaccination efforts.

Publication Type

Journal article.

<418>

Accession Number

20210097187

Author

Park KyungSoo; Bazzill, J. D.; Son SeJin; Nam, J.; Shin SeungWon; Ochyl, L. J.; Stuckey, J. A.; Meagher, J. L.; Chang, L.; Song Jun; Montefiori, D. C.; LaBranche, C. C.; Smith, J. L.; Xu Jie; Moon, J. J.

Title

Lipid-based vaccine nanoparticles for induction of humoral immune responses against HIV-1 and SARS-CoV-2.

Source

Journal of Controlled Release; 2021. 330:529-539. 42 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The current health crisis of corona virus disease 2019 (COVID-19) highlights the urgent need for vaccine systems that can generate potent and protective immune responses. Protein vaccines are safe, but conventional approaches for protein-based vaccines often fail to elicit potent and long-lasting immune responses. Nanoparticle vaccines designed to co-deliver protein antigens and adjuvants can promote their delivery to antigen-presenting cells and improve immunogenicity. However, it remains challenging to develop vaccine nanoparticles that can preserve and present conformational epitopes of protein antigens for induction of neutralizing antibody responses. Here, we have designed a new lipid-based nanoparticle vaccine platform (NVP) that presents viral proteins (HIV-1 and SARS-CoV-2 antigens) in a conformational manner for induction of antigen-specific antibody responses. We show that NVP was readily taken up by dendritic cells (DCs) and promoted DC maturation and antigen presentation. NVP loaded with BG505.SOSIP.664 (SOSIP) or SARS-CoV-2 receptor-binding domain (RBD) was readily recognized by neutralizing antibodies, indicating the conformational display of antigens on the surfaces of NVP. Rabbits immunized with SOSIP-NVP elicited strong neutralizing antibody responses against HIV-1. Furthermore, mice immunized with RBD-NVP induced robust and long-lasting antibody responses against RBD from SARS-CoV-2. These results suggest that NVP is a promising platform technology for vaccination against infectious pathogens.

Publication Type

Journal article.

<419>

Accession Number

20210097125

Author

Palamar, J. J.; Le, A.; Acosta, P.

Title

Shifts in drug use behavior among electronic dance music partygoers in New York during COVID-19 social distancing.

Source

Substance Use and Misuse; 2021. 56(2):238-244. 44 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Background: Little is known about how COVID-19-related social distancing has affected illegal drug use. We surveyed electronic dance music (EDM) partygoers—a population known for high levels of drug use—to determine whether their drug use patterns had changed during state-mandated social distancing in New York. Methods: Individuals were recruited online and screened for eligibility throughout April and May 2020. We surveyed 128 eligible adults and queried, retrospectively, whether their drug use behavior had changed during COVID-19-related social distancing. Results: Most participants reporting past-three-month use reported decreased frequency of use during COVID-19-related social distancing. Specifically, 78.6% reduced frequency of use of cocaine, 71.1% reduced frequency of use of ecstasy/MDMA/Molly, and 68.0% reduced frequency of use of LSD. Although some participants reported increased frequency of use of cocaine (7.1%), ecstasy (7.9%), or LSD (12.0%), 35.0% reported increased frequency of cannabis use. Most (66.7%) of those reporting cocaine use reduced the amount used. The majority of those reporting use of cannabis, ecstasy, cocaine, and/or LSD reported that drug cost (80.0-84.0%) and drug quality (84.2-92.0%) did not change during social distancing. Having a college degree was associated with higher odds for decreasing frequency of cannabis use. Older participants (ages ≥23) were at lower odds for decreasing frequency of cocaine use, as were those earning >\$500 per week, and participants who attended EDM events biweekly or more often were at higher odds for decreasing frequency of LSD use. Conclusions: Participants in this sample tended to reduce party drug use during COVID-19-related social distancing.

Publication Type

Journal article.

<420>

Accession Number

20210097119

Author

Bezerra Espinola, M. S.; Bertelli, M.; Bizzarri, M.; Unfer, V.; Lagana, A. S.; Visconti, B.; Aragona, C.

Title

Inositol and vitamin D may naturally protect human reproduction and women undergoing assisted reproduction from COVID-19 risk.

Source

Journal of Reproductive Immunology; 2021. 144. many ref.

Publisher

Elsevier Science Ireland Ltd.

Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

In late 2019, the new Coronavirus has been identified in the city of Wuhan then COVID-19 spreads like wildfire in the rest of the world. Pregnant women represent a risk category for increased abortion rates and vertical transmission with adverse events on the newborns has been recently confirmed. The scientific world is struggling for finding an effective cure for counteracting symptomatology. Today, there are many therapeutic proposes but none of them can effectively counteract the infection. Moreover, many of these compounds show important side effects not justifying their use. Scientific literature reports an immune system over-reaction through interleukins-6 activation. In this regard, the possibility to control the immune system represents a possible strategy for counteracting the onset of COVID-19 symptomatology. Vitamin D deficiency shows increased susceptibility to acute viral respiratory infections. Moreover, Vitamin D seems involved in host protection from different virus species by modulating activation and release of cytokines. Myo-inositol down-regulates the expression of IL-6 by phosphatidyl-inositol-3-kinase (PI3K) pathway. Furthermore, myo-inositol is the precursor of phospholipids in the surfactant and it is applied for inducing surfactant synthesis in infants for treating respiratory distress syndrome (RDS). This review aims to summarize the evidence about COVID-19 infection in pregnant women and to encourage the scientific community to investigate the use of Vitamin D and Myo-inositol which could represent a possible preventive treatment for pregnant women or women undergoing assisted reproductive technologies (ART).

Publication Type

Journal article.

<421>

Accession Number

20210096784

Author

Passavanti, M.; Argentieri, A.; Barbieri, D. M.; Lou BaoWen; Wijayaratna, K.; Foroutan Mirhosseini, A. S.; Wang FuSong; Naseri, S.; Qamhia, I.; Tangerang, M.; Pelliciarì, M.; Ho ChunHsing

Title

The psychological impact of COVID-19 and restrictive measures in the world.

Source

Journal of Affective Disorders; 2021. 283:36-51. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: In a short time, the COVID-19 pandemic turned into a global emergency. The fear of becoming infected and the lockdown measures have drastically changed people's daily routine. The aim of this study is to establish the psychological impact that the COVID-19 pandemic is entailing, particularly with regards to levels of stress, anxiety and depression, and to the risks of developing Post-Traumatic Stress Disorder (PTSD). Methods: The study, carried out with a sample of 1612 subjects distributed in seven countries (Australia, China, Ecuador, Iran, Italy, Norway and the United States), allowed us to collect information about the psychological impact of COVID-19. Results: The findings of this study show that the levels of stress, depression and anxiety, as well as the risks of PTSD, are higher than average in over half of the considered sample. The severity of these disorders significantly depends on gender, type of outdoor activities, characteristics of their homes, eventual presence of infected acquaintances, time dedicated to looking for related information (in the news and social networks), type of source information and, in part, to the level of education and income. Conclusions: We conclude that COVID-19 has a very strong psychological impact on the global population. This appears to be linked to the coping strategies adopted, level of mindful awareness, socio-demographic variables, people's habits and the way individuals use means of communication and information.

Publication Type

Journal article.

<422>

Accession Number

20210096773

Author

Schmitt, A. A.; Brenner, A. M.; Primo Carvalho Alves, L. de; Claudino, F. C. de A.; Fleck, M. P. de A.; Rocha, N. S.

Title

Potential predictors of depressive symptoms during the initial stage of the COVID-19 outbreak among Brazilian adults.

Source

Journal of Affective Disorders; 2021. 282:1090-1095. 28 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: In early 2020, Sars-Cov-2 was identified in China as a new coronavirus. Due to its transmission, Sars-Cov-2 has spread rapidly across the world. In the early stage of the disease outbreak, psychiatric symptoms have been reported, including depressive symptoms. In this study, we assessed the prevalence of depressive symptoms in quarantine and its association with sociodemographic variables and known protective factors for depression, such as spirituality, social support, resilience, and quality of life. **Methods:** A cross-sectional web-based questionnaire was distributed via social media. The instruments consisted of the 8-item EUROHIS-QOL, PHQ-9, Social Support Questionnaire, WHOQoL-SRPB, and CD-RISC. **Results:** A total of 3,274 participants were included in this study. 23.67% of the participants met the criteria for a depressive episode. Higher age, spirituality, social support, resiliency, and quality of life were associated with less depressive symptoms. Quarantine length; mental health treatment; chronic disease; age; sex; lower levels of spirituality, social support, resilience, quality of life, physical exercise, and education; and unpaid occupation were found to be predictors of depressive symptoms during COVID-19 quarantine. **Limitations:** The data are limited to the pandemic initial period, the sample isn't random and the use of self-reported questionnaires are some limitations of our study. **Conclusions:** During the initial phase of the COVID-19 outbreak in Brazil, quarantine time, treatment for mental health, chronic illness, lower levels of education, and unpaid occupation were positively associated with depressive symptoms. Age, sex, spirituality, social support, resilience, quality of life, and physical exercise showed a negative relationship with depressive symptoms.

Publication Type

Journal article.

<423>

Accession Number

20210096767

Author

An YuanYuan; Sun YiJing; Liu ZhengKui; Chen YaRu

Title

Investigation of the mental health status of frontier-line and non-frontier-line medical staff during a stress period.

Source

Journal of Affective Disorders; 2021. 282:836-839. 29 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The Coronavirus Disease 2019 (COVID-19) epidemic has become a global public health event. Medical staff around the world are nervously responding to the crisis, and their mental health problems deserve attention. To better know the differences in the mental health status between frontier-line and non-frontier-line medical staff. This study used the Child PTSD Symptom Scale, the Self-Rating Depression Scale, the Self-Rating Anxiety Scale and the Connor-Davidson Resilience Scale to examine the PTSD, depression, anxiety and resilience among 162 frontier-line medical workers and 163 non-frontier-line medical workers in China. The results showed that all negative factor scores of non-frontier-line medical staff seemed to be worse than those of frontier-line medical staff, and the positive factor scores were the opposite through descriptive analysis, independent sample t-test and Chi-square test. Some psychological effects and theories were used to explain this phenomenon. Intervention suggestions for medical staff and future research directions were discussed.

Publication Type

Journal article.

<424>

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Accession Number

20210096753

Author

Torrente, F.; Yoris, A.; Low, D. M.; Lopez, P.; Bekinschtein, P.; Manes, F.; Cetkovich, M.

Title

Sooner than you think: a very early affective reaction to the COVID-19 pandemic and quarantine in Argentina.

Source

Journal of Affective Disorders; 2021. 282:495-503. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The unique circumstances created by the COVID-19 pandemic pose serious challenges to mood stability and emotional regulation at all ages. Although many people tend to react resiliently to stress, others appear to display emotional anxiety and depression-related symptoms. In this study, we carried out a survey (N = 10,053) during the first week of the general lockdown (quarantine) in Argentina to measure early affective reactions in Argentine adults. Respondents showed substantial anxious and depressive symptoms, with 33% and 23% of participants reporting possible depressive and anxious syndromes, respectively, with the youngest group (18 to 25 y.o.) showing the highest prevalence of symptoms. Even if prior mental health problems predisposed or aggravated the reaction, participants without prior complaints showed signs of psychological impact. Using linear regression, the most important independent variables related to depressive symptoms were the feeling of loneliness followed by daily stress. In the case of anxious states, the strongest variables were negative repetitive thinking and feeling of loneliness. Other psychological, economic, and social factors are discussed. This study is in line with previous literature that highlight the importance of the psychological impact of pandemics, but additionally demonstrates that these reactions are present at a large scale immediately after the start of quarantine with very low infectious rates as an early anticipatory adaptive reaction leading to potential negative outcomes from adjustment disorders to major disorders. In addition, the present results provide potentially relevant information about sudden environmental impacts on affective states and specific pathways for anxiety and depression to be expressed. We end by discussing implications for public policy based on considering the most vulnerable groups.

Publication Type

Journal article.

<425>

Accession Number

20210096732

Author

Mayopoulos, G. A.; Ein-Dor, T.; Dishy, G. A.; Rasvitha Nandru; Chan, S. J.; Hanley, L. E.; Kaimal, A. J.; Dekel, S.

Title

COVID-19 is associated with traumatic childbirth and subsequent mother-infant bonding problems.

Source

Journal of Affective Disorders; 2021. 282:122-125. 21 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Knowledge of women's experience of childbirth in the outbreak of the coronavirus (COVID-19) pandemic and associated maternal health outcomes is scarce. Methods: A sample of primarily American women who gave birth around the height of COVID-19 (n = 1,611) and matched controls, i.e., women who gave birth before COVID-19 (n = 640), completed an anonymous Internet survey about recent childbirth, birth-related traumatic stress (peritraumatic distress inventory; PTSD-checklist), maternal bonding (maternal attachment inventory; mother-to-infant bonding scale) and breastfeeding status. Groups (n = 637 in each) were matched on demographics, prior mental health/trauma and childbirth factors to determine the unique contribution of COVID-19 to the psychological experience of childbirth. Results: Mothers in COVID-19-exposed communities endorsed more clinically acute stress response to childbirth than matched controls (Z = 2.65, p = .008, OR = 1.38). A path mediation model revealed that acute stress mediated the relationship between study group and postpartum outcomes. Specifically, higher acute stress response in birth was associated with more childbirth-related posttraumatic stress disorder symptoms (beta = .42, p < .001) and less bonding with the infant (beta = .26, p < .001), including breastfeeding problems (beta = .10, p < .01). Limitations: Use of a convenient internet sample introduces bias towards more educated women and reliance on retrospective self-report assessments may entail recall bias. Conclusions: COVID-19 is a major stressor for delivering women. It can heighten traumatic childbirth experiences and interfere with successful postpartum adjustment. Clinical attention to traumatic stress in childbirth and problems with caring for the young during this pandemic is important.

Publication Type

Journal article.

<426>

Accession Number

20210096721

Author

Zhang Xing; Huang PengFei; Li BiQin; Xu WenJian; Li Wen; Zhou Bin

Title

The influence of interpersonal relationships on school adaptation among Chinese university students during COVID-19 control period: multiple mediating roles of social support and resilience.

Source

Journal of Affective Disorders; 2021. 285:97-104.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Owing to the government's effective epidemic control measures, universities in some areas of China gradually resumed offline teaching six months after the COVID-19 outbreak. Although attention should now be paid to the experiences of students after they returned to campus, few studies have explored the factors and mechanisms that have influenced these students' school adaptation. The present study investigated the multiple roles of social support and resilience in mediating associations the relationship between Chinese university students' interpersonal relationships and their school adaptation during COVID-19 control period. Methods: A cross-sectional survey was conducted with 4534 Chinese university students ($M_{age} = 19.70$, $SD = 1.14$) at two universities in Jiangxi provinces. The independent variable was interpersonal relationships; mediating variables were social support and resilience; and the dependent variable was school adaptation. Multiple mediation analysis was performed using the MPlus software. Results: Controlling for demographic variables, the quality of students' interpersonal relationships was significantly and positively related to their school adaptation, with students' ratings of social support and resilience mediating these associations. More interestingly, social support and resilience played multiple mediating roles in the relationship between interpersonal relationships and school adaptation. Limitations: The age stage of the sample and the methods in which the data were collected may affect the generalizability of the results. Conclusions: During COVID-19 control period, interpersonal relationships can influence school adaptation either directly or indirectly by enhancing social support or resilience (parallel mediation) or by activating resilience via the experience of social support (serial mediation). This study's results emphasize the role of interpersonal relationships, as well as the contributions of positive external and internal factors on students' school adaptation during the epidemic control period. Accordingly, these findings may have implications for the mental health education of college students in the post-epidemic era.

Publication Type

Journal article.

<427>

Accession Number

20210096700

Author

Brunori, G.; Reboldi, P.; Aucella, F.

Title

Lessons learnt during the COVID-19 pandemic: for patients with end-stage renal disease, we should prioritize home-based treatment and telemedicine.

Source

Kidney & Blood Pressure Research; 2021. 46(1):11-16. 24 ref.

Publisher

S Karger AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Backgrounds: The recent coronavirus disease 2019 (COVID-19) pandemic has placed worldwide health systems and hospitals under pressure, and so are the renal care models. This may be a unique opportunity to promote and expand alternative models of health-care delivery in patients undergoing renal replacement therapies. **Summary:** Despite the high risk of acquiring communicable diseases when undergoing in-centre treatments, only a small proportion of patients are currently being treated with home therapies. Recent data provided by the Italian Society of Nephrology (SIN), the REIN French Registry and the Wuhan Hemodialysis Quality Control Center clearly show that patients receiving hospital-based treatment have a 3- to 4-fold greater risk of infection, and a subsequent fatality proportion between 21 and 34%. On the other hand, home-based therapy can be managed remotely, there is little or no need for transport to and from the hospital, and it is less expensive. Besides, the digital revolution in health care with the development of virtual care systems can make home dialysis with telehealth a cost-effective solution for both patients and health-care providers. Such a transition would require specific training for physicians and health-care professionals and a functional re-organization of dialysis centres to improve the skills and expertise in caring for patients at home. **Conclusion:** The need for more widespread home treatment is the main lesson learnt by nephrologists by the COVID-19 pandemic.

Publication Type

Journal article.

<428>

Accession Number

20210096629

Author

Richardson, D. P.; Lovegrove, J. A.

Title

Nutritional status of micronutrients as a possible and modifiable risk factor for COVID-19: a UK perspective.

Source

British Journal of Nutrition; 2021. 125(6):678-684. 80 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Recent scientific evidence has indicated that the elderly have increased risk of COVID-19 infections, with over 70s and 80s being hardest hit - especially residents of care homes and in clinical settings, ethnic minorities, people who work indoors and those who are overweight and obese. Other potential risk factors include lack of exposure to sunlight, darker skin pigmentation, co-morbidities, poor diet, certain medications, disadvantaged social and economic status, and lifestyle factors such as smoking and excessive consumption of alcohol. A key question is to understand how and why certain groups of people are more susceptible to COVID-19, whether they have weakened immune systems and what the roles of good nutrition and specific micronutrients are in supporting immune functions. A varied and balanced diet with an abundance of fruits and vegetables and the essential nutrients like vitamin D, vitamin A, B vitamins (folate, vitamin B6 and vitamin B12), vitamin C and the minerals, Fe, Cu, Se and Zn are all known to contribute to the normal functions of the immune system. Avoidance of deficiencies and identification of suboptimal intakes of these micronutrients in targeted groups of patients and in distinct and highly sensitive populations could help to strengthen the resilience of people to the COVID-19 pandemic. It is important to highlight evidence-based public health messages, to prevent false and misleading claims about the benefits of foods and food supplements and to communicate clearly that the extent of knowledge between micronutrients and COVID-19 infection is still being explored and that no diet will prevent or cure COVID-19 infection. Frequent handwashing and social distancing will be critical to reduce transmission.

Publication Type

Journal article.

<429>

Accession Number

20210096624

Author

Gleeson, L. E.; Roche, H. M.; Sheedy, F. J.

Title

Obesity, COVID-19 and innate immunometabolism.

Source

British Journal of Nutrition; 2021. 125(6):628-632. 50 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

As COVID-19 continues to spread worldwide, severe disease and mortality have been observed in obese patients. We discuss how obesity and obesity-associated factors such as 'meta-inflammation', dietary fat intake and paradoxical suppression of the innate immune response within the pulmonary compartment may be crucial determinants in the host response to a novel viral pathogen. Modulation of immune cell bioenergetics and metabolic potential plays a central role in the innate immune response to infection, and as we strive to combat this new global health threat, immunometabolism of the innate immune system warrants attention.

Publication Type

Journal article.

<430>

Accession Number

20210096623

Author

Bermano, G.; Meplan, C.; Mercer, D. K.; Hesketh, J. E.

Title

Selenium and viral infection: are there lessons for COVID-19?

Source

British Journal of Nutrition; 2021. 125(6):618-627. 110 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Se is a micronutrient essential for human health. Sub-optimal Se status is common, occurring in a significant proportion of the population across the world including parts of Europe and China. Human and animal studies have shown that Se status is a key determinant of the host response to viral infections. In this review, we address the question whether Se intake is a factor in determining the severity of response to coronavirus disease 2019 (COVID-19). Emphasis is placed on epidemiological and animal studies which suggest that Se affects host response to RNA viruses and on the molecular mechanisms by which Se and selenoproteins modulate the inter-linked redox homeostasis, stress response and inflammatory response. Together these studies indicate that Se status is an important factor in determining the host response to viral infections. Therefore, we conclude that Se status is likely to influence human response to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and that Se status is one (of several) risk factors which may impact on the outcome of SARS-CoV-2 infection, particularly in populations where Se intake is sub-optimal or low. We suggest the use of appropriate markers to assess the Se status of COVID-19 patients and possible supplementation may be beneficial in limiting the severity of symptoms, especially in countries where Se status is regarded as sub-optimal.

Publication Type

Journal article.

<431>

Accession Number

20210096514

Author

Chen Jing; Bai HuaLin; Liu Jia; Chen Ge; Liao QiuYue; Yang Jie; Wu Peng; Wei JunCheng; Ma Ding; Chen Gang; Ai JiHui; Li KeZhen

Title

Distinct clinical characteristics and risk factors for mortality in female inpatients with coronavirus disease 2019 (COVID-19): a sex-stratified, large-scale cohort study in Wuhan, China.

Source

Clinical Infectious Diseases; 2020. 71(12):3188-3195. 28 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: As the coronavirus disease 2019 (COVID-19) outbreak accelerates worldwide, it is important to evaluate sex-specific clinical characteristics and outcomes, which may affect public health policies. **Methods:** Patients with COVID-19 admitted to Tongji Hospital between 18 January and 27 March 2020 were evaluated. Clinical features, laboratory data, complications, and outcomes were compared between females and males. Risk factors for mortality in the whole population, females, and males were determined respectively. **Results:** There were 1667 (50.38%) females among the 3309 patients. The mortality rate was 5.9% in females but 12.7% in males. Compared with males, more females had no initial symptoms (11.1% vs 8.3%, $P = .008$). Complications including acute respiratory distress syndrome, acute kidney injury, septic shock, cardiac injury, and coagulation disorder were less common in females; critical illness was also significantly less common in females (31.1% vs 39.4%, $P < .0001$). Significantly fewer females received antibiotic treatment ($P = .001$), antiviral therapy ($P = .025$), glucocorticoids treatment ($P < .0001$), mechanical ventilation ($P < .0001$), and had intensive care unit admission ($P < .0001$). A lower risk of death was found in females (OR, .44; 95% CI, .34-.58) after adjusting for age and coexisting diseases. Among females, age, malignancy, chronic kidney disease, and days from onset to admission were significantly associated with mortality, while chronic kidney disease was not a risk factor in males. **Conclusions:** Significantly milder illness and fewer deaths were found in female COVID-19 inpatients and risk factors associated with mortality varied among males and females.

Publication Type

Journal article.

<432>

Accession Number

20210096334

Author

Fiorino, S.; Zippi, M.; Gallo, C.; Sifo, D.; Sabbatani, S.; Manfredi, R.; Rasciti, E.; Rasciti, L.; Giampieri, E.; Corazza, I.; Leandri, P.; Biase, D. de

Title

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The rationale for a multi-step therapeutic approach based on antivirals, drugs and nutrients with immunomodulatory activity in patients with coronavirus-SARS2-induced disease of different severities.

Source

British Journal of Nutrition; 2021. 125(3):275-293. 114 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

In December 2019, a novel human-infecting coronavirus, named Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2), was recognised to cause a pneumonia epidemic outbreak with different degrees of severity in Wuhan, Hubei Province in China. Since then, this epidemic has spread worldwide; in Europe, Italy has been involved. Effective preventive and therapeutic strategies are absolutely required to block this serious public health concern. Unfortunately, few studies about SARS-CoV-2 concerning its immunopathogenesis and treatment are available. On the basis of the assumption that the SARS-CoV-2 is genetically related to SARS-CoV (about 82% of genome homology) and that its characteristics, like the modality of transmission or the type of the immune response it may stimulate, are still poorly known, a literature search was performed to identify the reports assessing these elements in patients with SARS-CoV-induced infection. Therefore, we have analysed: (1) the structure of SARS-CoV-2 and SARS-CoV; (2) the clinical signs and symptoms and pathogenic mechanisms observed during the development of acute respiratory syndrome and the cytokine release syndrome; (3) the modification of the cell microRNome and of the immune response in patients with SARS infection; and (4) the possible role of some fat-soluble compounds (such as vitamins A, D and E) in modulating directly or indirectly the replication ability of SARS-CoV-2 and host immune response.

Publication Type

Journal article.

<433>

Accession Number

20210096291

Author

Gu Wei; Deng XianDing; Reyes, K.; Hsu, E.; Wang, C.; Sotomayor-Gonzalez, A.; Federman, S.; Bushnell, B.; Miller, S.; Chiu, C. Y.

Title

Associations of early COVID-19 cases in San Francisco with domestic and international travel.

Source

Clinical Infectious Diseases; 2020. 71(11):2976-2980. 16 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

In early-to-mid March 2020, 20 of 46 (43%) COVID-19 cases at a tertiary care hospital in San Francisco, California were travel related. Cases were significantly associated with travel to either Europe (odds ratio, 6.1) or New York (odds ratio, 32.9). Viral genomes recovered from 9 of 12 (75%) cases co-clustered with lineages circulating in Europe.

Publication Type

Journal article.

<434>

Accession Number

20210095950

Author

Kim EunSung; Chung JiBum

Title

Korean mothers' morality in the wake of COVID-19 contact-tracing surveillance.

Source

Social Science & Medicine; 2021. 270. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The Korean government collects and releases sociodemographic information about people infected with COVID-19, their travel histories, and whether or not the patients wore masks. Korean mothers then upload this information on the boards of online groups called "mom cafes." Based upon a digital ethnography of 15 "mom cafes," we examine how Korean mothers understand the travel histories of virus patients and explore the relationships between morality and materiality in the context of infectious disease surveillance. The main findings reveal that mom cafe mothers form moral personhood based on information gathered about artifacts, places, and the mobility of patients. They tie patients' travel histories inextricably to moral identities. Non-maleficence is central to Korean mothers' morality. This morality appears through the material discourses of artifacts, places, and mobility. A face mask becomes one such hallmark of morality. It is a requisite for moral persons. Those who visit crowded places, such as churches, clubs, and room salons, become immoral because they can be easily infected and spread the virus to their families and communities. To mom cafe mothers, mobile patients, such as clubbers, appear less moral than those who self-quarantine due to the high infection rate of COVID-19. We conclude that morality in this context involves the materiality of artifacts, a sense of place, and the spatial mobility of people.

Publication Type

Journal article.

<435>

Accession Number

20210095881

Author

Stobbs, C.

Title

Maintaining personal resilience in this COVID-19 era.

Source

In Practice; 2021. 43(2):109-112. 2 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

The role of personal resilience in maintaining psychological wellbeing is now more important than ever. No matter what your role is in practice, you are still susceptible to making that unfortunate transition from feeling pressure (which comes with the job) to feeling stressed. The Covid-19 pandemic has made these

issues more acute, so it's worth taking time out to think about how you can preserve and enhance your mental health going forward.

Publication Type

Journal article.

<436>

Accession Number

20210095878

Author

Greensmith, T.; Cook, S.

Title

Extracorporeal therapies in veterinary medicine: what is currently performed in the UK?

Source

In Practice; 2021. 43(2):71-76.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Although extracorporeal therapies (ECTs) are commonly used in human medicine, they are still in their infancy in veterinary medicine and are currently only offered in referral or experimental settings. This is expected to change in coming years, with ECTs becoming more widely available throughout the profession, although we acknowledge that while the Covid-19 pandemic is ongoing the provision of some of these therapies might be reduced/altered. Aim of the article: This article provides practitioners with an introduction to the three ECTs currently offered to veterinary patients - haemodialysis, therapeutic plasma exchange and cardiopulmonary bypass.

Publication Type

Journal article.

<437>

Accession Number

20210095762

Author

Pedrosa, M. A.; Valenzuela, R.; Garrido-Gil, P.; Labandeira, C. M.; Navarro, G.; Franco, R.; Labandeira-Garcia, J. L.; Rodriguez-Perez, A. I.

Title

Experimental data using candesartan and captopril indicate no double-edged sword effect in COVID-19.

Source

Clinical Science; 2021. 135(3):465-481. 68 ref.

Publisher

Portland Press Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

The key link between renin-angiotensin system (RAS) and COVID-19 is ACE2 (angiotensin-converting enzyme 2), which acts as a double-edged sword, because ACE2 increases the tissue anti-inflammatory response but it is also the entry receptor for the virus. There is an important controversy on several drugs that regulate RAS activity and possibly ACE2, and are widely used, particularly by patients most vulnerable to severe COVID-19. In the lung of healthy rats, we observed that candesartan (an angiotensin type-1, AT1, receptor blocker; ARB) and captopril (an ACE inhibitor; ACEI) up-regulated expression of tissue ACE2 and RAS anti-inflammatory axis receptors (AT2 and Mas receptors). This effect was particularly pronounced in rats with metabolic syndrome (obesity, increased blood pressure and hyperglycemia) and aged rats. Treatment of cultures of human type-II pneumocytes with candesartan or captopril induced up-regulation of ACE2 expression in cells. Treatment with viral spike protein induced a decrease in full-length (i.e. transmembrane) ACE2, an increase in levels of a short intracellular ACE2 polypeptide and an increase in ADAM17 activity in cells, together with an increase in levels of soluble ACE2 and major proinflammatory cytokines in the culture medium. Spike protein-induced changes and levels of spike protein internalization in cells were inhibited by pretreatment with the above-mentioned drugs. The results suggest that these drugs increase ACE2 levels and promote the anti-inflammatory RAS axis in the lung. Furthermore, possible up-regulation of viral entry by the drug-induced increase in expression of transmembrane ACE2 is counteracted by additional mechanisms, particularly by drug-induced inhibition of ADAM17 activity.

Publication Type

Journal article.

<438>

Accession Number

20210095729

Author

Wang BingRui; Sun XueHua; Kong XiaoNi; Gao YueQiu

Title

Systematic elucidation of the mechanism of Jingyin granule in the treatment of novel coronavirus (COVID-19) pneumonia via network pharmacology.

Source

International Journal of Medical Sciences (Sydney); 2021. 18(7):1648-1656. 33 ref.

Publisher

Ivyspring International Publisher Pty Ltd

Location of Publisher

Sydney

Country of Publication

Australia

Abstract

Background: Jingyin granule is one of the widely used traditional Chinese medicine mixture composed of multiple herbs in the treatment of respiratory system diseases. The mechanism of its therapeutic effects has still been obscure. The aim of this study is to use the network pharmacology approach for identification of the main active ingredients of Jingyin granule against COVID-19 targets and to explore their therapeutic mechanism. Material and Method: In this study, the ingredients of Jingyin granule were evaluated by the usage of Traditional Chinese Medicine Systems Pharmacology Database and Traditional Chinese Medicine Integrated Database, and the interactions between potential gene targets and ingredients were identified using the SwissTargetPrediction database. Meanwhile the possible efficient targets COVID-19 acts on were identified via Online Mendelian Inheritance in Man database, DisGeNET database and GeneCards database. In addition, functions, components and pathways were identified by Gene Ontology enrichment analysis and Kyoto Encyclopedia of Genes and Genomes pathway analysis. Protein interaction, ingredients-targets network was established. Results: Our findings showed that numerous ingredients of Jingyin granule could act on COVID-19 with 88 target genes. GO enrichment analysis, KEGG pathway analysis, and protein-protein interaction network revealed that these targets were interrelated with regulation of immune function, directly targeting disease genes. Conclusions: Jingyin granule could be utilized to exert systematic pharmacological effects. Jingyin granule could directly target the major genes, and also regulate the immune system, acting as oblique disease treatment.

Publication Type

Journal article.

<439>

Accession Number

20210095562

Author

Vagga, A. A.; Butola, L. K.; Khadhe, S. G.; Meshram, K. A.

Title

Association of natural antioxidants and immunity in Covid-19 pandemic.

Source

Journal of Evolution of Medical and Dental Sciences; 2021. 10(9):613-618. 49 ref.

Publisher

Akshantala Enterprises

Location of Publisher

Mysore

Country of Publication

India

Abstract

BACKGROUND: A pandemic is when an infectious disease occurs in different parts of the world simultaneously and quickly spreads from person to person. The pandemic of the 21st century in the entire world is infection with the coronavirus. India now has the world's second-largest number of confirmed cases, next to US, following a recent increase in recorded infections. In case of serious corona infections, the out-of-control immune system ultimately causes the patients' lungs to stop supplying oxygen to the body leading to respiratory failure. In some cases, the malfunctioning immune response in Covid-19 patients can drive the rapid decline in lung function. Symptoms of Covid-19, such as flu (influenza infection) similar to cold, can be avoided or mitigated and are mostly managed by combining a balanced diet with exercise and addition of antioxidants; the most common antioxidant is vitamin C in some form like raw or ripe fruits and vegetables is preferred and supplementations are also advised. Ascorbic acid is best known for its antioxidant properties and can scavenge damaging reactive oxygen species, thus protecting the body's cells and tissues from oxidative harm and dysfunction. However, vitamins also have many other significant body functions, many of which are known to promote good immune function. Vitamin C levels may be reduced during infection, and the demand for vitamin C enhances with the severity of the infection. Consequently, a possible antioxidant therapy may be suggested to get relief from the Covid-19 respiratory infection. An effective immune response relies on an appropriate diet and natural antioxidants, to hold infection at bay.

Publication Type

Journal article.

<440>

Accession Number

20210095527

Author

Ryzhakova, A. V.; Goloviznina, M. S.

Title

Quality and competitiveness of Russian chocolate in accordance with modern consumer expectations.

Source

Pishchevaya Promyshlennost'; 2021. (2):15-19. 9 ref.

Publisher

OOO "Infokholodtekh"

Location of Publisher

Moscow

Country of Publication

Russia

Abstract

In modern conditions of uncertainty caused by the introduction of quarantine measures and other restrictions associated with COVID-19, as well as the economic crisis provoked by the previously listed reasons, manufacturers need to constantly look for ways to improve competitiveness and safety (in particular, the lack of artificial additives) food products. The buyer begins to take care of his health more and more carefully and pays attention not only to the taste of the product, ignoring the ways of production and with the help of which additives it is achieved, but also pays attention to the safety and even the health benefits of a such product. As part of the scientific study, a descriptor analysis of 5 samples of chocolate (milk, bitter and dark), made according to a traditional recipe, excluding the introduction of artificial additives and flavors, was carried out in order to identify distinctive flavor and aromatic characteristics. The analysis of the obtained profiles of taste and aroma for each investigated chocolate bar, as well as the analysis of information about the distinctive features of cocoa beans of various geographical origin, showed that in the production of chocolate, cocoa beans are really used, characterized by special shades of taste and aroma. It was revealed that cocoa beans from Peru, Madagascar, Ghana, the Dominican Republic and Venezuela were presumably used in the production of the studied types of chocolate.

Publication Type

Journal article.

<441>

Accession Number

20210095524

Author

Valekar, S. S.; Phaphe, S. A.; Sarode, K. R.

Title

Mental status of dental students during lockdown due to COVID-19 pandemic - a cross sectional study in western Maharashtra.

Source

Journal of Evolution of Medical and Dental Sciences; 2021. 10(8):532-535. 20 ref.

Publisher

Akshantala Enterprises

Location of Publisher

Mysore

Country of Publication

India

Abstract

BACKGROUND: Since the World Health Organization declared coronavirus disease 2019 (Covid-19) a pandemic, it has become a major challenge to public health all around the world. The situation is physically as well as mentally challenging for dental practitioners, teaching faculty, and dental students. We wanted to determine the stress among dental students due to the lockdown. This will aid us in determining the amendments to be made to help students manage the stress in such a critical situation the world is facing. **METHODS:** This is a cross-sectional quantitative study done using a voluntarily filled online questionnaire. The survey was conducted on undergraduate dental students of School of Dental Sciences, Karad. Third and final year students were included in the study as they are more into clinical practice. Out of 163 students, 118 students responded to the questionnaire. **RESULTS:** 93% of the total respondents reported that the period of lockdown will have an impact on the mental wellbeing of the students. Stress due to loss of academic year, patients missing appointments, dentist's being at high risk was found to be 97%, 75%, 89.8% respectively. **CONCLUSIONS:** A significant number of dental students had disturbed mental wellbeing during the period of lockdown. Supporting the mental health of all health care workers must be a critical part of the public health response, and special efforts should be directed to vulnerable sectors.

Publication Type

Journal article.

<442>

Accession Number

20210095086

Author

Bousquet, J.; Anto, J. M.; Czarlewski, W.; Haahtela, T.; Fonseca, S. C.; Iaccarino, G.; Blain, H.; Vidal, A.; Sheikh, A.; Akdis, C. A.; Zuberbier, T.

Title

Cabbage and fermented vegetables: from death rate heterogeneity in countries to candidates for mitigation strategies of severe COVID-19.

Source

Allergy; 2020. 76(3):735-750. 155 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

Large differences in COVID-19 death rates exist between countries and between regions of the same country. Some very low death rate countries such as Eastern Asia, Central Europe, or the Balkans have a common feature of eating large quantities of fermented foods. Although biases exist when examining ecological studies, fermented vegetables or cabbage have been associated with low death rates in European countries. SARS-CoV-2 binds to its receptor, the angiotensin-converting enzyme 2 (ACE2). As a result of SARS-CoV-2 binding, ACE2 downregulation enhances the angiotensin II receptor type 1 (AT1R) axis associated with oxidative stress. This leads to insulin resistance as well as lung and endothelial damage, two severe outcomes of COVID-19. The nuclear factor (erythroid-derived 2)-like 2 (Nrf2) is the most potent antioxidant in humans and can block in particular the AT1R axis. Cabbage contains precursors of sulforaphane, the most active natural activator of Nrf2. Fermented vegetables contain many lactobacilli, which are also potent Nrf2 activators. Three examples are: kimchi in Korea, westernized foods, and the slum paradox. It is proposed that fermented cabbage is a proof-of-concept of dietary manipulations that may enhance Nrf2-associated antioxidant effects, helpful in mitigating COVID-19 severity.

Publication Type

Journal article.

<443>

Accession Number

20210095022

Author

Munazza Asad; Nooresahar; Sabzwari, S. R.

Title

Telemedicine: a new frontier in clinical practice.

Source

Pakistan Journal of Medical Sciences; 2021. 37(2):588-590. 13 ref.

Publisher

Professional Medical Publications

Location of Publisher

Karachi

Country of Publication

Pakistan

Abstract

The COVID-19 pandemic has highlighted the important role of telemedicine as a tool for safe healthcare delivery across the world. While its use was more common in the developed world, the developing world has also adopted this strategy. It is important to develop a clear process and contextual guidance for effective use of this strategy for better patient-doctor interaction and its role in teaching/learning of trainees.

Publication Type

Journal article.

<444>

Accession Number

20210095021

Author

Laima Alam; Kazmi, S. K. H.; Mafaza Alam; Varqa Faraid

Title

Amid COVID-19 pandemic, are non-COVID patients left in the lurch?

Source

Pakistan Journal of Medical Sciences; 2021. 37(2):576-581. 17 ref.

Publisher

Professional Medical Publications

Location of Publisher

Karachi

Country of Publication

Pakistan

Abstract

Objectives: (1) To explore the possible impact of the pandemic on the health seeking behavior of the patients, (2) To explore the relation of socio-demographics on the utility of health-care facilities. **Methods:** This cross-sectional study was conducted by enrolling all patients 15 years of age presenting to the Out-Patient-Department of three main public-hospitals after obtaining ethical committee approval. A questionnaire with validated Urdu translation was filled by each participant that included sociodemographic data, pre-Covid and Covid-19 era health seeking behaviors and the impact of the pandemic on the utilization of healthcare facilities. Data was analyzed using SPSS V.19. **Results:** A total of 393 patients were enrolled with a male preponderance (72%) and a median age range of 31- 45 years. Fifty-eight percent of the study population was unemployed and 47.3% were seeking follow up care. The frequency of ER and multiple (>4 times) OPD visits were significantly decreased in the Covid-19 times whereas, the laboratory and radiology services were largely unaffected. A significant number of patients were not satisfied with the current healthcare facilities that was seen irrespective of the socio-demographic status. Emergency Room and radiology services were largely unaffected whereas, elective procedures and laboratory facilities were reported to be severely affected or delayed in relation to socio-demographic variables. **Conclusions:** Healthcare inequalities have widened and depression has shown a sharp rise during this pandemic. The over-burdened healthcare facilities at the verge of collapse may miss out on the chronic non-Covid patients which would ultimately lead to increased morbidity and mortality.

Publication Type

Journal article.

<445>

Accession Number

20210095015

Author

Zahid Mahmood; Sadia Saleem; Sara Subhan; Ayesha Jabeen

Title

Psychosocial reactions of Pakistani students towards COVID-19: a prevalence study.

Source

Pakistan Journal of Medical Sciences; 2021. 37(2):456-460. 21 ref.

Publisher

Professional Medical Publications

Location of Publisher

Karachi

Country of Publication

Pakistan

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Abstract

Background: The current study aimed at investigating the manifestation and prevalence of the commonly reported psychosocial reactions in the university students following the onset of COVID-19 pandemic. **Methods:** This cross-sectional survey was carried out during April to May, 2020 in the city of Lahore. Based on the interviews and presenting problems of thirty-nine self-referred students to student counselling service center, a list of twenty-seven self-report measure was presented through an online cross-sectional survey of 510 students enrolled in a private institute. The age range of the participants was between 17-26 years (M, 21.86; SD, 2.94). **Results:** The results showed that the most frequently reported reactions by university students during COVID-19 is restricted daily routine (92%), preoccupation with cleanliness (86%), feeling uncertain about future (85%), feeling bored (84%) and low mood (84%). The least frequently reported reaction was financial crisis (48%). The findings further showed that 18% of the participants had mild, 34% had moderate, 29% severe and 19% very severe level of problems. **Conclusions:** The finding revealed that university students have significantly affected by this pandemic which need attention from mental health professionals.

Publication Type

Journal article.

<446>

Accession Number

20210095005

Author

Rhodes, J. M.; Subramanian, S.; Laird, E.; Griffin, G.; Kenny, R. A.

Title

Vitamin D deficiency and COVID-19 severity - plausibly linked by latitude, ethnicity, impacts on cytokines, ACE2 and thrombosis.

Source

Journal of Internal Medicine; 2022. 289(1):97-115. 125 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: SARS-CoV-2 coronavirus infection ranges from asymptomatic through to fatal COVID-19 characterized by a 'cytokine storm' and lung failure. Vitamin D deficiency has been postulated as a

determinant of severity. Objectives: To review the evidence relevant to vitamin D and COVID-19. Methods: Narrative review. Results: Regression modelling shows that more northerly countries in the Northern Hemisphere are currently (May 2020) showing relatively high COVID-19 mortality, with an estimated 4.4% increase in mortality for each 1 degree latitude north of 28 degrees North (P = 0.031) after adjustment for age of population. This supports a role for ultraviolet B acting via vitamin D synthesis. Factors associated with worse COVID-19 prognosis include old age, ethnicity, male sex, obesity, diabetes and hypertension and these also associate with deficiency of vitamin D or its response. Vitamin D deficiency is also linked to severity of childhood respiratory illness. Experimentally, vitamin D increases the ratio of angiotensin-converting enzyme 2 (ACE2) to ACE, thus increasing angiotensin II hydrolysis and reducing subsequent inflammatory cytokine response to pathogens and lung injury. Conclusions: Substantial evidence supports a link between vitamin D deficiency and COVID-19 severity but it is all indirect. Community-based placebo-controlled trials of vitamin D supplementation may be difficult. Further evidence could come from study of COVID-19 outcomes in large cohorts with information on prescribing data for vitamin D supplementation or assay of serum unbound 25(OH) vitamin D levels. Meanwhile, vitamin D supplementation should be strongly advised for people likely to be deficient.

Publication Type

Journal article.

<447>

Accession Number

20210094931

Author

Bielarz, V.; Willemart, K.; Avalosse, N.; Swert, K. de; Lotfi, R.; Lejeune, N.; Poulain, F.; Ninanne, N.; Gilloteaux, J.; Gillet, N.; Nicaise, C.

Title

Susceptibility of neuroblastoma and glioblastoma cell lines to SARS-CoV-2 infection.

Source

Brain Research; 2021. 1758. 37 ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Modelling cell infection in-a-dish can represent a useful tool to understand the susceptibility of different cell types towards severe acute respiratory coronavirus-2 (SARS-CoV-2) and to decipher its neurotropism. In

this perspective, retinoic acid (RA)-differentiated neuroblastoma cell lines, SH-SY5Y and SK-N-BE(2) and glioblastoma cell lines, U-87 MG and U-373 MG, were infected with a SARS-CoV-2 strain, at various multiplicity-of-infection (MOI). We first demonstrated that the common entry genes - needed for invading epithelial cells - were expressed. RA-differentiation induced an upregulation of ace2 and tmprss2 gene expression while inducing downregulation of ctsb and ctst. Using in situ hybridization and confocal analysis, SARS-CoV-2 gene S RNA was detected intracellularly at MOI 5.0, and localized in both soma and neuritic-like or glial-like processes. The infection was confirmed by quantification of viral gene E RNA and showed a dose-dependency, with few infected cells at MOI 0.1. After 24 h of infection, no cytopathic effect was observed in SH-SY5Y abilities to maintain neuritic processes or in U-373 MG for the uptake of glutamate. Unlike the permissive Vero E6 cells, no significant apoptosis death was detected following SARS-CoV-2 infection of neuroblastoma or glioblastoma cells. This study demonstrates the susceptibility of neuronal- and glial-like cell lines towards SARS-CoV-2 infection at high MOIs. Once inside the cells, the virus does not seem to rapidly replicate nor exert major cytopathic effect. Overall, our results strengthen the idea that SARS-CoV-2 has a tropism for nervous cells that express commonly described entry genes.

Publication Type

Journal article.

<448>

Accession Number

20210094854

Author

Maina, M.; Tosas-Auguet, O.; English, M.; Schultsz, C.; McKnight, J.

Title

Infection prevention and control during the COVID-19 pandemic: challenges and opportunities for Kenyan public hospitals [version 1; peer review: 2 approved].

Source

Wellcome Open Research; 2020. 5. 15 ref.

Publisher

Wellcome Trust

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Infection prevention and control, and water sanitation and hygiene have an essential role in ensuring the quality of care and patient outcomes in hospitals. Using a modification of the World Health Organization's water sanitation and hygiene facility improvement tool, we undertook assessments in 14

public hospitals in Kenya in 2018. The hospitals received written feedback on areas where they could make improvements. Following the first confirmed cases of COVID-19 in Kenya, we were drawn to ask whether the results of our pre-pandemic survey had led to action, and whether or not the threat of COVID-19 had focused more attention on infection prevention and control and water sanitation and hygiene. Methods: Using a semi-structured interview guide, we carried out phone interviews with key hospital leaders in 11 of the 14 hospitals. The data were transcribed and coded into thematic areas. We draw on these interviews to describe the status and awareness of infection prevention and control. Results: The infection prevention and control committee members are training health workers on infection prevention and control procedures and proper use of personal protective equipment and in addition, providing technical support to hospital managers. While some hospitals have also accessed additional funds to improve infection prevention and control, they tended to be small amounts of money. Long-standing challenges with supplies of infection prevention and control materials and low staff morale persist. Crucially, the reduced supply of personal protective equipment has led to fear and anxiety among health care personnel. Conclusions: As funds are mobilised to support care for COVID-19, we ask that funds prioritise infection prevention and control measures. This would have a profoundly positive effect on within hospital virus transmission, patient and staff safety but also lasting benefits beyond the COVID-19 pandemic.

Publication Type

Journal article.

<449>

Accession Number

20210094834

Author

Andersson, M. I.; Arancibia-Carcamo, C. V.; Auckland, K.; Baillie, J. K.; Barnes, E.; Beneke, T.; Bibi, S.; Brooks, T.; Carroll, M.; Crook, D.; Dingle, K.; Dold, C.; Downs, L. O.; Dunn, L.; Eyre, D. W.; Jaramillo, J. G.; Harvala, H.; Hoosdally, S.; Ijaz, S.; James, T.; James, W.; Jeffery, K.; Justice, A.; Klenerman, P.; Knight, J. C.; Knight, M.; Liu Xu; Lumley, S. F.; Matthews, P. C.; McNaughton, A. L.; Mentzer, A. J.; Mongkolsapaya, J.; Oakley, S.; Oliveira, M. S.; Peto, T.; Ploeg, R. J.; Ratcliff, J.; Robbins, M. J.; Roberts, D. J.; Rudkin, J.; Russell, R. A.; Screatton, G.; Semple, M. G.; Skelly, D.; Simmonds, P.; Stoesser, N.; Turtle, L.; Wareing, S.; Zambon, M.

Title

SARS-CoV-2 RNA detected in blood products from patients with COVID-19 is not associated with infectious virus [version 2; peer review: 2 approved].

Source

Wellcome Open Research; 2020. 5. 56 ref.

Publisher

Wellcome Trust

Location of Publisher

London

Country of Publication

Abstract

Background: Laboratory diagnosis of SARS-CoV-2 infection (the cause of COVID-19) uses PCR to detect viral RNA (vRNA) in respiratory samples. SARS-CoV-2 RNA has also been detected in other sample types, but there is limited understanding of the clinical or laboratory significance of its detection in blood. **Methods:** We undertook a systematic literature review to assimilate the evidence for the frequency of vRNA in blood, and to identify associated clinical characteristics. We performed RT-PCR in serum samples from a UK clinical cohort of acute and convalescent COVID-19 cases (n=212), together with convalescent plasma samples collected by NHS Blood and Transplant (NHSBT) (n=462 additional samples). To determine whether PCR-positive blood samples could pose an infection risk, we attempted virus isolation from a subset of RNA-positive samples. **Results:** We identified 28 relevant studies, reporting SARS-CoV-2 RNA in 0-76% of blood samples; pooled estimate 10% (95%CI 5-18%). Among serum samples from our clinical cohort, 27/212 (12.7%) had SARS-CoV-2 RNA detected by RT-PCR. RNA detection occurred in samples up to day 20 post symptom onset, and was associated with more severe disease (multivariable odds ratio 7.5). Across all samples collected 28 days post symptom onset, 0/494 (0%, 95%CI 0-0.7%) had vRNA detected. Among our PCR-positive samples, cycle threshold (ct) values were high (range 33.5-44.8), suggesting low vRNA copy numbers. PCR-positive sera inoculated into cell culture did not produce any cytopathic effect or yield an increase in detectable SARSCoV- 2 RNA. There was a relationship between RT-PCR negativity and the presence of total SARS-CoV-2 antibody (p=0.02). **Conclusions:** vRNA was detectable at low viral loads in a minority of serum samples collected in acute infection, but was not associated with infectious SARS-CoV-2 (within the limitations of the assays used). This work helps to inform biosafety precautions for handling blood products from patients with current or previous COVID-19.

Publication Type

Journal article.

<450>

Accession Number

20210094827

Author

Chibwana, M. G.; Jere, K. C.; Kamng'ona, R.; Mandolo, J.; Katunga-Phiri, V.; Tembo, D.; Mitole, N.; Musasa, S.; Sichone, S.; Lakudzala, A.; Sibale, L.; Matambo, P.; Kadwala, I.; Byrne, R. L.; Mbewe, A.; Henrion, M. Y. R.; Morton, B.; Phiri, C.; Mallewa, J.; Mwandumba, H. C.; Adams, E. R.; Gordon, S. B.; Jambo, K. C.

Title

High SARS-CoV-2 seroprevalence in health care workers but relatively low numbers of deaths in urban Malawi.

Source

Wellcome Open Research; 2020. 5. 18 ref.

Publisher

Wellcome Trust

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In low-income countries, like Malawi, important public health measures including social distancing or a lockdown have been challenging to implement owing to socioeconomic constraints, leading to predictions that the COVID-19 pandemic would progress rapidly. However, due to limited capacity to test for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, there are no reliable estimates of the true burden of infection and death. We, therefore, conducted a SARS-CoV-2 serosurvey amongst health care workers (HCWs) in Blantyre city to estimate the cumulative incidence of SARS-CoV-2 infection in urban Malawi. Methods: We recruited 500 otherwise asymptomatic HCWs from Blantyre City (Malawi) from 22nd May 2020 to 19th June 2020 and serum samples were collected from all participants. A commercial ELISA was used to measure SARS-CoV-2 IgG antibodies in serum. Results: A total of 84 participants tested positive for SARS-CoV-2 antibodies. The HCWs with positive SARS-CoV-2 antibody results came from different parts of the city. The adjusted seroprevalence of SARS-CoV-2 antibodies was 12.3% [CI 8.2 - 16.5]. Using age-stratified infection fatality estimates reported from elsewhere, we found that at the observed adjusted seroprevalence, the number of predicted deaths was eight times the number of reported deaths. Conclusions: The high seroprevalence of SARS-CoV-2 antibodies among HCWs and the discrepancy in the predicted versus reported deaths suggests that there was early exposure but slow progression of COVID-19 epidemic in urban Malawi. This highlights the urgent need for development of locally parameterised mathematical models to more accurately predict the trajectory of the epidemic in sub-Saharan Africa for better evidence-based policy decisions and public health response planning.

Publication Type

Journal article.

<451>

Accession Number

20210094819

Author

Pan-Ngum, W.; Poomchaichote, T.; Peerawaranun, P.; Kulpijit, N.; Osterrieder, A.; Waithira, N.; Mukaka, M.; Naemiratch, B.; Chanviriyavuth, R.; Asarath, S.; Ruangakajorn, S.; Kannika, N.; Cheah PhaikYeong

Title

Perspectives on public health interventions in the management of the COVID-19 pandemic in Thailand.

Source

Wellcome Open Research; 2020. 5. 22 ref.

Publisher

Wellcome Trust

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Location of Publisher

London

Country of Publication

UK

Abstract

Background: Any government needs to react quickly to a pandemic and make decisions on healthcare interventions locally and internationally with little information regarding the perceptions of people and the reactions they may receive during the implementation of restrictions. Methods: We report an anonymous online survey in Thailand conducted in May 2020 to assess public perceptions of three interventions in the Thai context: isolation, quarantine and social distancing. A total of 1,020 participants, of whom 52% were women, responded to the survey. Results: Loss of income was the main concern among respondents (>80% for all provinces in Thailand). Traditional media and social media were important channels for communication during the pandemic. A total of 92% of respondents reported that they changed their social behaviour even before the implementation of government policy with 94% reporting they performed social distancing, 97% reported using personal protective equipment such as masks and 95% reported using sanitizer products. Conclusions: This study showed a high level of compliance from individuals with government enforced or voluntarily controls such as quarantine, isolation and social distancing in Thailand. The findings from this study can be used to inform future government measures to control the pandemic and to shape communication strategies.

Publication Type

Journal article.

<452>

Accession Number

20210094107

Author

Li JinYan; Wang Qiong; Liao CeHeng; Qiu Ye; Ge XingYi

Title

The 442th amino acid residue of the spike protein is critical for the adaptation to bat hosts for SARS-related coronaviruses.

Source

Virus Research; 2021. 295. 40 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Bats carry diverse severe acute respiratory syndrome-related coronaviruses (SARSr-CoVs). The suspected interspecies transmission of SARSr-CoVs from bats to humans has caused two severe CoV pandemics, the SARS pandemic in 2003 and the recent COVID-19 pandemic. The receptor utilization of SARSr-CoV plays the key role in determining the host range and the interspecies transmission ability of the virus. Both SARS-CoV and SARS-CoV-2 use angiotensin-converting enzyme 2 (ACE2) as their receptor. Previous studies showed that WIV1 strain, the first living coronavirus isolated from bat using ACE2 as its receptor, is the prototype of SARS-CoV. The receptor-binding domain (RBD) in the spike protein (S) of SARS-CoV and WIV1 is responsible for ACE2 binding and mediates the viral entry. Comparing to SARS-CoV, WIV1 has three distinct amino acid residues (442, 472, and 487) in its RBD. This study aimed at exploring whether these three residues could alter the receptor utilization of SARSr-CoVs. We replaced the three residues in SARS-CoV (BJ01 strain) S with their counterparts in WIV1 S, and then evaluated the change of their utilization of bat, civet, and human ACE2s using a lentivirus-based pseudovirus infection system. To further validate the S-ACE2 interactions, the binding affinity between the RBDs of these S proteins and the three ACE2s were verified by flow cytometry. The results showed that the single amino acid substitution Y442S in the RBD of BJ01 S enhanced its utilization of bat ACE2 and its binding affinity to bat ACE2. On the contrary, the reverse substitution in WIV1 S (S442Y) significantly attenuated the pseudovirus utilization of bat, civet and human ACE2s for cell entry, and reduced its binding affinity with the three ACE2s. These results suggest that the S442 is critical for WIV1 adapting to bats as its natural hosts. These findings will enhance our understanding of host adaptations and cross-species infections of coronaviruses, contributing to the prediction and prevention of coronavirus epidemics.

Publication Type

Journal article.

<453>

Accession Number

20210094100

Author

Roy, S.; Ghani, K.; Campos-Lima, P. O. de; Caruso, M.

Title

A stable platform for the production of virus-like particles pseudotyped with the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) spike protein.

Source

Virus Research; 2021. 295.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In this study, we showed that a codon optimized version of the spike (S) protein of SARS-CoV-2 can migrate to the cell membrane. However, efficient production of Moloney murine leukemia (MLV) infectious viral particles was only achieved with stable expression of a shorter S version in C-terminal (S) in MLV Gag-pol expressing cells. As compared to transient transfections, this platform generated viruses with a 1000-fold higher titer. S was 15-times more efficiently incorporated into VLPs as compared to S, and that was not due to steric interference between the cytoplasmic tail and the MLV capsid, as similar differences were also observed with extracellular vesicles. The amount of S incorporated into VLPs released from producer cells was high and estimated at 1.25 g/mL S2 equivalent (S is comprised of S1 and S2). The resulting VLPs could potentially be used alone or as a boost of other immunization strategies for COVID-19.

Publication Type

Journal article.

<454>

Accession Number

20210092630

Author

Sserwanja, Q.; Kawuki, J.; Kim, J. H.

Title

Increased child abuse in Uganda amidst COVID-19 pandemic.

Source

Journal of Paediatrics and Child Health; 2020. 57(2):188-191. 30 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

Globally, COVID-19 lockdown measures have exposed children to more sexual, physical and emotional abuse and neglect. Although the COVID-19 pandemic is likely to have long-lasting adverse psychological effects on children, there have been comparatively few studies on children's health as compared with adults, particularly in low-income countries. Uganda implemented one of the most stringent lockdowns with bans on transportation and gatherings as well as the closure of schools, stores and places of worship. In order to address the dearth of information in less developed regions, the article aims to provide an insight into the increased cases of child abuse in Uganda during the COVID-19 pandemic. The data and information were primarily compiled from government and child welfare organisation open-source databases. The psychosocial impacts of COVID-19 have greatly disrupted the living conditions of children, limiting their access to basic needs such as food and health care. In addition, there is a lack of social support, thus putting children at an increased risk of different forms of child abuse. Since the implementation of the COVID-19 lockdown in Uganda, there has been a rise in the incidence of child abuse. Increased cases of physical and sexual abuse against children have been reported in different parts of the country as well as increased cases of child labour. To strengthen child protection during the COVID-19 pandemic, this article highlights a need for multi-level stakeholder cooperation to ensure increased funding, increased community awareness and sensitisation, early detection and effective management and referral of child abuse cases.

Publication Type

Journal article.

<455>

Accession Number

20210092622

Author

Walker, G. J.; Clifford, V.; Bansal, N.; Stella, A. O.; Turville, S.; Stelzer-Braid, S.; Klein, L. D.; Rawlinson, W.

Title

SARS-CoV-2 in human milk is inactivated by holder pasteurisation but not cold storage.

Source

Journal of Paediatrics and Child Health; 2020. 56(12):1872-1874. 11 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

Aim: As the COVID-19 pandemic evolves, human milk banks world-wide continue to provide donor human milk to vulnerable infants who lack access to mother's own milk. Under these circumstances, ensuring the safety of donor human milk is paramount, as the risk of vertical transmission of SARS-CoV-2 is not fully understood. Here, we investigate the inactivation of SARS-CoV-2 in human milk by pasteurisation and the stability of SARS-CoV-2 in human milk under cold storage. **Methods:** SARS-CoV-2 was experimentally inoculated into human milk samples from healthy donors or into a control medium. Triplicates of each sample were layered onto uninfected cells after Holder pasteurisation (63 degrees C for 30 min), heating to 56 degrees C for 30 min, or after 48 h of storage at 4 degrees C or -30 degrees C. Infectious titres of virus were determined at 72 h post-infection by endpoint titration. **Results:** Following heating to 63 degrees C or 56 degrees C for 30 min, replication competent (i.e. live) SARS-CoV-2 was undetected in both human milk and the control medium. Cold storage of SARS-CoV-2 in human milk (either at 4 degrees C or -30 degrees C) did not significantly impact infectious viral load over a 48 h period. **Conclusion:** SARS-CoV-2 is effectively inactivated by Holder pasteurisation, suggesting that existing milk bank processes will effectively mitigate the risk of transmission of SARS-COV-2 to vulnerable infants through pasteurised donor human milk. The demonstrated stability of SARS-CoV-2 in refrigerated or frozen human milk may assist in the development of guidelines around safe expressing and storing of milk from COVID-19 infected mothers.

Publication Type

Journal article.

<456>

Accession Number

20210092572

Author

El-Chaar, G.

Title

Pharmacotherapy of acute COVID-19 infection and multisystem inflammatory syndrome in children: current state of knowledge.

Source

Pediatric Allergy, Immunology, and Pulmonology; 2020. 33(4):177-189. 60 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

Background: The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) pandemic is a health care emergency across the world. Although mitigation measures, such as social distancing and face masks, have attempted to slow the spread of the infection, cases continue to rise. Children who are otherwise healthy tend to develop a milder acute Coronavirus disease 2019 (COVID-19) infection and have lower mortality rates compared with adults. **Methods:** Guidelines and current primary and secondary literature on the treatment of COVID-19 and the multisystem inflammatory syndrome in children were searched and reviewed. There are 6 published pediatric series that included 252 children with acute COVID-19 infection and describe various treatments and outcomes. **Results:** Guidelines recommend treating pediatric patients similarly to adult patients. Currently, no prophylactic drug therapy has been shown to reduce the spread of infection. Treatment options for acute COVID-19 are limited to remdesivir and glucocorticoids for patients who require oxygen and/or mechanical ventilation. The efficacy of hydroxychloroquine, chloroquine, and azithromycin has not been proven and their safety has been a concern. Other therapies that are being explored include interleukin (IL)-1 and IL-6 inhibitors. In children, an atypical Kawasaki-like disease emerged after recent exposure to SARS-CoV-2 and has been named Multisystem Inflammatory Syndrome in Children (MIS-C). Nine case series, including 418 pediatric patients, described pharmacotherapies used and patient outcomes. These pharmacotherapies included intravenous immune globulin and glucocorticoids and in some patients, IL-1 and IL-6 inhibitors. **Conclusion:** Given the paucity of data in children, this article presents currently recommended pharmacotherapies for the treatment of acute COVID-19 infection in adult patients and whenever available, in pediatric patients. Pharmacotherapies used in the treatment of MIS-C in children are also reviewed.

Publication Type

Journal article.

<457>

Accession Number

20210092533

Author

Hosie, M. J.; Hofmann-Lehmann, R.; Hartmann, K.; Egberink, H.; Truyen, U.; Addie, D. D.; Belak, S.; Boucraut-Baralon, C.; Frymus, T.; Lloret, A.; Lutz, H.; Marsilio, F.; Pennisi, M. G.; Tasker, S.; Thiry, E.; Mostl, K.

Title

Anthropogenic infection of cats during the 2020 COVID-19 pandemic.

Source

Viruses; 2021. 13(2). 89 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

COVID-19 is a severe acute respiratory syndrome (SARS) caused by a new coronavirus (CoV), SARS-CoV-2, which is closely related to SARS-CoV that jumped the animal-human species barrier and caused a disease outbreak in 2003. SARS-CoV-2 is a betacoronavirus that was first described in 2019, unrelated to the commonly occurring feline coronavirus (FCoV) that is an alphacoronavirus associated with feline infectious peritonitis (FIP). SARS-CoV-2 is highly contagious and has spread globally within a few months, resulting in the current pandemic. Felids have been shown to be susceptible to SARS-CoV-2 infection. Particularly in the Western world, many people live in very close contact with their pet cats, and natural infections of cats in COVID-19-positive households have been described in several countries. In this review, the European Advisory Board on Cat Diseases (ABCD), a scientifically independent board of experts in feline medicine from 11 European Countries, discusses the current status of SARS-CoV infections in cats. The review examines the host range of SARS-CoV-2 and human-to-animal transmissions, including infections in domestic and non-domestic felids, as well as mink-to-human/-cat transmission. It summarises current data on SARS-CoV-2 prevalence in domestic cats and the results of experimental infections of cats and provides expert opinions on the clinical relevance and prevention of SARS-CoV-2 infection in cats.

Publication Type

Journal article.

<458>

Accession Number

20210092490

Author

Takeda, Y.; Jamsransuren, D.; Matsuda, S.; Crea, R.; Ogawa, H.

Title

The SARS-CoV-2-inactivating activity of hydroxytyrosol-rich aqueous olive pulp extract (HIDROXR) and its use as a virucidal cream for topical application.

Source

Viruses; 2021. 13(2). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has spread globally. Although measures to control SARS-CoV-2, namely, vaccination, medication, and chemical disinfectants are being investigated, there is an increase in the demand for auxiliary antiviral approaches using natural compounds. Here we have focused on hydroxytyrosol (HT)-rich aqueous olive pulp extract (HIDROXR) and evaluated its SARS-CoV-2-inactivating activity in vitro. We showed that the HIDROX solution exhibits time- and concentration-dependent SARS-CoV-2-inactivating activities, and that HIDROX has more potent virucidal activity than pure HT. The evaluation of the mechanism of action suggested that both HIDROX and HT induced structural changes in SARS-CoV-2, which changed the molecular weight of the spike proteins. Even though the spike protein is highly glycosylated, this change was induced regardless of the glycosylation status. In addition, HIDROX or HT treatment disrupted the viral genome. Moreover, the HIDROX-containing cream applied on film showed time- and concentration-dependent SARS-CoV-2-inactivating activities. Thus, the HIDROX-containing cream can be applied topically as an antiviral hand cream. Our findings suggest that HIDROX contributes to improving SARS-CoV-2 control measures.

Publication Type

Journal article.

<459>

Accession Number

20210092484

Author

Bakovic, A.; Risner, K.; Bhalla, N.; Alem Farhang; Chang, T. L.; Weston, W. K.; Harness, J. A.; Narayanan, A.

Title

Brilacidin demonstrates inhibition of SARS-CoV-2 in cell culture.

Source

Viruses; 2021. 13(2). 75 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the newly emergent causative agent of coronavirus disease-19 (COVID-19), has resulted in more than two million deaths worldwide since it was first detected in 2019. There is a critical global need for therapeutic intervention strategies that can be deployed to safely treat COVID-19 disease and reduce associated morbidity and mortality. Increasing evidence shows that both natural and synthetic antimicrobial peptides (AMPs), also referred to as Host

Defense Proteins/Peptides (HDPs), can inhibit SARS-CoV-2, paving the way for the potential clinical use of these molecules as therapeutic options. In this manuscript, we describe the potent antiviral activity exerted by brilacidin - a de novo designed synthetic small molecule that captures the biological properties of HDPs - on SARS-CoV-2 in a human lung cell line (Calu-3) and a monkey cell line (Vero). These data suggest that SARS-CoV-2 inhibition in these cell culture models is likely to be a result of the impact of brilacidin on viral entry and its disruption of viral integrity. Brilacidin demonstrated synergistic antiviral activity when combined with remdesivir. Collectively, our data demonstrate that brilacidin exerts potent inhibition of SARS-CoV-2 against different strains of the virus in cell culture.

Publication Type

Journal article.

<460>

Accession Number

20210092467

Author

Varghese, F. S.; Woudenbergh, E. van; Overheul, G. J.; Eleveld, M. J.; Kurver, L.; Heerbeek, N. van; Laarhoven, A. van; Miesen, P.; Hartog, G. den; Jonge, M. I. de; Rij, R. P. van

Title

Berberine and obatoclax inhibit SARS-CoV-2 replication in primary human nasal epithelial cells in vitro.

Source

Viruses; 2021. 13(2). 66 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged as a new human pathogen in late 2019 and it has infected over 100 million people in less than a year. There is a clear need for effective antiviral drugs to complement current preventive measures, including vaccines. In this study, we demonstrate that berberine and obatoclax, two broad-spectrum antiviral compounds, are effective against multiple isolates of SARS-CoV-2. Berberine, a plant-derived alkaloid, inhibited SARS-CoV-2 at low micromolar concentrations and obatoclax, which was originally developed as an anti-apoptotic protein antagonist, was effective at sub-micromolar concentrations. Time-of-addition studies indicated that berberine acts on the late stage of the viral life cycle. In agreement, berberine mildly affected viral RNA synthesis, but it strongly reduced infectious viral titers, leading to an increase in the particle-to-pfu ratio. In

contrast, obatoclax acted at the early stage of the infection, which is in line with its activity to neutralize the acidic environment in endosomes. We assessed infection of primary human nasal epithelial cells that were cultured on an air-liquid interface and found that SARS-CoV-2 infection induced and repressed expression of specific sets of cytokines and chemokines. Moreover, both obatoclax and berberine inhibited SARS-CoV-2 replication in these primary target cells. We propose berberine and obatoclax as potential antiviral drugs against SARS-CoV-2 that could be considered for further efficacy testing.

Publication Type

Journal article.

<461>

Accession Number

20210092459

Author

Bharadwaj, S.; El-Kafrawy, S. A.; Alandijany, T. A.; Bajrai, L. H.; Shah, A. A.; Amit Dubey; Sahoo, A. K.; Umesh Yadava; Kamal, M. A.; Azhar, E. I.; Kang SangGu; Dwivedi, V. D.

Title

Structure-based identification of natural products as SARS-CoV-2 Mpro antagonist from *Echinacea angustifolia* using computational approaches.

Source

Viruses; 2021. 13(2). 64 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Coronavirus disease-19 (COVID-19) pandemic, caused by the novel SARS-CoV-2 virus, continues to be a global threat. The number of cases and deaths will remain escalating due to the lack of effective therapeutic agents. Several studies have established the importance of the viral main protease (Mpro) in the replication of SARS-CoV-2 which makes it an attractive target for antiviral drug development, including pharmaceutical repurposing and other medicinal chemistry approaches. Identification of natural products with considerable inhibitory potential against SARS-CoV-2 could be beneficial as a rapid and potent alternative with drug-likeness by comparison to de novo antiviral drug discovery approaches. Thereof, we carried out the structure-based screening of natural products from *Echinacea-angustifolia*, commonly used to prevent cold and other microbial respiratory infections, targeting SARS-CoV-2 Mpro. Four natural products namely, Echinacoside, Quercetageitin 7-glucoside, Levan N, Inulin from chicory, and 1,3-

Dicaffeoylquinic acid, revealed significant docking energy (>-10 kcal/mol) in the SARS-CoV-2 Mpro catalytic pocket via substantial intermolecular contacts formation against co-crystallized ligand (<-4 kcal/mol). Furthermore, the docked poses of SARS-CoV-2 Mpro with selected natural products showed conformational stability through molecular dynamics. Exploring the end-point net binding energy exhibited substantial contribution of Coulomb and van der Waals interactions to the stability of respective docked conformations. These results advocated the natural products from *Echinacea angustifolia* for further experimental studies with an elevated probability to discover the potent SARS-CoV-2 Mpro antagonist with higher affinity and drug-likeness.

Publication Type

Journal article.

<462>

Accession Number

20210092458

Author

Lee YingRay; Chang ChiaMing; Yeh YuanChieh; Huang, C. Y. F.; Lin FengMao; Huang JuanTing; Hsieh ChangChi; Wang JenRen; Liu HsiaoSheng

Title

Honeysuckle aqueous extracts induced let-7a suppress EV71 replication and pathogenesis in vitro and in vivo and is predicted to inhibit SARS-CoV-2.

Source

Viruses; 2021. 13(2). 88 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Honeysuckle (*Lonicera japonica* Thunb) is a traditional Chinese medicine (TCM) with an antipathogenic activity. MicroRNAs (miRNAs) are small non-coding RNA molecules that are ubiquitously expressed in cells. Endogenous miRNA may function as an innate response to block pathogen invasion. The miRNA expression profiles of both mice and humans after the ingestion of honeysuckle were obtained. Fifteen overexpressed miRNAs overlapped and were predicted to be capable of targeting three viruses: dengue virus (DENV), enterovirus 71 (EV71) and SARS-CoV-2. Among them, let-7a was examined to be capable of targeting the EV71 RNA genome by reporter assay and Western blotting. Moreover, honeysuckle-induced let-7a suppression of EV71 RNA and protein expression as well as viral replication were investigated both in vitro

and in vivo. We demonstrated that let-7a targeted EV71 at the predicted sequences using luciferase reporter plasmids as well as two infectious replicons (pMP4-y-5 and pTOPO-4643). The suppression of EV71 replication and viral load was demonstrated in two cell lines by luciferase activity, RT-PCR, real-time PCR, Western blotting and plaque assay. Furthermore, EV71-infected suckling mice fed honeysuckle extract or inoculated with let-7a showed decreased clinical scores and a prolonged survival time accompanied with decreased viral RNA, protein expression and virus titer. The ingestion of honeysuckle attenuates EV71 replication and related pathogenesis partially through the upregulation of let-7a expression both in vitro and in vivo. Our previous report and the current findings imply that both honeysuckle and upregulated let-7a can execute a suppressive function against the replication of DENV and EV71. Taken together, this evidence indicates that honeysuckle can induce the expression of let-7a and that this miRNA as well as 11 other miRNAs have great potential to prevent and suppress EV71 replication.

Publication Type

Journal article.

<463>

Accession Number

20210092456

Author

Flude, B. M.; Nannetti, G.; Mitchell, P.; Compton, N.; Richards, C.; Heurich, M.; Brancale, A.; Ferla, S.; Bassetto, M.

Title

Targeting the complement serine protease MASP-2 as a therapeutic strategy for coronavirus infections.

Source

Viruses; 2021. 13(2). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

MASP-2, mannose-binding protein-associated serine protease 2, is a key enzyme in the lectin pathway of complement activation. Hyperactivation of this protein by human coronaviruses SARS-CoV, MERS-CoV and SARS-CoV-2 has been found to contribute to aberrant complement activation in patients, leading to aggravated lung injury with potentially fatal consequences. This hyperactivation is triggered in the lungs through a conserved, direct interaction between MASP-2 and coronavirus nucleocapsid (N) proteins. Blocking this interaction with monoclonal antibodies and interfering directly with the catalytic activity of

MASP-2, have been found to alleviate coronavirus-induced lung injury both in vitro and in vivo. In this study, a virtual library of 8736 licensed drugs and clinical agents has been screened in silico according to two parallel strategies. The first strategy aims at identifying direct inhibitors of MASP-2 catalytic activity, while the second strategy focusses on finding protein-protein interaction inhibitors (PPIs) of MASP-2 and coronaviral N proteins. Such agents could represent promising support treatment options to prevent lung injury and reduce mortality rates of infections caused by both present and future-emerging coronaviruses. Forty-six drug repurposing candidates were purchased and, for the ones selected as potential direct inhibitors of MASP-2, a preliminary in vitro assay was conducted to assess their interference with the lectin pathway of complement activation. Some of the tested agents displayed a dose-response inhibitory activity of the lectin pathway, potentially providing the basis for a viable support strategy to prevent the severe complications of coronavirus infections.

Publication Type

Journal article.

<464>

Accession Number

20210092455

Author

Lundstrom, K.

Title

Viral vectors for COVID-19 vaccine development.

Source

Viruses; 2021. 13(2). 104 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Vaccine development against SARS-CoV-2 has been fierce due to the devastating COVID-19 pandemic and has included all potential approaches for providing the global community with safe and efficient vaccine candidates in the shortest possible timeframe. Viral vectors have played a central role especially using adenovirus-based vectors. Additionally, other viral vectors based on vaccinia viruses, measles viruses, rhabdoviruses, influenza viruses and lentiviruses have been subjected to vaccine development. Self-amplifying RNA virus vectors have been utilized for lipid nanoparticle-based delivery of RNA as COVID-19 vaccines. Several adenovirus-based vaccine candidates have elicited strong immune responses in

immunized animals and protection against challenges in mice and primates has been achieved. Moreover, adenovirus-based vaccine candidates have been subjected to phase I to III clinical trials. Recently, the simian adenovirus-based ChAdOx1 vector expressing the SARS-CoV-2 S spike protein was approved for use in humans in the UK.

Publication Type

Journal article.

<465>

Accession Number

20210092439

Author

Pasquereau, S.; Nehme, Z.; Ahmad, S. H.; Daouad, F.; Assche, J. van; Wallet, C.; Schwartz, C.; Rohr, O.; Morot-Bizot, S.; Herbein, G.

Title

Resveratrol inhibits HCoV-229E and SARS-CoV-2 coronavirus replication in vitro.

Source

Viruses; 2021. 13(2). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

A novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), emerged in China at the end of 2019 causing a large global outbreak. As treatments are of the utmost importance, drug repurposing embodies a rich and rapid drug discovery landscape, where candidate drug compounds could be identified and optimized. To this end, we tested seven compounds for their ability to reduce replication of human coronavirus (HCoV)-229E, another member of the coronavirus family. Among these seven drugs tested, four of them, namely rapamycin, disulfiram, loperamide and valproic acid, were highly cytotoxic and did not warrant further testing. In contrast, we observed a reduction of the viral titer by 80% with resveratrol (50% effective concentration (EC50) = 4.6 micro M) and lopinavir/ritonavir (EC50 = 8.8 micro M) and by 60% with chloroquine (EC50 = 5 micro M) with very limited cytotoxicity. Among these three drugs, resveratrol was less cytotoxic (cytotoxic concentration 50 (CC50) = 210 micro M) than lopinavir/ritonavir (CC50 = 102 micro M) and chloroquine (CC50 = 67 micro M). Thus, among the seven drugs tested against HCoV-229E, resveratrol demonstrated the optimal antiviral response with low cytotoxicity with a selectivity index (SI) of 45.65. Similarly, among the three drugs with an anti-HCoV-229E activity, namely

lopinavir/ritonavir, chloroquine and resveratrol, only the latter showed a reduction of the viral titer on SARS-CoV-2 with reduced cytotoxicity. This opens the door to further evaluation to fight Covid-19.

Publication Type

Journal article.

<466>

Accession Number

20210092395

Author

Shrum, W.; Aggrey, J.; Campos, A.; Costa, J. P. da; Joseph, J.; Kreimer, P.; Kroeger, R.; Medina, L. R.; Miller, P.; Palackal, A.; Peza, A. P. de la; Traore, A.

Title

Who's afraid of Ebola? Epidemic fires and locative fears in the information age.

Source

Social Studies of Science; 2020. 50(5):707-727. 40 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

Epidemics have traditionally been viewed as the widespread occurrence of infectious disease within a community, or a sudden increase above what is typical. But modern epidemics are both more and less than the diffusion of viral entities. We argue that epidemics are 'fire objects', using a term coined by Law and Singleton: They generate locative fears through encounters that focus attention on entities that are unknown or imprecisely known, transforming spaces and humans into indeterminate dangers, alternating appearance and absence. The Ebola epidemic of 2014 had more complex impacts than the number of infections would suggest. We employ multi-sited qualitative interviews to argue that locative fear is the essence of modern global epidemics. In the discussion we contrast Ebola with both the Zika epidemic that followed and the ongoing coronavirus (COVID-19) pandemic.

Publication Type

Journal article.

<467>

Accession Number

20210091669

Author

Perez, B.; Alvarez, B.; Boso, A.; Lison, F.

Title

Design and psychometric properties of the BAAtSS: a new tool to assess attitudes towards bats.

Source

Animals; 2021. 11(2). 56 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Despite the benefits that bats offer the ecosystem, these animals are feared and attacked. The COVID-19 pandemic has aggravated this situation. Today there is an urgent need to address the human-bat conflict to develop conservation policies. Understanding peoples' attitudes towards bats are critical for this process. This study aimed to design the Bats Attitudes Standard Scale (BAAtSS) and to analyze its psychometric properties. We developed an initial version of the scale in which we established the content validity; we analyzed the items and structure in a pilot sample. In the next phase, we examined psychometric properties in a sample of 1639 Chileans. The final BAAtSS consists of 34 Likert-type items configured in an oblique-hierarchical structure of four factors (scientific, positivistic, negativistic, and myths) and three facets (emotional negativistic, behavioral negativistic, and cognitive negativistic). It presents adequate internal consistency, and the analysis of concurrent validity confirms the scale's capacity to discriminate between groups. Women and participants with a lower level of education are more negativistic and less positivistic. People with a higher level of education have a less mythological view of bats. We also analyzed the items under the assumptions of item response theory (IRT).

Publication Type

Journal article.

<468>

Accession Number

20210091659

Author

Conrad, Z.; Reinhardt, S. L.; McDowell, A.; Nance, J.

Title

Reducing food waste and saving money: a guide for nutritionists.

Source

Nutrition Today; 2021. 56(1):33-38.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

The COVID-19 pandemic has heightened the importance of affordable nutrition. Fruits and vegetables are among the most commonly wasted food items, representing waste of key nutrients that are needed to maintain health and support the immune system. Food waste also represents substantial environmental burden and more than one-quarter of consumer food spending. Practical strategies are urgently needed to help nutritionists support their clients in reducing food waste, which can help improve diet quality, reduce environmental impacts, and increase financial flexibility during this critical time. Fortunately, recent research has demonstrated that efforts to reduce waste of fruits and vegetables at home, as well as meat and seafood away from home, will be particularly impactful. A number of strategies exist to help consumers reduce their food waste while making affordable food choices, and nutritionists are well poised to communicate these strategies to their clients and communities of practice.

Publication Type

Journal article.

<469>

Accession Number

20210091657

Author

Naidu, A. S.; Pressman, P.; Clemens, R. A.

Title

Coronavirus and nutrition: what is the evidence for dietary supplements usage for COVID-19 control and management?

Source

Nutrition Today; 2021. 56(1):19-25.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

In the wake of the COVID-19 pandemic, global medical research has undertaken a relentless quest to unravel the virulence mechanisms of SARS-CoV-2, the innate barriers of host defense, the surveillance of progress toward herd immunity, and the attempts to quickly identify and evaluate novel or alternative coronavirus interventions. This nutrition update highlights the important role of dietary factors in achieving optimum health and also explores possible approaches to augmenting innate host defenses. The potential anti-coronavirus benefits of micronutrients and macronutrients (ie, minerals, vitamins, lipids, proteins and polyphenols) to combat COVID-19 infection through inhibition of viral targets on human cell surface (ie, angiotensin-converting enzyme 2) for docking, entry, and replication and, furthermore, to regulate immune and inflammatory responses (cytokine storm), oxidative stress (redox imbalance), and normal signaling pathways to the reduce health risks among vulnerable populations (ie, elderly) with metabolic disorders (ie, obesity, diabetes, cardiovascular disease, hypertension, asthma) and recovery of patients to normal health are discussed.

Publication Type

Journal article.

<470>

Accession Number

20210091656

Author

Kolasa, K. M.; Craven, K.; Nordby, K.; Drier, L.; Ascanio, K.; Tant, R.; Strickland, A.; Matarese, L.; Jennings, J.; Johnstone, J.

Title

Meeting the challenge of providing nutrition services during the COVID-19 pandemic.

Source

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Nutrition Today; 2021. 56(1):7-18. 56 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

We, registered dietitian nutritionists (RDNs), could have sat on the sidelines in the early days of the pandemic when many RDNs were not considered "essential" workers. Instead, RDNs used their abilities to innovate and adapt to ensure the public, their patients, and clients received continuous nutrition services. Some of the strategies adopted were possible because of temporary or emergency flexibilities in policies. We present examples primarily from our outpatient practices, with efforts by public health and inpatient RDNs acknowledged. We hope these examples will inspire all to do the work needed to provide increased access to medical nutrition therapy and nutrition education for all.

Publication Type

Journal article.

<471>

Accession Number

20210091651

Author

Cros, M.

Title

Bat portraits in times of pandemic.

Source

Medicine Anthropology Theory; 2020. 7(2):273-284. 7 ref.

Publisher

University of Edinburgh

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

In this Photo Essay, photographs are combined with drawings collected in Burkina Faso in the years following the 2014 - 2016 Ebola outbreak. Portraits of bats are shown. The blacklisting of these animals following the recommendations of health authorities collides with local realities, where it is not possible to talk about bats in a 'general' sense. The same is true today in the period of COVID - 19, when chiropterans are once again in the etiological hot seat: bats are behind the pandemic, according to Ridley's shock phrase (2020). In Burkina Faso's Lobi country, between the red and black fruit - eaters (which have always been eaten) and the small insectivores (which have never been eaten as such, but are very useful to animist healers), there is a chasm of representation that is unveiled by these images.

Publication Type

Journal article.

<472>

Accession Number

20210091575

Author

Wijayanto, A. K.; Rushayati, S. B.; Hermawan, R.; Setiawan, Y.; Prasetyo, L. B.

Title

Jakarta and Surabaya land surface temperature before and during the COVID-19 pandemic.

Source

AES Bioflux; 2020. 12(3):213-221. 23 ref.

Publisher

Bioflux

Location of Publisher

Cluj-Napoca

Country of Publication

Romania

Abstract

The first incidence of the novel coronavirus or Covid-19 was reported in late 2019, and in the following year, the disease was declared a global pandemic. In Indonesia, the first case was reported in early March, 2020, and ever since, the government has appealed to the public to reduce outdoor activities in order to curtail the spread of the virus. Consequently, many companies and institutions implemented the 'Work from Home' (WFH) policy. At the end of April, the provincial government of Jakarta issued large-scale social restrictions, locally called PSBB. These restrictions were later implemented in other cities such as Surabaya. Jakarta was the epicentre of the spread of the virus in Indonesia, followed by Surabaya, the second largest city in the country. Therefore, this study aimed to analyze the Thermal Humidity Index (THI) of both cities,

before and during the pandemic. Data were obtained from the MODIS Terra Land Surface Temperature and Emissivity 8-Day Global 1 km, from the 1st to 14th May, 2019 (before the pandemic), and during the same period the following year (during the pandemic). Furthermore, data analysis was carried out using Google Earth Engine (GEE), a cloud-based platform for geo-spatial data analysis. The hypothesis in this study was that the social restriction policy caused a difference in the THI before and during the pandemic. Therefore, this hypothesis was proven by the results, as the policy caused a decrease in the THI during the pandemic.

Publication Type

Journal article.

<473>

Accession Number

20210091327

Author

Ching, C.; Zambrano, P.; Nguyen, T. T.; Tharaney, M.; Zafimanjaka, M. G.; Mathisen, R.

Title

Old tricks, new opportunities: how companies violate the International Code of Marketing of Breast-Milk Substitutes and undermine maternal and child health during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 94 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Breastfeeding is critical to maternal and child health and survival, and the benefits persist until later in life. Inappropriate marketing of breastmilk substitutes (BMS), feeding bottles, and teats threatens the enabling environment of breastfeeding, and exacerbates child mortality, morbidity, and malnutrition, especially in the context of COVID-19. These tactics also violate the International Code of Marketing of Breast-Milk Substitutes. This study identified marketing tactics of BMS companies since the start of the COVID-19 pandemic by reviewing promotional materials and activities from 9 companies in 14 countries, and the official Code reporting data from the Philippines. Eight qualitative themes emerged that indicate companies are capitalizing on fear related to COVID-19 by using health claims and misinformation about breastfeeding. Other promotional tactics such as donations and services were used to harness the public sentiment of hope and solidarity. Past studies show that these tactics are not new, but the pandemic has provided a new entry point, helped along by the unprecedented boom in digital marketing. There was a sharp increase of

reported violations in the Philippines since the pandemic: 291 during the first months of the outbreak compared with 70 in all of 2019, corroborating the thematic findings. A lack of public awareness about the harm of donations and inadequate Code implementation and enforcement have exacerbated these problems. Proposed immediate action includes using monitoring findings to inform World Health Assembly (WHA) actions, targeted enforcement, and addressing misinformation about breastfeeding in the context of COVID-19. Longer-term action includes holding social media platforms accountable, raising public awareness on the Code, and mobilizing community monitoring.

Publication Type

Journal article.

<474>

Accession Number

20210091324

Author

Suardi, C.; Cazzaniga, E.; Graci, S.; Dongo, D.; Palestini, P.

Title

Link between viral infections, immune system, inflammation and diet.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 81 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The strong spread of COVID-19 and the significant number of deaths associated with it could be related to improper lifestyles, which lead to a low-grade inflammation (LGI) that not only increases the risk of chronic diseases, but also the risk of facing complications relating to infections and a greater susceptibility to infections themselves. Recently, scientific research has widely demonstrated that the microbiota plays a fundamental role in modulating metabolic responses in the immune system. There is, in fact, a two-way interaction between lifestyle, infection, and immunity. The immune response is compromised if nutrition is unbalanced or insufficient, because diet affects the intestinal flora predisposing people to infections and, at the same time, the nutritional state can be aggravated by the immune response itself to the infection. We evaluate the link between balanced diet, the efficiency of the immune system, and microbiota with the aim of providing some practical advice for individuals, with special attention to the elderly. A correct lifestyle that follows the Mediterranean model, which is especially rich in plant-based foods along with the use of

extra-virgin olive oil, are the basis of preventing LGI and other chronic pathologies, directly influencing the intestinal microbiota and consequently the immune response.

Publication Type

Journal article.

<475>

Accession Number

20210091308

Author

Franco, E.; Urosa, J.; Barakat, R.; Refoyo, I.

Title

Physical activity and adherence to the Mediterranean diet among Spanish employees in a health-promotion program before and during the COVID-19 pandemic: the Sanitas-Healthy Cities challenge.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 67 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Physical activity and a healthy diet are key factors for avoiding major noncommunicable diseases. The aim of the present study was to analyze how physical activity (PA) and adherence to the Mediterranean diet among employees participating in the Healthy Cities program have been affected during confinement due to the COVID-19 pandemic. The sample was composed of 297 employees from 40 leading companies based in Spain, who participated in the 5th edition of the Sanitas "Healthy Cities" challenge. The participants (148 women and 149 men), aged between 24 and 63 years old (M = 42.76; SD = 7.79) completed the short form of the International Physical Activity Questionnaire (IPAQ) and the PREDIMED (Prevencion con Dieta Mediterranea) questionnaire to measure adherence to the Mediterranean diet before and during the pandemic. Pearson X2 tests revealed that workers were more likely to show sedentary behaviors during the pandemic than before (83.5% vs. 66.7%). Additionally, they were more likely to reach high levels of PA (51.2% vs. 64%), and Wilcoxon tests revealed that energy expenditure measured in Metabolic Equivalent of Task (MET) was higher during the pandemic (4199.03 METs) than before (3735.32 METs), due to an increase in moderate PA. Lastly, a higher adherence to a Mediterranean diet during the pandemic (76.4%) than before (54.5%) was reported. The findings of this investigation suggest a positive effect of working

from home for employees involved in a health-promotion program, and highlight the relevance of this kind of action among this population.

Publication Type

Journal article.

<476>

Accession Number

20210091306

Author

Ali, A. M.; Kunugi, H.

Title

Approaches to nutritional screening in patients with coronavirus disease 2019 (COVID-19).

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 86 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Malnutrition is common among severe patients with coronavirus disease 2019 (COVID-19), mainly elderly adults and patients with comorbidities. It is also associated with atypical presentation of the disease. Despite the possible contribution of malnutrition to the acquisition and severity of COVID-19, it is not clear which nutritional screening measures may best diagnose malnutrition in these patients at early stages. This is of crucial importance given the urgency and rapid progression of the disease in vulnerable groups. Accordingly, this review examines the available literature for different nutritional screening approaches implemented among COVID-19 patients, with a special focus on elderly adults. After a literature search, we selected and scrutinized 14 studies assessing malnutrition among COVID-19 patients. The Nutrition Risk Screening 2002 (NRS-2002) has demonstrated superior sensitivity to other traditional screening measures. The controlling nutritional status (CONUT) score, which comprises serum albumin level, cholesterol level, and lymphocytes count, as well as a combined CONUT-lactate dehydrogenase-C-reactive protein score expressed a predictive capacity even superior to that of NRS-2002 (0.81% and 0.92% vs. 0.79%) in midlife and elder COVID-19 patients. Therefore, simple measures based on routinely conducted laboratory investigations such as the CONUT score may be timely, cheap, and valuable alternatives for identifying COVID-19 patients with high nutritional risk. Mini Nutritional Assessment (MNA) was the only measure used to detect residual malnutrition and high malnutrition risk in remitting patients - MNA scores

correlated with hypoalbuminemia, hypercytokinemia, and weight loss. Older males with severe inflammation, gastrointestinal symptoms, and pre-existing comorbidities (diabetes, obesity, or hypertension) are more prone to malnutrition and subsequently poor COVID-19 prognosis both during the acute phase and during convalescence. Thus, they are in need of frequent nutritional monitoring and support while detecting and treating malnutrition in the general public might be necessary to increase resilience against COVID-19.

Publication Type

Journal article.

<477>

Accession Number

20210091292

Author

Rueda Lopez, R.; Lopez-Felipe, T.; Navajas-Romero, V.; Menor-Campos, A.

Title

Lessons from the first wave of COVID-19. What security measures do women and men require from the hotel industry to protect against the pandemic?

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 72 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The tourism sector in general and the hotel sector in particular face the challenge of managing appropriate security measures to deal with the COVID-19 pandemic. In this sense, it is useful to know which measures are most demanded by the clientele. This research, through non-parametric statistics tests, concluded that women are more demanding than men in relation to the security measures to be taken in hotels. More specifically, this research concludes that women are more demanding than men in relation to a set of measures including ensuring good hygiene conditions, the use of disinfectants, the existence of health and information checks, adapting the establishment to WHO recommendations, obtaining quality certification, measuring temperature, the need to provide information on protocols and measures, and the elimination of physical contact between people. This, as a practical application, makes it possible to know more accurately about the safety requirements of sex-segmented customers in the face of future health

crises, allowing tourist managers to offer safer destinations and the hotel sector better health conditions for their clients.

Publication Type

Journal article.

<478>

Accession Number

20210091284

Author

Yoon Miryoung; Kim JongHun; Sung JiSun; Lim AhYoung; Hwang MyungJae; Kim EunHye; Cheong HaeKwan

Title

Population response to air pollution and the risk of coronavirus disease in Chinese cities during the early pandemic period.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 36 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Health behavior is a critical measure in controlling the coronavirus disease 2019 (COVID-19) pandemic. We estimated the effect of health behaviors against air pollution on reducing the risk of COVID-19 during the initial phase of the pandemic. The attack rates of COVID-19 in 159 mainland Chinese cities during the first 2 weeks after the closure of major cities was estimated; air pollution level as a surrogate indicator of the mask-wearing rate. Data on air pollution levels and meteorologic factors 2 weeks prior to the closure were obtained. The attack rate was compared with the level of air pollution using a generalized linear model after adjusting for confounders. When fine particulates (PM2.5) and nitrogen dioxide (NO2) levels increased by one unit of air quality index (AQI), the infection risk decreased by 0.7% and 3.4%, respectively. When PM2.5 levels exceeded 150 (level 4), the infection risk decreased (relative risk, RR = 0.635, 95% confidence interval, CI: 0.442 to 0.912 for level 4; RR = 0.529, 95% CI: 0.337 to 0.830 for level 5; respectively). After controlling for the number of high-speed railway routes, when PM2.5 and NO2 levels increased by one AQI, relative risk for PM2.5 and NO2 was 0.990 (95% CI, 0.984 to 0.997) and 0.946 (95% CI, 0.911 to 0.982), respectively, demonstrating a consistently negative association. It is postulated that, during the early phase of the pandemic, the cities with higher air pollution levels may represent the higher practice of mask-

wearing to protect from air pollution, which could have acted as a barrier to the transmission of the virus. This study highlights the importance of health behaviors, including mask-wearing for preventing infections.

Publication Type

Journal article.

<479>

Accession Number

20210091280

Author

Bermejo-Martins, E.; Luis, E. O.; Sarrionandia, A.; Martinez, M.; Garces, M. S.; Oliveros, E. Y.; Cortes-Rivera, C.; Belintxon, M.; Fernandez-Berrocal, P.

Title

Different responses to stress, health practices, and self-care during COVID-19 lockdown: a stratified analysis.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The aim of the present cross-sectional study was to analyze the differential impact of the first COVID-19 lockdown (3 April 2020) on stress, health practices, and self-care activities across different Hispanic countries, age range, and gender groups. One thousand and eighty-two participants from Spain, Chile, Colombia, and Ecuador took part in this study. Irrespective of the country, and controlling for income level, young people, especially females, suffered a greater level of stress, perceived the situation as more severe, showed less adherence to health guidelines, and reported lower levels of health consciousness, in comparison to their male peers and older groups. However, in the case of self-care, it seems that older and female groups are generally more involved in self-care activities and adopt more healthy daily routines. These results are mostly similar between Colombia, Ecuador, and Spain. However, Chile showed some different tendencies, as males reported higher levels of healthy daily routines and better adherence to health guidelines compared to females and people over the age of 60. Differences between countries, genders, and age ranges should be considered in order to improve health recommendations and adherence to guidelines. Moreover, developing community action and intersectoral strategies with a gender-based approach could help to reduce health inequalities and increase the success of people's adherence to health

guidelines and self-care-promoting interventions. Future studies should be addressed to explore the possible causations of such differences in more cultural-distant samples and at later stages of the current outbreak.

Publication Type

Journal article.

<480>

Accession Number

20210091266

Author

Tudor, M. A.; Benea, A. F.; Bratosin, S.

Title

COVID-19 pandemic lockdown and religious mediatization of social sustainability. A case study of Romania.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 144 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This article presents an empirical study on the institutional audiovisual mediatization of social sustainability made by the eighteen religious denominations officially recognized in Romania during the period of the COVID-19 pandemic onset. Research is undertaken based on the mediatization theories. Specifically, it highlights and discusses the conditions for producing the meaning of social sustainability as a result of religious mediatization during the months of March, April and May 2020, a period with strong religious connotations since it involved the dates of the major annual feasts celebrated by the three majority monotheistic religions, i.e., the Christian Easter, the Muslim Ramadan and the Jewish Passover. As a result, we noticed that the production of meaning in terms of social sustainability was simultaneously anchored in the accumulation of four contextual "social worlds": (a) that of social transformation induced by mediatization, (b) that of the COVID-19 pandemic, a crisis that is neither social, economic, or environmental, but with consequences on the three levels of reality mentioned above, (c) that of spirituality during the time of the great monotheistic religious feasts and (d) that of the national culture of Romania, statistically the most religious country of the European Union.

Publication Type

Journal article.

<481>

Accession Number

20210091252

Author

Mark, E. P.; Lewis, M. A. O.; Graziani, F.; Atlas, B.; Utsch, J.

Title

Droplet sizes emitted from demonstration electric toothbrushes.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 16 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has drawn attention to microbial transmission risk via aerosols in dental practice. Demonstration electric toothbrushes are used intra-orally for education. The aim of this investigation was to measure the size of droplets emitted by the brush head of two demonstration oscillating-rotating electric toothbrushes. Measurement of droplet production and size was recorded in vitro using three methods: (1) Malvern Spraytec (LASER particle size measurement device with detectable particle size of 0.1-2500 m) and brushes mounted on a 3D-printed, two-shell form-fit fixture with a supply of tap water; (2) a DustTrak aerosol measurement device and toothpaste slurry, with brushing simulated in the oral cavity of a phantom head; (3) high-speed visualization in a simulated-use situation in the oral cavity of a phantom head, with individual evaluation of tap water, water with detergent, 70% ethanol, glycerin and toothpaste slurry. Both brushes showed the size of emitted droplets was consistently between 200 and 1200 m, categorized as splatter (dental aerosols are <50 m diameter). No significant incremental aerosol-sized matter was detected during toothbrush operation. The high-speed video visualization confirmed only splatter-sized droplets during operation. These findings indicate that oscillating-rotating toothbrushes do not produce aerosol-sized particles during simulated use.

Publication Type

Journal article.

<482>

Accession Number

20210091243

Author

Hakansson, A.; Widinghoff, C.

Title

Changes of gambling patterns during COVID-19 in Sweden, and potential for preventive policy changes. A second look nine months into the pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 42 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Gambling has been suggested as one of the potential mental health consequences of the COVID-19 pandemic. In earlier self-report studies, increased gambling has been reported by a limited proportion of respondents characterized with a high degree of problem gambling. The present study, carried out with the same methodology and in the same geographical setting, around seven months later in the pandemic, aimed to repeat and to extend the understanding of potential gambling changes in the population during COVID-19. An anonymous sample of web panel members was assessed, altogether 2029 individuals (52% women, 10% moderate-risk or problem gamblers). Results indicated that 6% reported increased gambling, and 4% reported decreased gambling during the pandemic. Having increased gambling was associated with more severe gambling problems (OR 2.78, 95% confidence interval 2.27-3.40), increased alcohol consumption (OR 2.92, 1.71-4.98), and psychological distress (OR 3.38, 1.83-6.23). In the group reporting increased gambling during COVID-19, moderate-risk/problem gambling was very common (62%). Recent governmental policy interventions in the area were known to a minority (30%) of respondents, but awareness of the regulations was markedly more common in individuals with at least moderate-risk gambling (56%) and in self-excluders (78%). Reporting of any perceived influence from policy changes was low (3%), and divided between those reporting an increasing and decreasing effect, respectively. Increased gambling may be a consequence of COVID-19-related changes in everyday lives of individuals with problematic gambling patterns. Thus, a vulnerable group demonstrates higher rates of gambling migration and psychosocial problems, and may require particular attention in screening and treatment contexts, and further scientific evaluations.

Publication Type

Journal article.

<483>

Accession Number

20210091240

Author

Diaz-Castro, L.; Hector Cabello-rangel; Hoffman, K.

Title

The impact of health policies and sociodemographic factors on doubling time of the COVID-19 pandemic in Mexico.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background. The doubling time is the best indicator of the course of the current COVID-19 pandemic. The aim of the present investigation was to determine the impact of policies and several sociodemographic factors on the COVID-19 doubling time in Mexico. **Methods.** A retrospective longitudinal study was carried out across March-August, 2020. Policies issued by each of the 32 Mexican states during each week of this period were classified according to the University of Oxford Coronavirus Government Response Tracker (OxCGRT), and the doubling time of COVID-19 cases was calculated. Additionally, variables such as population size and density, poverty and mobility were included. A panel data model was applied to measure the effect of these variables on doubling time. **Results.** States with larger population sizes issued a larger number of policies. Delay in the issuance of policies was associated with accelerated propagation. The policy index (coefficient 0.60, $p < 0.01$) and the income per capita (coefficient 3.36, $p < 0.01$) had a positive effect on doubling time; by contrast, the population density (coefficient -0.012, $p < 0.05$), the mobility in parks (coefficient -1.10, $p < 0.01$) and the residential mobility (coefficient -4.14, $p < 0.01$) had a negative effect. **Conclusions.** Health policies had an effect on slowing the pandemic's propagation, but population density and mobility played a fundamental role. Therefore, it is necessary to implement policies that consider these variables.

Publication Type

Journal article.

<484>

Accession Number

20210091236

Author

Boldt, K.; Coenen, M.; Movsisyan, A.; Voss, S.; Rehfuess, E.; Kunzler, A. M.; Lieb, K.; Jung-Sievers, C.

Title

Interventions to ameliorate the psychosocial effects of the COVID-19 pandemic on children - a systematic review.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 66 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The aim of this study was to identify interventions targeting children and their caregivers to reduce psychosocial problems in the course of the COVID-19 pandemic and comparable outbreaks. The review was performed using systematic literature searches in MEDLINE, Embase, PsycINFO and COVID-19-specific databases, including the CDC COVID-19 Research Database, the World Health Organisation (WHO) Global Database on COVID-19 Research and the Cochrane COVID-19 Study Register, ClinicalTrials.gov, the EU Clinical Trials Register and the German Clinical Trials Register (DRKS) up to 25th September 2020. The search yielded 6657 unique citations. After title/abstract and full text screening, 11 study protocols reporting on trials planned in China, the US, Canada, the UK, and Hungary during the COVID-19 pandemic were included. Four interventions targeted children 10 years directly, seven system-based interventions targeted the parents and caregivers of younger children and adolescents. Outcome measures encompassed mainly anxiety and depressive symptoms, different dimensions of stress or psychosocial well-being, and quality of supportive relationships. In conclusion, this systematic review revealed a paucity of studies on psychosocial interventions for children during the COVID-19 pandemic. Further research should be encouraged in light of the expected demand for child mental health management.

Publication Type

Journal article.

<485>

Accession Number

20210091217

Author

Sallam, M.; Dababseh, D.; Eid, H.; Hasan, H.; Taim, D.; Al-Mahzoum, K.; Al-Haidar, A.; Yaseen, A.; Ababneh, N. A.; Assaf, A.; Bakri, F. G.; Matar, S.; Mahafzah, A.

Title

Low COVID-19 vaccine acceptance is correlated with conspiracy beliefs among university students in Jordan.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 65 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Vaccination to prevent coronavirus disease 2019 (COVID-19) emerged as a promising measure to overcome the negative consequences of the pandemic. Since university students could be considered a knowledgeable group, this study aimed to evaluate COVID-19 vaccine acceptance among this group in Jordan. Additionally, we aimed to examine the association between vaccine conspiracy beliefs and vaccine hesitancy. We used an online survey conducted in January 2021 with a chain-referral sampling approach. Conspiracy beliefs were evaluated using the validated Vaccine Conspiracy Belief Scale (VCBS), with higher scores implying embrace of conspiracies. A total of 1106 respondents completed the survey with female predominance (n = 802, 72.5%). The intention to get COVID-19 vaccines was low: 34.9% (yes) compared to 39.6% (no) and 25.5% (maybe). Higher rates of COVID-19 vaccine acceptance were seen among males (42.1%) and students at Health Schools (43.5%). A Low rate of influenza vaccine acceptance was seen as well (28.8%), in addition to 18.6% of respondents being anti-vaccination altogether. A significantly higher VCBS score was correlated with reluctance to get the vaccine ($p < 0.001$). Dependence on social media platforms was significantly associated with lower intention to get COVID-19 vaccines (19.8%) compared to dependence on medical doctors, scientists, and scientific journals (47.2%, $p < 0.001$). The results of this study showed the high prevalence of COVID-19 vaccine hesitancy and its association with conspiracy beliefs among university students in Jordan. The implementation of targeted actions to increase the awareness of such a group is highly recommended. This includes educational programs to dismantle vaccine conspiracy beliefs and awareness campaigns to build recognition of the safety and efficacy of COVID-19 vaccines.

Publication Type

Journal article.

<486>

Accession Number

20210091199

Author

Yuan XiaoLing; Li CaiJuan; Zhao Kai; Xu XiaoYu

Title

The changing patterns of consumers' behavior in China: a comparison during and after the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 52 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This paper has an opportunity to collect questionnaire-based data regarding respondents' life choices in China at the peak of COVID-19 outbreak (i.e., around 9-11 March 2020) and in a relatively stable period where the national pandemic was over and the lockdown policy was halted (i.e., around 25-30 March 2020). Comparing respondents' answers about their most fundamental aspects of life during and after the pandemic, including income level, expenditure structure and level, purchase method, study method, food price and quality, and dining habit, both the descriptive and econometric models reveal that Chinese consumers' life patterns were not significantly changed. These findings may imply a "new normal" where consumers stick to their new living habits that were forged during the pandemic. Therefore, policy makers have to envisage such an implicative socio-economic change (cost) brought by the implementation of a lock down policy in a long run, in addition to direct and explicit economic losses. However, improving food quality and controlling food price appear to be the strong and stable safety signals to reassure consumers in this complicated environment.

Publication Type

Journal article.

<487>

Accession Number

20210091169

Author

Jackson, S. B.; Stevenson, K. T.; Larson, L. R.; Peterson, M. N.; Seekamp, E.

Title

Outdoor activity participation improves adolescents' mental health and well-being during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 111 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

COVID-19 is reshaping human interactions with the natural environment, potentially generating profound consequences for health and well-being. To assess the effects of COVID-19 on the outdoor recreation participation and subjective well-being of adolescents, as well as how participation in outdoor activities may mitigate declines in subjective well-being, we used a Qualtrics XM panel to conduct a nationally representative survey of youth ages 10-18 across the United States (n = 624) between 30 April and 15 June 2020. Survey questions focused on frequency of participation in outdoor activities before and during the pandemic, as well as changes in subjective well-being. Paired t-tests revealed decreases in both outdoor recreation participation (64% reported declines) and subjective well-being (52% reported declines). A regression model examining correlates of changes in subjective well-being ($R^2 = 0.42$) revealed strong associations with changes in outdoor play ($B = 0.44$, $p < 0.001$) and nature-based ($B = 0.21$, $p = 0.016$) activities. Adolescents' from all backgrounds who participated in these activities during the pandemic reported smaller declines in subjective well-being. Results highlight the critical role that time outdoors and time in nature play in bolstering adolescents' resilience to stressors such as the COVID-19 pandemic and underscore the need to facilitate outdoor recreation opportunities for youth during times of crisis.

Publication Type

Journal article.

<488>

Accession Number

20210091168

Author

Fuzeki, E.; Schroder, J.; Carraro, N.; Merlo, L.; Reer, R.; Groneberg, D. A.; Banzer, W.

Title

Physical activity during the first COVID-19-related lockdown in Italy.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 49 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The spread of the COVID-19 virus was met by a strict lockdown in many countries around the world, with the closure of all physical activity (PA) facilities and limitations on moving around freely. The aim of the present online survey was to assess the effect of lockdown on physical activity in Italy. Physical activity was assessed using the European Health Interview Survey questionnaire. A total of 1500 datasets were analyzed. Differences between conditions were tested with a chi2-based (X2) test for categorical variables, and with the Student's t-test for paired data. A fixed effects binary logistic regression analysis was conducted to identify relevant predictor variables to explain the compliance with World Health Organisation (WHO) recommendations. We found a substantial decline in all physical activity measures. Mean differences in walking and cycling metabolic equivalent of task minutes per week (METmin/week), respectively, were 344.4 (95% confidence interval (95% CI): 306.6-382.2; $p < 0.001$) and 148.5 (95% CI: 123.6-173.5; $p < 0.001$). Time spent in leisure time decreased from 160.8 to 112.6 min/week (mean difference 48.2; 95% CI: 40.4-56.0; $p < 0.001$). Compliance with WHO recommendations decreased from 34.9% to 24.6% (chi2 (1, 3000) = 38.306, $p < 0.001$, $V = 0.11$). Logistic regression showed a reduced chance (OR 0.640, 95% CI: 0.484-0.845; $p = 0.001$) to comply with WHO PA recommendations under lockdown conditions. Measures to promote physical activity should be intensified to limit detrimental health effects.

Publication Type

Journal article.

<489>

Accession Number

20210091162

Author

Ditekemena, J. D.; Mavoko, H. M.; Obimpeh, M.; Hees, S. van; Fodjo, J. N. S.; Nkamba, D. M.; Tshetu, A.; Damme, W. van; Muyembe, J. J.; Colebunders, R.

Title

Adherence to COVID-19 prevention measures in the Democratic Republic of the Congo, results of two consecutive online surveys.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 29 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Adherence to preventive measures is essential to reduce the risk of COVID-19 transmission. Two online surveys were conducted in the Democratic Republic of the Congo (DRC) from 23 April to 8 June 2020, and from August 24th to September 8th, respectively. A total of 3268 (round 1) and 4160 (round 2) participants were included. In both surveys, there was a moderate level of adherence to regular handwashing (85% and 77%, respectively), wearing of facemasks (41.4% and 69%, respectively), and respecting physical distancing (58% and 43.4%, respectively). The second survey found that, working in private (OR = 2.31, CI: 1.66-3.22; $p < 0.001$) and public organizations (OR = 1.61, CI: 1.04-2.49; $p = 0.032$) and being a healthcare worker (OR = 2.19, CI: 1.57-3.05; $p < 0.001$) significantly increased the odds for better adherence. However, a unit increase in age (OR = 0.99, CI: 0.98-0.99; $p < 0.026$), having attained lower education levels (OR = 0.60, CI: 0.46-0.78; $p < 0.001$), living in a room (OR = 0.36, CI: 0.15-0.89; $p = 0.027$), living in a studio (OR = 0.26, CI: 0.11-0.61; $p = 0.002$) and apartment (OR = 0.29, CI: 0.10-0.82; $p = 0.019$) significantly decreased the odds for better adherence. We recommend a multi-sectorial approach to monitor and respond to the pandemic threat. While physical distancing may be difficult in Africa, it should be possible to increase the use of facemasks.

Publication Type

Journal article.

<490>

Accession Number

20210091157

Author

Qiao GuangHui; Zhao XiaoLi; Xin LuQi; Kim SeokChool

Title

Concerns or desires post-pandemic: an extended MGB model for understanding South Korean residents' perceptions and intentions to travel to China.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 74 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In this study, we examined South Korean residents' travel-related behavioural intention for mainland China post-COVID-19 using an extended model of goal-directed behaviour. To do so, we integrated South Korean residents' perceptions of country image (PCI), mass media, and concerns about travel into the framework of the original model of goal-directed behaviour (MGB). Structural equation modelling was used to identify the structural relationships among the latent variables. The results show that mass media had a positive influence on South Korean residents' perception of China's image, a negative influence on residents' concerns, and a positive influence on residents' behavioural intentions for travel overseas. Meanwhile, PCI had a positive influence on residents' attitude towards travel overseas. The theoretical and practical implications of the study are discussed.

Publication Type

Journal article.

<491>

Accession Number

20210091143

Author

Park SunHee; Kim BeomSoo; Kim, K. A.

Title

Preventive behavioral insights for emerging adults: a survey during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Emerging adulthood is an important period for establishing health behavior patterns in life. This study aimed to examine factors related to preventive behaviors of emerging adults during the COVID-19 pandemic. A descriptive online survey design was used. Data were collected using a self-administrated, 28-item questionnaire completed by 239 undergraduate students from a university in Seoul, South Korea. The questionnaire was developed based on previous studies and the guidelines of the World Health Organization about COVID-19 preventive behaviors. The mean age of participants was 21.97 years, and the average score for COVID-19 preventive behaviors was 4.13 (SD: +or-0.42) on a 5-point scale. Hierarchical regression analyses revealed that subjective norms related to parents (beta = 0.425, $p < 0.001$), issue involvement related to COVID-19 (beta = 0.160, $p = 0.024$), and sex (beta = 0.137, $p = 0.029$) were significant factors related to preventive behaviors of emerging adults after controlling for demographic characteristics. The variables explained 20.1% of the variance in preventive behaviors. The results of this study suggest that better strategies for subjective norms related to parents and issue involvement related to COVID-19 must be considered to improve emerging adults' preventive behaviors.

Publication Type

Journal article.

<492>

Accession Number

20210091134

Author

Nathan, A.; George, P.; Ng, M.; Wenden, E.; Bai, P.; Phiri, Z.; Christian, H.

Title

Impact of COVID-19 restrictions on Western Australian children's physical activity and screen time.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Physical activity is essential for children's healthy development, yet COVID-19 physical distancing restrictions such as school closures and staying at home, playground closures, and the cancelling of organised community sport have dramatically altered children's opportunities to be physically active. This study describes changes in levels of physical activity and screen time from February 2020 (i.e., before COVID-19 restrictions were introduced in Western Australia) to May 2020 (i.e., when COVID-19 restrictions were in place). Parents of children aged 5 to 9 years from Western Australia were eligible to participate and recruited through convenience sampling. An online survey instrument that included validated measures of their children's physical activity (unstructured, organized, home-based, indoor/outdoor active play, dog play/walking), sociodemographic, and other potential confounders was administered to parents. Paired t-tests and mixed ANOVA models assessed changes in physical activity outcomes. The analytic sample comprised parents of 157 children who were 6.9 years of age (SD = 1.7) on average. Overall, weekly minutes of total physical activity (PA) did not change from before to during COVID-19. However, frequency and duration (total and home-based) of unstructured physical activity significantly increased. Outdoor play in the yard or street around the house, outdoor play in the park or playground or outdoor recreation area, and active indoor play at home all significantly increased. Frequency and total duration of organised physical activity significantly declined during COVID-19 distancing. During Western Australian COVID-19 restrictions, there was an increase in young children's unstructured physical activity and outdoor play and a decrease in organised physical activity. It remains to be seen whether children's increased physical activity has been sustained with the easing of physical distancing restrictions.

Publication Type

Journal article.

<493>

Accession Number

20210091080

Author

Hommel, F.; Loon, W. van; Thielecke, M.; Abramovich, I.; Lieber, S.; Hammerich, R.; Gehrke-Beck, S.; Linzbach, E.; Schuster, A.; Dem Busche, K. von; Theuring, S.; Gertler, M.; Martinez, G. E.; Richter, J.; Bergmann, C.; Bolke, A.; Bohringer, F.; Mall, M. A.; Rosen, A.; Krannich, A.; Keller, J.; Bethke, N.; Kurzmann, M.; Kurth, T.; Kirchberger, V.; Seybold, J.; Mockenhaupt, F. P.

Title

SARS-CoV-2 infection, risk perception, behaviour and preventive measures at schools in Berlin, Germany, during the early post-lockdown phase: a cross-sectional study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 29 ref.

Publisher

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MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Briefly before the first peak of the COVID-19 pandemic in Berlin, Germany, schools closed in mid-March 2020. Following re-opening, schools resumed operation at a reduced level for nine weeks. During this phase, we aimed at assessing, among students and teachers, infection status, symptoms, individual behaviour, and institutional infection prevention measures. Twenty-four primary and secondary school classes, randomly selected across Berlin, were examined. Oro-nasopharyngeal swabs and capillary blood samples were collected to determine SARS-CoV-2 infection (PCR) and specific IgG (ELISA), respectively. Medical history, household characteristics, leisure activities, fear of infection, risk perception, hand hygiene, facemask wearing, and institutional preventive measures were assessed. Descriptive analysis was performed. Among 535 participants (385 students, 150 staff), one teenager was found to be infected with SARS-CoV-2 (0.2%), and seven individuals exhibited specific IgG (1.3%). Compared to pre-pandemic times, screen time (e.g., TV, gaming, social media) increased, and the majority of primary school students reported reduced physical activity (42.2%). Fear of infection and risk perception were relatively low, acceptance of adapted health behaviors was high. In this post-lockdown period of low SARS-CoV-2 incidence in Berlin, individual and school-level infection prevention measures were largely adhered to. Nevertheless, vigilance and continued preventive measures are essential to cope with future pandemic activity.

Publication Type

Journal article.

<494>

Accession Number

20210091079

Author

Alamri, S. H.; Ali, N.; Albar, H. M. S. A.; Rashid, M. I.; Rajeh, N.; Qutub, M. M. A.; Malarvannan, G.

Title

Polycyclic aromatic hydrocarbons in indoor dust collected during the COVID-19 pandemic lockdown in Saudi Arabia: status, sources and human health risks.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 42 ref.

Publisher

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Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To control the spread of coronavirus disease (COVID-19), Saudi Arabia's government imposed a strict lockdown during March-July 2020. As a result, the public was confined to indoors, and most of their daily activities were happening in their indoor places, which might have resulted in lower indoor environment quality. Polycyclic aromatic hydrocarbons (PAHs) were analyzed in household dust (n = 40) collected from different residential districts of Jeddah, Saudi Arabia, during the lockdown period. PAHs' levels were two folds higher than the previously reported PAHs in indoor dust from this region. We detected low molecular weight (LMW) with two to four aromatic ring PAHs in all the samples with a significant contribution from Phenanthrene (Phe), present at an average concentration of 1590 ng/g of dust. Although high molecular weight (HMW) (5-6 aromatic ring) PAHs were detected at lower concentrations than LMW PAHs, however, they contributed >90% in the carcinogenic index of PAHs. The estimated daily intake (EDI) of specific PAHs was above the reference dose (RfD) for young children in high-end exposure and the calculated Incremental Lifetime Cancer Risk (ILCR) was $>1.00 \times 10^{-4}$ for both Saudi adults and young children. The study highlighted that indoor pollution has increased significantly during lockdown due to the increased indoor activities and inversely affect human health. This study also warrants to conduct more studies involving different chemicals to understand the indoor environment quality during strict lockdown conditions.

Publication Type

Journal article.

<495>

Accession Number

20210091063

Author

Leone, M.; Ciccacci, F.; Orlando, S.; Petrolati, S.; Guidotti, G.; Majid, N. A.; Tolno, V. T.; Sagno, J.; Thole, D.; Corsi, F. M.; Bartolo, M.; Marazzi, M. C.

Title

Pandemics and burden of stroke and epilepsy in sub-Saharan Africa: experience from a longstanding health programme.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 89 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Eighty percent of people with stroke live in low- to middle-income nations, particularly in sub-Saharan Africa (SSA) where stroke has increased by more than 100% in the last decades. More than one-third of all epilepsy-related deaths occur in SSA. HIV infection is a risk factor for neurological disorders, including stroke and epilepsy. The vast majority of the 38 million people living with HIV/AIDS are in SSA, and the burden of neurological disorders in SSA parallels that of HIV/AIDS. Local healthcare systems are weak. Many standalone HIV health centres have become a platform with combined treatment for both HIV and noncommunicable diseases (NCDs), as advised by the United Nations. The COVID-19 pandemic is overwhelming the fragile health systems in SSA, and it is feared it will provoke an upsurge of excess deaths due to the disruption of care for chronic diseases such as HIV, TB, hypertension, diabetes, and cerebrovascular disorders. Disease Relief through Excellent and Advanced Means (DREAM) is a health programme active since 2002 to prevent and treat HIV/AIDS and related disorders in 10 SSA countries. DREAM is scaling up management of NCDs, including neurologic disorders such as stroke and epilepsy. We described challenges and solutions to address disruption and excess deaths from these diseases during the ongoing COVID-19 pandemic.

Publication Type

Journal article.

<496>

Accession Number

20210090595

Author

Usman, M.; Muhammad Farooq; Farooq, M.; Anastopoulos, I.

Title

Exposure to SARS-CoV-2 in aerosolized wastewater: toilet flushing, wastewater treatment, and sprinkler irrigation.

Source

Water; 2021. 13(4). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The existence of SARS-CoV-2, the etiologic agent of coronavirus disease 2019 (COVID-19), in wastewater raises the opportunity of tracking wastewater for epidemiological monitoring of this disease. However, the existence of this virus in wastewater has raised health concerns regarding the fecal-oral transmission of COVID-19. This short review is intended to highlight the potential implications of aerosolized wastewater in transmitting this virus. As aerosolized SARS-CoV-2 could offer a more direct respiratory pathway for human exposure, the transmission of this virus remains a significant possibility in the prominent wastewater-associated bioaerosols formed during toilet flushing, wastewater treatment, and sprinkler irrigation. Implementing wastewater disinfection, exercising precautions, and raising public awareness would be essential. Additional research is needed to evaluate the survival, fate, and dissemination of SARS-CoV-2 in wastewater and the environment and rapid characterization of aerosols and their risk assessment.

Publication Type

Journal article.

<497>

Accession Number

20210090541

Author

Saberian, M.; Li Jie; Kilmartin-Lynch, S.; Boroujeni, M.

Title

Repurposing of COVID-19 single-use face masks for pavements base/subbase.

Source

Science of the Total Environment; 2021. 769. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The coronavirus (COVID-19) pandemic has not only created a global health crisis, but it is also now threatening the environment. A multidisciplinary collaborative approach is required to fight against the pandemic and reduce the environmental risks associated with the disposal of used personal protective equipment (PPE). This paper explores an innovative way to reduce pandemic-generated waste by recycling the used face masks with other waste materials in civil constructions. In this research, for the first time, a

series of experiments, including modified compaction, unconfined compression strength and resilient modulus tests, were conducted on the blends of different percentages of the shredded face mask (SFM) added to the recycled concrete aggregate (RCA) for road base and subbase applications. The experimental results show that RCA mixed with three different percentages (i.e., 1%, 2% and 3%) of SFM satisfied the stiffness and strength requirements for pavements base/subbase. The introduction of the shredded face mask not only increased the strength and stiffness but also improved the ductility and flexibility of RCA/SFM blends. The inclusion of 1% SFM to RCA resulted in the highest values of unconfined compressive strength (216 kPa) and the highest resilient modulus (314.35 MP). However, beyond 2%, increasing the amount of SFM led to a decrease in strength and stiffness.

Publication Type

Journal article.

<498>

Accession Number

20210090529

Author

Bekbulat, B.; Apte, J. S.; Millet, D. B.; Robinson, A. L.; Wells, K. C.; Presto, A. A.; Marshall, J. D.

Title

Changes in criteria air pollution levels in the US before, during, and after COVID-19 stay-at-home orders: evidence from regulatory monitors.

Source

Science of the Total Environment; 2021. 769. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The widespread and rapid social and economic changes from Covid-19 response might be expected to dramatically improve air quality. However, national monitoring data from the US Environmental Protection Agency for criteria pollutants (PM2.5, ozone, NO2, CO, PM10) provide inconsistent support for that expectation. Specifically, during stay-at-home orders, average PM2.5 levels were slightly higher (~10% of its multi-year interquartile range [IQR]) than expected; average ozone, NO2, CO, and PM10 levels were slightly lower (~30%, ~20%, ~27%, and ~1% of their IQR, respectively) than expected. The timing of peak anomaly, relative to the stay-at-home orders, varied by pollutant (ozone: 2 weeks before; NO2, CO: 3 weeks after; PM10: 2 weeks after); but, by 5-6 weeks after stay-at-home orders, the concentration anomalies appear to

have ended. For PM2.5, ozone, CO, and PM10, no US state had lower-than-expected pollution levels for all weeks during stay-at-home-orders; for NO2, only Arizona had lower-than-expected levels for all weeks during stay-at-home orders. Our findings show that the enormous changes from the Covid-19 response have not lowered PM2.5 levels across the US beyond their normal range of variability; for ozone, NO2, CO, and PM10 concentrations were lowered but the reduction was modest and transient.

Publication Type

Journal article.

<499>

Accession Number

20210090467

Author

Andreoni, V.

Title

Estimating the European CO2 emissions change due to COVID-19 restrictions.

Source

Science of the Total Environment; 2021. 769.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The carbon dioxide variations generated by the socio-economic restrictions imposed by the management of the COVID-19 crisis are analysed in this paper for 23 European countries and 10 economic sectors. By considering the most up to date information on GDP and carbon intensity of production, this paper represents one of the first attempts to estimate the CO2 emissions change that have taken place in Europe during the first six months of 2020. Results show that more than 195,600 thousand tons of CO2 have been avoided between January and June 2020, compared to the same period of the previous year, representing a -12.1% emissions change. The largest reductions have taken place in the Manufacturing, Wholesale, Retail Trade, Transport, Accommodation and Food Service sectors, accounting for more than 93.7% of total CO2 change. Spain, Italy and France have been the most affected areas with -106,600 thousand tons emissions drop. In line with the results provided by previous studies, this paper highlights that the geographical and the sectoral distribution of the CO2 emissions change has been largely influenced by the magnitude of the COVID-19 impacts. In addition, the carbon intensity of production, characterizing the most affected economic activities, has been the main element of differentiation compared to the previous 2008 crisis. By

providing preliminary estimation of the CO₂ emissions change that have taken place across geographical and sectoral activities, this paper contributes to the existing climate policy debate and can support future estimation of CO₂ variations both in a context of confinement release as well as in a context of reintroduced COVID-19 restrictions.

Publication Type

Journal article.

<500>

Accession Number

20210090326

Author

Hokajarvi, A. M.; Rytkonen, A.; Tiwari, A.; Kauppinen, A.; Oikarinen, S.; Lehto, K. M.; Kankaanpaa, A.; Gunnar, T.; Al-Hello, H.; Blomqvist, S.; Miettinen, I. T.; Savolainen-Kopra, C.; Pitkanen, T.

Title

The detection and stability of the SARS-CoV-2 RNA biomarkers in wastewater influent in Helsinki, Finland.

Source

Science of the Total Environment; 2021. 770. 36 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Wastewater-based surveillance of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is used to monitor the population-level prevalence of the COVID-19 disease. In many cases, due to lockdowns or analytical delays, the analysis of wastewater samples might only be possible after prolonged storage. In this study, the effect of storage conditions on the RNA copy numbers of the SARS-CoV-2 virus in wastewater influent was studied and compared to the persistence of norovirus over time at 4 degrees C, -20 degrees C, and -75 degrees C using the reverse-transcription quantitative PCR (RT-qPCR) assays E-Sarbeco, N2, and norovirus GII. For the first time in Finland, the presence of SARS-CoV-2 RNA was tested in 24 h composite influent wastewater samples collected from Viikinmaki wastewater treatment plant, Helsinki, Finland. The detected and quantified SARS-CoV-2 RNA copy numbers of the wastewater sample aliquots taken during 19-20 April 2020 and stored for 29, 64, and 84 days remained surprisingly stable. In the stored samples, the SARS betacoronavirus and SARS-CoV-2 copy numbers, but not the norovirus GII copy numbers, seemed slightly higher when analyzed from the pre-centrifuged pellet - that is, the particulate matter of the influent-as compared with the supernatant (i.e., water fraction) used for

ultrafiltration, although the difference was not statistically significant. Furthermore, when wastewater was spiked with SARS-CoV-2, linear decay at 4 degrees C was observed on the first 28 days, while no decay was visible within 58 days at -20 degrees C or -75 degrees C. In conclusion, freezing temperatures should be used for storage when immediate SARS-CoV-2 RNA analysis from the wastewater influent is not possible. Analysis of the particulate matter of the sample, in addition to the water fraction, can improve the detection frequency.

Publication Type

Journal article.

<501>

Accession Number

20210090243

Author

Dyca, B.; Muldoon-Smith, K.; Greenhalgh, P.

Title

Common value: transferring development rights to make room for water.

Source

Environmental Science & Policy; 2020. 114:312-320. 1 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

In 2019 floods made up 49% of disasters and 43% of disaster related deaths globally. Flooding is also the costliest natural disaster, with yearly estimated losses of \$36.3 billion. In order to counter these challenges, the flood risk management (FRM) narrative is evolving towards integration of blue/green infrastructure (BGI), using projects that harness nature and mimic natural processes. However, there is very little research into how BGI-related innovations will be mainstreamed, nor, particularly, how they will be funded. In order to reflect upon this situation, this paper analyses current academic literature and international best practice in BGI and Land Value Capture (LVC) instruments - to form a novel conceptual framework that is designed to act as a staging post for new research into BGI and its practical delivery. Specifically, this analysis focuses on the Transferable Development Rights (TDR) instrument, which has enabled some planning authorities to successfully push forward their environmental agendas, through land conservation, including in flood prone areas. This gap in knowledge has multiple significance. Firstly, land management decisions related to BGI can have deep distributive-justice implications that need to be addressed.

Secondly, there is an immediate need to pay for such FRM measures across the world. Thirdly, this financial imperative takes place against an international backdrop of reduced government funding in a time of deep structural change and Covid-19 pressure. Findings in this paper suggest that TDR has the potential to be a successful conduit for managing all three conditions. Yet, the success of TDR is closely linked to the specific legal, market and urban development contexts, which further research should explore within the framework of BGI implementation.

Publication Type

Journal article.

<502>

Accession Number

20210090007

Author

Mejia, C. R.; Charri, J. C.; Rodriguez-Alarcon, J. F.; Flores-Lovon, K.; Cuzcano-Gonzales, K. V.; Benites-Ibarra, C. A.; Huamani-Merma, E.; Vasquez-Ascate, J.; Medina, D. S.; Tovani-Palone, M. R.

Title

Perception of possible SARS-CoV-2 infection and associated complications in seven labor sectors in Peru.

Source

Electronic Journal of General Medicine; 2021. 18(2). 37 ref.

Publisher

Modestrum LTD, UK

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To determine the perception of possible infection caused by the severe acute respiratory syndrome coronavirus (SARS-CoV-2) and associated complications according to the labor sector in Peru. **Methods:** We performed an observational, cross sectional, and secondary data analysis. The study had three dependent variables that were obtained from a locally validated questionnaire, in which it is asked whether the professionals had the perception that they could be infected with SARS-CoV-2 at work, or could transmit the virus to their family/friends, and regarding the possibility of complications related to the infection. **Results:** Of the 2843 workers participating in the study, those in the health sector perceived that they were more likely to be infected at work. In the multivariate analysis, adjusted for four variables, health sector workers also perceived that they could be infected more frequently at work (adjusted prevalence ratio (aPR): 1.74; 95% confidence interval (CI): 1.40-2.15; $p < 0.001$). These professionals, moreover, perceived that they could transmit the virus to their family/friends (aPR: 0.76; 95% CI: 0.63-0.92; $p = 0.005$)

or that there would be complications resulting from the infection (aPR: 0.59; 95% CI: 0.48-0.73; $p < 0.001$). On the other hand, engineering sector workers were the ones who had a greater perception that they could infect their family/friends (aPR: 1.95; 95% CI: 1.20-3.20; $p = 0.007$), while workers from other sectors perceived that they could have more chances of complications from the infection (aPR: 1.17; 95% CI: 1.05-1.30; $p = 0.006$). Conclusion: The health sector may be the most vulnerable in this context, which is why occupational health teams should develop and implement specific surveillance plans to prevent and reduce the number of coronavirus disease 2019 (COVID-19) cases among healthcare workers.

Publication Type

Journal article.

<503>

Accession Number

20210089979

Author

Cosgrove, K.; Vizcaino, M.; Wharton, C.

Title

COVID-19-related changes in perceived household food waste in the United States: a cross-sectional descriptive study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 39 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Food waste contributes to adverse environmental and economic outcomes, and substantial food waste occurs at the household level in the US. This study explored perceived household food waste changes during the COVID-19 pandemic and related factors. A total of 946 survey responses from primary household food purchasers were analyzed. Demographic, COVID-19-related household change, and household food waste data were collected in October 2020. Wilcoxon signed-rank was used to assess differences in perceived food waste. A hierarchical binomial logistic regression analysis was conducted to examine whether COVID-19-related lifestyle disruptions and food-related behavior changes increased the likelihood of household food waste. A binomial logistic regression was conducted to explore the contribution of different food groups to the likelihood of increased food waste. Perceived food waste, assessed as the estimated percent of food wasted, decreased significantly during the pandemic ($z = -7.47$, p

< 0.001). Food stockpiling was identified as a predictor of increased overall food waste during the pandemic, and wasting fresh vegetables and frozen foods increased the odds of increased food waste. The results indicate the need to provide education and resources related to food stockpiling and the management of specific food groups during periods of disruption to reduce food waste.

Publication Type

Journal article.

<504>

Accession Number

20210089940

Author

Shahzad, F.; Du JianGuo; Imran Khan; Zeeshan Ahmad; Muhammad Shahbaz

Title

Untying the precise impact of COVID-19 policy on social distancing behavior.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 20 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Social distancing has manifold effects and is used as a non-pharmacological measure to respond to pandemic situations such as the novel coronavirus (COVID-19), especially in the absence of vaccines and other useful antiviral drugs. Governments around the globe have adopted and implemented a series of social distancing strategies. The efficacy of various policies and their comparative influence on mechanisms led by public actions and adoptions have not been examined. The differences in types and effective dates of various social distancing policies in various provinces/territories of Pakistan constitute a pure ground to examine the causal effects of each COVID-19 policy. Using the location trends and population movement data released by Google, a quasi-experimental method was used to measure the impact of the government's various social distancing policies on the people's existence at home and their outside social mobility. Based on the magnitude and importance of policy influences, this research ranked six social distancing policies whose influence exceeded the effect of voluntary behavior. Our research outcomes describe that the trend of staying at home was firmly pushed by state-wide home order rather than necessary business closings and policies that were associated with public gathering restrictions. Strong government policies have a strong causal effect on reducing social interactions.

Publication Type

Journal article.

<505>

Accession Number

20210089924

Author

Furstenau, L. B.; Rabaioli, B.; Sott, M. K.; Cossul, D.; Bender, M. S.; Farina, E. M. J. de M.; Barcellos Filho, F. N.; Severo, P. P.; Dohan, M. S.; Bragazzi, N. L.

Title

A bibliometric network analysis of coronavirus during the first eight months of COVID-19 in 2020.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 122 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has affected all aspects of society. Researchers worldwide have been working to provide new solutions to and better understanding of this coronavirus. In this research, our goal was to perform a Bibliometric Network Analysis (BNA) to investigate the strategic themes, thematic evolution structure and trends of coronavirus during the first eight months of COVID-19 in the Web of Science (WoS) database in 2020. To do this, 14,802 articles were analyzed, with the support of the SciMAT software. This analysis highlights 24 themes, of which 11 of the more important ones were discussed in-depth. The thematic evolution structure shows how the themes are evolving over time, and the most developed and future trends of coronavirus with focus on COVID-19 were visually depicted. The results of the strategic diagram highlight 'CHLOROQUINE', 'ANXIETY', 'PREGNANCY' and 'ACUTE-RESPIRATORY-SYNDROME', among others, as the clusters with the highest number of associated citations. The thematic evolution. structure presented two thematic areas: "Damage prevention and containment of COVID-19" and "Comorbidities and diseases caused by COVID-19", which provides new perspectives and futures trends of the field. These results will form the basis for future research and guide decision-making in coronavirus focused on COVID-19 research and treatments.

Publication Type

Journal article.

<506>

Accession Number

20210089913

Author

Shoesmith, E.; Shahab, L.; Kale, D.; Mills, D. S.; Reeve, C.; Toner, P.; Assis, L. S. de; Ratschen, E.

Title

The influence of human-animal interactions on mental and physical health during the first COVID-19 lockdown phase in the U.K.: a qualitative exploration.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 45 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus disease 2019 (COVID-19) pandemic presents an opportunity to explore the role of animals as sources of emotional and physical support during a period when most of the population is experiencing social and environmental challenges. We investigated how companion animal owners perceived the influence of human-animal interaction on their physical and mental health during the first COVID-19 lockdown phase in the U.K., and what concerns they had regarding their animals at this time. We also explored the impact of participants' interaction with non-companion animals during this phase. A cross-sectional online survey of U.K. residents aged over 18 was conducted between April and June 2020. The final item of the survey invited open-ended free-text responses, allowing participants to describe any experiences and/or perceptions of their human-animal relationships during the COVID-19 lockdown phase. A qualitative thematic analysis of responses was undertaken. Four main themes related to the following aspects of human-animal interactions during the COVID-19 lockdown phase were identified: the positive impact of animal ownership during the COVID-19 lockdown (e.g., amelioration of wellbeing and mental health), concerns relating to animal ownership during the COVID-19 lockdown (e.g., concerns over animals carrying the COVID-19 virus), grief and loss of an animal during the COVID-19 lockdown and the impact of engaging with non-companion animals during the COVID-19 lockdown. The findings complement and extend previous insights into the impact of human-animal interaction with both companion and non-companion animals. They also highlight the challenges of caring for an animal during the lockdown phase and indicate the need to consider the development of further targeted support strategies, such as "day care" for the companion animals of key workers in this context.

Publication Type

Journal article.

<507>

Accession Number

20210089818

Author

Dragone, R.; Licciardi, G.; Grasso, G.; Gaudio, C. del; Chanussot, J.

Title

Analysis of the chemical and physical environmental aspects that promoted the spread of SARS-CoV-2 in the Lombard area.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 75 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Recent works have demonstrated that particulate matter (PM) and specific meteorological conditions played an important role in the airborne transmission of the SARS-CoV-1 and MERS-CoV. These studies suggest that these parameters could influence the transmission of SARS-CoV-2. In the present investigation, we sought to investigate the association between air pollution, meteorological data, and the Lombardy region COVID-19 outbreak caused by SARS-CoV-2. We considered the number of detected infected people at the regional and provincial scale from February to March 2020. Air pollution data were collected over the Lombardy region, nominally, sulphur dioxide, ammonia, nitrogen dioxide, nitrogen monoxide, carbon monoxide, ozone, and suspended particulate matter measuring less than 10 µm (PM10) and less than 2.5 µm (PM2.5). Meteorological data have been collected over the same region for temperature, relative humidity, and wind speed. In this work, we evaluated the combined impact of environmental pollutants and climate conditions on the COVID-19 outbreak. The analysis evidenced a positive correlation between spatial distribution of COVID-19 infection cases with high concentrations of suspended particulate matter and a negative relationship with ozone. Moreover, suspended particulate matter concentration peaks in February correlated positively with infection peaks according to the virus incubation period. The obtained results suggested that seasonal weather conditions and concentration of air pollutants seemed to influence COVID-19 epidemics in Lombardy region.

Publication Type

Journal article.

<508>

Accession Number

20210089802

Author

Xia JiaBei; Wu TaiLai; Zhou LiQin

Title

Sharing of verified information about COVID-19 on social network sites: a social exchange theory perspective.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 46 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: Verified and authentic information about coronavirus disease (COVID-19) on social networking sites (SNS) could help people make appropriate decisions to protect themselves. However, little is known about what factors influence people's sharing of verified information about COVID-19. Thus, the purpose of this study was to explore the factors that influence people's sharing of verified information about COVID-19 on social networking sites. Methods: Based on social exchange theory, we explore the factors that influence sharing of verified information about COVID-19 from two perspectives: benefits and costs. We employed the survey method to validate our hypothesized relationships. By using our developed measurement instruments, we collected 347 valid responses from SNS users and utilized the partial least squares method to analyze the data. Results: Among the benefits of sharing verified information about COVID-19, enjoyment in helping (beta = 0.357, p = 0.000), altruism (beta = 0.133, p = 0.029) and reputation (beta = 0.202, p = 0.000) were significantly associated with verified information sharing about COVID-19. Regarding the costs of sharing verified information about COVID-19, both verification cost (beta = -0.078, p = 0.046) and executional cost (beta = -0.126, p = 0.011) also significantly affect verified information sharing about COVID-19. All the proposed hypotheses were supported. Conclusions: By exploring factors from both benefits and costs perspectives, we could understand users' intention to share verified information about COVID-19 comprehensively. This study not only contributes to the literature on information sharing, but also has implications concerning users' behaviors on SNS.

Publication Type

Journal article.

<509>

Accession Number

20210089795

Author

Lee SeungMan; So WiYoung; Youn HyunSu

Title

Importance-performance analysis of health perception among Korean adolescents during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 26 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study assessed the health perceptions of 333 Korean adolescents during the coronavirus disease (COVID-19) pandemic via an online questionnaire administered in October 2020, which queried the perceived importance and actual performance of health behaviors. The health perception scales used in the survey consists of the six dimensions of mental health, disease, physical activity, sleep, diet, and sanitary health. The data were primarily analyzed using paired sample t-test for analysis of difference and importance-performance analysis (IPA). The IPA results were presented in four quadrants-"keep up the good work", "concentrate here", "low priority", and "possible overkill". The results indicated that first, there was a positive relationship between the importance and performance of all the subdimensions of health perception. Second, sanitary healthcare was rated as being of the greatest importance and was performed most, while physical activity management was rated least important and performed least. Third, statistically significant differences were found between importance and performance for all items of mental health, disease, physical activity, sleep, and diet dimensions, and some differences were found for items assessing the hygiene control dimension. Fourth, in the two-dimensional IPA model, "sanitary health" and "disease" are in Quadrant I (keep up the good work); "mental health", in Quadrant II (concentrate here); and "physical activity", "sleep", and "diet", in Quadrant III (low priority). No components of healthcare were in Quadrant IV (possible overkill). Based on these results, we emphasize the importance of adolescent health education and discuss solutions to enhance the performance of healthcare activities.

Publication Type

Journal article.

<510>

Accession Number

20210089135

Author

Onesti, C. E.; Tagliamento, M.; Curigliano, G.; Harbeck, N.; Bartsch, R.; Wildiers, H.; Tjan-Heijnen, V.; Martin, M.; Rottey, S.; Generali, D.; Campone, M.; Cristofanilli, M.; Pusztai, L.; Peeters, M.; Berchem, G.; Cortes, J.; Ruhstaller, T.; Ciruelos, E.; Rugo, H. S.; Jerusalem, G.

Title

Expected medium- and long-term impact of the COVID-19 outbreak in oncology.

Source

JCO Global Oncology; 2021. 7(162-172):162-172. 31 ref.

Publisher

Wolters Kluwer Health

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

PURPOSE: The COVID-19 pandemic has affected healthcare systems globally, leading to reorganization of medical activities. We performed an international survey aimed to investigate the medium- and long-term impact on oncology units. **MATERIALS AND METHODS:** An 82-item survey was distributed from June 17 to July 14, 2020 among medical oncologists worldwide. **RESULTS:** One hundred nine medical oncologists from 18 countries in Europe (n = 93), United States (n = 5), and Latin America (n = 11) answered the survey. A systematic tracing of COVID-19-positive patients was continued in the postacute phase by 77.1% of the centers; 64.2% of the respondents participated in a local registry and 56% in international or national registries of infected patients. Treatment adaptations were introduced, and surgery was the most affected modality being delayed or canceled in more than 10% of patients in 34% of the centers, whereas early cessation of palliative treatment was reported in 32.1% of the centers; 64.2% of respondents reported paying attention to avoid undertreatments. The use of telemedicine has been largely increased. Similarly, virtual tools are increasingly used particularly for medical education and international or national or multidisciplinary meetings. 60.6% of the participants reduced clinical activity, and 28.4% compensated by increasing their research activity. Significant reduction of clinical trial activities is expected in 37% of centers this year. The well-being of healthcare staff would not recover by the end of the year according to 18% of the participants. **CONCLUSION:** The COVID-19 outbreak has had a major impact on oncologic activity, which will persist in the future, irrespective of geographical areas.

Publication Type

Journal article.

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<511>

Accession Number

20210089060

Author

Li Zhen; Xu Hao; Chen JiaLin; Pang Zheng; Wang ChangLiang; You JiaBao; Zhao Wei; Li JingHui; Sun YongHu; Liu Hong; Zhang FuRen

Title

Internet-based remote consultation facilitates the medical care of patients with chronic skin diseases during COVID-19 pandemic.

Source

Journal of Infection; 2021. 82(2):e31-e32.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<512>

Accession Number

20210089058

Author

He Lu; Zeng YuYang; Zeng Cheng; Zhou YunYun; Li Ying; Xie XiaoJie; Xu Wei; Luo Wen; Hu Jing; Yi Zuohuizi; Wang XiaoLing; Tang ShiQi; Xu LiJuan; Chen ChangZheng

Title

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Positive rate of serology and RT-PCR for COVID-19 among healthcare workers during different periods in Wuhan, China.

Source

Journal of Infection; 2021. 82(2):e27-e28.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<513>

Accession Number

20210088967

Author

Nobari, N. N.; Seirafianpour, F.; Mashayekhi, F.; Goodarzi, A.

Title

A systematic review on treatment-related mucocutaneous reactions in COVID-19 patients.

Source

Dermatologic Therapy; 2020. 34(1). 47 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Most of drugs could have certain mucocutaneous reactions and COVID-19 drugs are not an exception that we focused. We systematically reviewed databases until August 15, 2020 and among initial 851 articles, 30 articles entered this study (20 case reports, 4 cohorts, and 6 controlled clinical trials). The types of reactions

included AGEP, morbilliform drug eruptions, vasculitis, DRESS syndrome, urticarial vasculitis, and so on. The treatments have been used before side effects occur, included: antimalarial, anti-viral, antibiotics, tocilizumab, enoxaparin and and so on. In pandemic, we found 0.004% to 4.15% of definite drug-induced mucocutaneous reactions. The interval between drug usage and the eruption varied about few hours to 1 month; tightly dependent to the type of drug and hydroxychloroquine seems to be the drug with highest mean interval. Antivirals, antimalarials, azithromycin, and tocilizumab are most responsive drugs for adverse drug reactions, but antivirals especially in combination with antimalarial drugs are in the first step. Types of skin reactions are usually morbilliform/exanthematous maculopapular rashes or urticarial eruptions, which mostly may manage by steroids during few days. In the setting of HCQ, specific reactions like AGEP should be considered. Lopinavir/ritonavir is the most prevalent used drug among antivirals with the highest skin adverse reaction; ribarivin and remdisivir also could induce cutaneous drug reactions but favipiravir has no or less adverse effects. Logically the rate of dermatologic adverse effects among antivirals may relate to their frequency of usage. Rarely, potentially life-threatening reactions may occur. Better management strategies could achieve by knowing more about drug-induced mucocutaneous presentations of COVID-19.

Publication Type

Journal article.

<514>

Accession Number

20210088964

Author

Iranmanesh, B.; Khalili, M.; Amiri, R.; Zartab, H.; Aflatoonian, M.

Title

Oral manifestations of COVID-19 disease: a review article.

Source

Dermatologic Therapy; 2020. 34(1). 38 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Dysgeusia is the first recognized oral symptom of novel coronavirus disease (COVID-19). In this review article, we described oral lesions of COVID-19 patients. We searched PubMed library and Google Scholar for published literature since December 2019 until September 2020. Finally, we selected 35 articles including

case reports, case series and letters to editor. Oral manifestations included ulcer, erosion, bulla, vesicle, pustule, fissured or depapillated tongue, macule, papule, plaque, pigmentation, halitosis, whitish areas, hemorrhagic crust, necrosis, petechiae, swelling, erythema, and spontaneous bleeding. The most common sites of involvement in descending order were tongue (38%), labial mucosa (26%), and palate (22%). Suggested diagnoses of the lesions were aphthous stomatitis, herpetiform lesions, candidiasis, vasculitis, Kawasaki-like, EM-like, mucositis, drug eruption, necrotizing periodontal disease, angina bullosa-like, angular cheilitis, atypical Sweet syndrome, and Melkerson-Rosenthal syndrome. Oral lesions were symptomatic in 68% of the cases. Oral lesions were nearly equal in both genders (49% female and 51% male). Patients with older age and higher severity of COVID-19 disease had more widespread and severe oral lesions. Lack of oral hygiene, opportunistic infections, stress, immunosuppression, vasculitis, and hyper-inflammatory response secondary to COVID-19 are the most important predisposing factors for onset of oral lesions in COVID-19 patients.

Publication Type

Journal article.

<515>

Accession Number

20210088698

Author

Atangana, E.; Oberholster, P. J.; Turton, A. R.

Title

Will the extraction of COVID-19 from wastewater help flatten the curve?

Source

Chemosphere; 2021. 271. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

With the potentially fatal effect of COVID-19 and its devastating impact on economies worldwide, some environmental scientist has suggested the use of waste from household sewage to trace the movement of SARS-CoV-2, within a given country. However, this approach is not without challenges where developing countries lack proper and adequate hygiene and sanitation, resulting in widespread defecation. Limited scientific research has been done to determine how many times a recently infected person can defecate and the quantification of SARS-CoV-2 found in a single expel. On the other hand, there is no detailed

research to specify where the heavy viral load of SARS-CoV-2 can be found in human excreta. In this paper, we present some obstacles that this approach could face in the absence of an intense lockdown in developing nations such as sub-Saharan countries. To achieve this, we identify some research needs that will strengthen our understanding of the transmission, occurrence, and persistence of SARS-CoV-2 in sewage and wastewater, including the life-span that depends on temperature. A methodology to follow in the process of identifying a hotspot on a small scale using some mathematical distributions, including the normal distribution, log-normal distribution, and the most complex one known as Blancmange function, was presented with some examples. Our investigation showed that this method might have some challenges, especially in developing countries (sub-Sahara countries) where open latrine usage is very high. Some recommendations we suggested to ensure the efficiency of such a method on a small scale. However, in general, it is essential to note the extraction/detection method will not help more than the testing method used all over the world to trace SARS-CoV-2 -19 in humans.

Publication Type

Journal article.

<516>

Accession Number

20210088673

Author

Bowers, I.; Subedi, B.

Title

Isoprostanes in wastewater as biomarkers of oxidative stress during COVID-19 pandemic.

Source

Chemosphere; 2021. 271. 36 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Isoprostanes are the potential biomarkers of endogenous human metabolism and proven clinically to provide the quantitative measure of systematic oxidative injury. An ultra-performance liquid chromatography-tandem mass spectrometric analytical method capable of determining four biomarkers of oxidative stress (8-iso-PGF2a, 2,3-dinor-iPF2a-III, PGE2, and 5-iPF2a-VI) in wastewater was developed and validated. Isoprostanes were quantified in the range of 31.1-1270 ng/L in raw wastewater samples in two communities in western Kentucky and Tennessee during the first four months of the COVID-19 pandemic.

Consistent detection of PGE2 and 5-iPF2a-VI in wastewater suggested that PGE2 and 5-iPF2a-VI can be a reliable biomarker of community oxidative anxiety. The higher 4-month average mass load of isoprostanes (ranged from 22.9 mg/d/1000 people to 807 mg/d/1000 people) may be attributed to the elevated community level oxidative anxiety owing COVID-19 uncertainties. The average mass loads of PGE2 and 5-iPF2a-VI in a community were significantly increased (two-tailed $p < 0.001$) from the first month of COVID-19 pandemic to the second month; however, significantly decreased (two-tailed $p < 0.001$) in the third month. Wastewater-based-epidemiological determination of isoprostanes can be a near-real-time and cost-effective approach of a trend in community depression. This is the first report of the quantification of PGE2 and 5-iPF2a-VI in wastewater and estimation of the community level oxidative anxiety.

Publication Type

Journal article.

<517>

Accession Number

20210088266

Author

Ilie, P. C.; Stefanescu, S.; Smith, L.

Title

The role of vitamin D in the prevention of coronavirus disease 2019 infection and mortality. (Themed section: COVID-19.)

Source

Aging, Clinical and Experimental Research; 2020. 32(7):1195-1198. 15 ref.

Publisher

Springer International Publishing AG

Location of Publisher

Cham

Country of Publication

Switzerland

Abstract

WHO declared SARS-CoV-2 a global pandemic. The present aim was to propose an hypothesis that there is a potential association between mean levels of vitamin D in various countries with cases and mortality caused by COVID-19. The mean levels of vitamin D for 20 European countries and morbidity and mortality caused by COVID-19 were acquired. Negative correlations between mean levels of vitamin D (average 56 mmol/L, STDEV 10.61) in each country and the number of COVID-19 cases/1 M (mean 295.95, STDEV 298.7), and mortality/1 M (mean 5.96, STDEV 15.13) were observed. Vitamin D levels are severely low in the aging population especially in Spain, Italy and Switzerland. This is also the most vulnerable group of the

population in relation to COVID-19. It should be advisable to perform dedicated studies about vitamin D levels in COVID-19 patients with different degrees of disease severity.

Publication Type

Journal article.

<518>

Accession Number

20210087928

Author

Iaccarino Idelson, P.; Rendina, D.; Strazzullo, P.

Title

Nutrition and the COVID-19 pandemic: three factors with high impact on community health.

Source

Nutrition, Metabolism and Cardiovascular Diseases; 2021. 31(3):756-761. 69 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Aims: In the course of the COVID-19 pandemic, multiple suggestions have been delivered through websites and social media referring to natural substances and various kinds of supplements with thaumaturgical properties in preventing and/or fighting the coronavirus infection. Indeed, there is no clinical trial evidence that a dietary or pharmacological supplementation of any particular substance will increase the effectiveness of the immune defences. There are however three nutritional issues that deserve special attention under the present circumstances, namely vitamin D deficiency, excess salt intake and inappropriate alcohol consumption. Here is a short review of the current knowledge about the possible role of these factors in the immunity defence system and their potential impact on the modulation of the immune response to SARS-COV2 infection. **Data synthesis:** For all of these factors there is convincing evidence of an impact on the immune defence structure and function. In the absence of RCT demonstration that increased ingestion of any given substance may confer protection against the new enemy, special attention to correction of these three nutritional criticisms is certainly warranted at the time of COVID pandemic. **Conclusions:** We propose that the inappropriate intake of salt and alcohol and the risk of inadequate vitamin D status should be object of screening, in particular in subjects at high mortality risk from SARS-COV 2 infection, such as institutionalised elderly subjects and all those affected by predisposing conditions.

Publication Type

Journal article.

<519>

Accession Number

20210087744

Author

Kartal, S. P.; Celik, G.; Sendur, N.; Aytekin, S.; Serdaroglu, S.; Dogan, B.; Yazici, A. C.; Cicek, D.; Borlu, M.; Kacar, N. G.; Ozden, M. G.; Bayramgurler, D.; Dogramaci, A. C.; Balci, D. D.; Saricaoglu, H.; Serdar, Z. A.; Donmez, L.; Alpsoy, E.

Title

Multicenter study evaluating the impact of COVID-19 outbreak on dermatology outpatients in Turkey.

Source

Dermatologic Therapy; 2020. 33(6). 23 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

COVID-19 pandemic has a significant impact on public health, whether directly or indirectly. The first case was seen in Turkey on March 11, and the World Health Organization (WHO) declared a pandemic on March 12, 2020. The study aimed to document the effect of pandemic on dermatology outpatient clinics in Turkey. Fifteen tertiary hospitals from 13 provinces were included in the study, which was conducted between January 12 and May 12, 2020. The International Codes of Diseases (ICD-10) categories and patients' characteristics were evaluated before and after the pandemic. A total of 164 878 patients, 133 131 before and 31 747 after the pandemic, were evaluated. The daily hospital applications were found reduced by 77%. The three of the most frequent diagnoses; dermatitis, acne, and psoriasis remained unchanged after the pandemic. While the frequency of herpes zoster, scabies, urticaria, pityriasis rosea and sexually transmitted diseases increased significantly; allergic and irritant contact dermatitis decreased after the pandemic. The applications regarding cutaneous neoplasms were considerably reduced during the pandemic, and this effect was more pronounced in cities with higher COVID incidence. The pandemic caused a noteworthy reduction in the number of patients accessing dermatological care. The pandemic caused significant changes in the frequency of a wide range of dermatological diseases. The application of cutaneous neoplasms is considerably reduced after the pandemic, and this effect was more pronounced in cities where pandemics are frequent. Therefore, the pandemic has resulted on numerous impacts on many critical issues in dermatology and dermatological care.

Publication Type

Journal article.

<520>

Accession Number

20210082025

Author

Beyer, R. M.; Manica, A.; Mora, C.

Title

Shifts in global bat diversity suggest a possible role of climate change in the emergence of SARS-CoV-1 and SARS-CoV-2.

Source

Science of the Total Environment; 2021. 767. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Bats are the likely zoonotic origin of several coronaviruses (CoVs) that infect humans, including SARS-CoV-1 and SARS-CoV-2, both of which have caused large-scale epidemics. The number of CoVs present in an area is strongly correlated with local bat species richness, which in turn is affected by climatic conditions that drive the geographical distributions of species. Here we show that the southern Chinese Yunnan province and neighbouring regions in Myanmar and Laos form a global hotspot of climate change-driven increase in bat richness. This region coincides with the likely spatial origin of bat-borne ancestors of SARS-CoV-1 and SARS-CoV-2. Accounting for an estimated increase in the order of 100 bat-borne CoVs across the region, climate change may have played a key role in the evolution or transmission of the two SARS CoVs.

Publication Type

Journal article.

<521>

Accession Number

20210079959

Author

Platto, S.; Zhou JinFeng; Wang YanQing; Wang Huo; Carafoli, E.

Title

Biodiversity loss and COVID-19 pandemic: the role of bats in the origin and the spreading of the disease. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:2-13.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The loss of biodiversity in the ecosystems has created the general conditions that have favored and, in fact, made possible, the insurgence of the COVID-19 pandemic. A lot of factors have contributed to it: deforestation, changes in forest habitats, poorly regulated agricultural surfaces, mismanaged urban growth. They have altered the composition of wildlife communities, greatly increased the contacts of humans with wildlife, and altered niches that harbor pathogens, increasing their chances to come in contact with humans. Among the wildlife, bats have adapted easily to anthropized environments such as houses, barns, cultivated fields, orchards, where they found the suitable ecosystem to prosper. Bats are major hosts for aCoV and betaCoV: evolution has shaped their peculiar physiology and their immune system in a way that makes them resistant to viral pathogens that would instead successfully attack other species, including humans. In time, the coronaviruses that bats host as reservoirs have undergone recombination and other modifications that have increased their ability for inter-species transmission: one modification of particular importance has been the development of the ability to use ACE2 as a receptor in host cells. This particular development in CoVs has been responsible for the serious outbreaks in the last two decades, and for the present COVID-19 pandemic.

Publication Type

Journal article.

<522>

Accession Number

20210074985

Author

Ramnath, V. R.; Hill, L.; Schultz, J.; Mandel, J.; Smith, A.; Morris, T.; Holberg, S.; Horton, L. E.; Malhotra, A.; Friedman, L. S.

Title

An in-person and telemedicine "hybrid" system to improve cross-border critical care in COVID-19.

Source

Annals of Global Health; 2021. 87(1). 29 ref.

Publisher

Levy Library Press

Location of Publisher

New York

Country of Publication

USA

Abstract

Background: UC San Diego Health System (UCSDHS) is an academic medical center and integrated care network in the US-Mexico border area of California contiguous to the Mexican Northern Baja region. The COVID-19 pandemic deeply influenced UCSDHS activities as new public health challenges increasingly related to high population density, cross-border traffic, economic disparities, and interconnectedness between cross-border communities, which accelerated development of clinical collaborations between UCSDHS and several border community hospitals - one in the US, two in Mexico - as high volumes of severely ill patients overwhelmed hospitals. Background: We describe the development, implementation, feasibility, and acceptance of a novel critical care support program in three community hospitals along the US-Mexico border. Methods: We created and instituted a hybrid critical care program involving: (1) in-person activities to perform needs assessments of equipment and supplies and hands-on training and education, and (2) creation of a telemedicine-based (Tele-ICU) service for direct patient management and/or consultative, education-based experiences. We collected performance metrics surrounding adherence to evidence-based practices and staff perceptions of critical care delivery. Findings: In-person intervention phase identified and filled gaps in equipment and supplies, and Tele-ICU program promoted adherence to evidence-based practices and improved staff confidence in caring for critically ill COVID-19 patients at each hospital. Conclusion: A collaborative, hybrid critical care program across academic and community centers is feasible and effective to address cross-cultural public health emergencies.

Publication Type

Journal article.

<523>

Accession Number

20210071032

Author

Mardones, F. O.; Rich, K. M.; Boden, L. A.; Moreno-Switt, A. I.; Caipo, M. L.; Zimin-Veselkoff, N.; Alateeqi, A. M.; Baltenweck, I.

Title

The COVID-19 pandemic and global food security.

Source

Frontiers in Veterinary Science; 2020. 6(November). 66 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

We present scientific perspectives on the impact of the COVID-19 pandemic and global food security. International organizations and current evidence based on other respiratory viruses suggests COVID-19 is not a food safety issue, i.e., there is no evidence associating food or food packaging with the transmission of the virus causing COVID-19 (SARS-CoV-2), yet an abundance of precaution for this exposure route seems appropriate. The pandemic, however, has had a dramatic impact on the food system, with direct and indirect consequences on lives and livelihoods of people, plants, and animals. Given the complexity of the system at risk, it is likely that some of these consequences are still to emerge over time. To date, the direct and indirect consequences of the pandemic have been substantial including restrictions on agricultural workers, planting, current and future harvests; shifts in agricultural livelihoods and food availability; food safety; plant and animal health and animal welfare; human nutrition and health; along with changes in public policies. All aspects are crucial to food security that would require "One Health" approaches as the concept may be able to manage risks in a cost-effective way with cross-sectoral, coordinated investments in human, environmental, and animal health. Like climate change, the effects of the COVID-19 pandemic will be most acutely felt by the poorest and most vulnerable countries and communities. Ultimately, to prepare for future outbreaks or threats to food systems, we must take into account the Sustainable Development Goals of the United Nations and a "Planetary Health" perspective.

Publication Type

Journal article.

<524>

Accession Number

20210067922

Author

Yu FaWen; Huang Xin; Yue Hui

Title

The high-quality development of rural tourism: connotative features, key issues and countermeasures.
[Chinese]

Source

China Rural Economy; 2020. (8).

Publisher

Institute of Rural Development, Chinese Academy of Social Sciences

Location of Publisher

Beijing

Country of Publication

China

Abstract

Rural tourism is an important carrier to promote rural revitalization and an important starting point for poverty alleviation. After "all-for-one tourism" has become a national strategy, rural tourism has shown a "blowout" development trend. Facing the impact of the Covid-19 outbreak, rural tourism is more urgently required to shift from quantity-oriented development to high-quality development, providing people with a healthier, safer, and better tourism environment. This article analyzes the high-quality development of rural tourism with the theory of coordinated development of ecological economy, and summarizes the concept and connotative features of high-quality development of rural tourism. Furthermore, it identifies key issues to realize the high-quality development of rural tourism from six aspects, namely, the integrity and scientific nature of development planning, resource sustainability, industrial integration, talent team construction, tourism products and services, as well as guarantee measures. Based on the analysis, the study puts forward a number of suggestions in order to achieve the high-quality development of rural tourism.

Publication Type

Journal article.

<525>

Accession Number

20210064333

Author

Dutta, R.

Title

National Board for Wildlife and the illusion of wildlife protection.

Source

Economic and Political Weekly; 2021. 56(3).

Publisher

Sameeksha Trust

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The recent approvals granted by the National Board for Wildlife permitting ecologically destructive activities within national parks and sanctuaries have generated a lot of concern. A significant part of the concern is with respect to the timing, and whether it is appropriate to approve projects during the COVID-19 lockdown. Other larger issues of concern point to the fact that the NBWL has become a "clearing house" for projects, where, irrespective of its impact on wildlife, projects are approved and that the decisions of the board are guided more by economic, strategic, political and other considerations and rarely in terms of wildlife conservation. The NBWL is the apex body for conservation of wildlife and its habitat, and the NBWL's role is of critical importance to ensure the long-term protection of India's biodiversity.

Publication Type

Journal article.

<526>

Accession Number

20210064244

Author

Saeedi-Boroujeni, A.; Mahmoudian-Sani, M. R.

Title

Anti-inflammatory potential of quercetin in COVID-19 treatment.

Source

Journal of Inflammation; 2021. 18(3). 51 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

SARS-CoV-2 is a betacoronavirus causing severe inflammatory pneumonia, so that excessive inflammation is considered a risk factor for the disease. According to reports, cytokine storm is strongly responsible for death in such patients. Some of the consequences of severe inflammation and cytokine storms include acute respiratory distress syndrome, acute lung injury, and multiple organ dysfunction syndromes. Phylogenetic findings show more similarity of the SARS-CoV-2 virus with bat coronaviruses, and less with SARS-CoV. Quercetin is a carbohydrate-free flavonoid that is the most abundant flavonoid in vegetables and fruits and has been the most studied to determine the biological effects of flavonoids. Inflammasomes are cytosolic multi-protein complexes assembling in response to cytosolic PAMP and DAMPs, whose function is to generate active forms of cytokines IL-1beta and IL-18. Activation or inhibition of the NLRP3 inflammasome is affected by regulators such as TXNIP, SIRT1 and NRF2. Quercetin suppresses the NLRP3 inflammasome by affecting these regulators. Quercetin, as an anti-inflammatory, antioxidant, analgesic and inflammatory compound, is probably a potential treatment for severe inflammation and one of the main life-threatening conditions in patients with COVID-19.

Publication Type

Journal article.

<527>

Accession Number

20210064210

Author

Meza-Palmeros, J. A.

Title

Risk perception, coronavirus and precariousness. A reflection on fieldwork under quarantine. (Special section on sociology and the coronavirus (COVID-19) pandemic.)

Source

Health Sociology Review; 2020. 29(2):113-121. 12 ref.

Publisher

Routledge

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

On 19 March 2020, I last met with a group of women from a neighbourhood of Monterrey, Mexico where I have spent the past year conducting ethnographic research. They had scheduled a meeting to decide whether to continue our weekly talks on health-related topics. 'Is this coronavirus real?' was the question guiding the meeting. Women shared their thoughts on their feelings on the threat that predominates in biomedical discourse. An air of resignation pervaded their speech. Nearly all of them suffer from chronic diseases and they clearly perceive the risk of their own death. However, the material conditions of their lives limit the scope of their strategies to protect themselves. A dialogue emerged between the women's request for clarity regarding the pandemic and me, a researcher called on as a physician. This article seeks to reflect on the political and moral aspects of everyday life that configure risk perception in the context of the WHO-declared pandemic. I analyse the dialogue sustained in the meeting as part of an ethnographic research I am conducting in this neighbourhood. Most of its residents live under precarious circumstances, which is a fundamental element in understanding their responses to the current COVID-19 crisis.

Publication Type

Journal article.

<528>

Accession Number

20210061088

Author

Iskander, N.

Title

Qatar, the coronavirus, and cordons sanitaires: migrant workers and the use of public health measures to define the nation.

Source

Medical Anthropology Quarterly; 2020. 34(4):561-577. 47 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

This article looks at the use of public health strategies to define political membership in the nation. I examine the use of the cordon sanitaire to mitigate the novel coronavirus in Qatar. I argue that it acts

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primarily as a boundary to map out zones of political exclusion, splitting those who are entitled to protection from disease from those who are not. Through an analysis of the logic, application, and history of the cordon sanitaire in Qatar and elsewhere, I argue that it is only a more explicit example of the ways that governments have applied public health measures such that they apportion exposure to COVID-19, protecting some while mandating exposure for others. Exposure, or protection from it, has become a means to spatialize power and territorialize the national imaginary, separating full members from those who are excluded and reduced to their economic function.

Publication Type

Journal article.

<529>

Accession Number

20210051480

Author

Fallon, A.; Dukelow, T.; Kennelly, S. P.; O'Neill, D.

Title

COVID-19 in nursing homes.

Source

QJM; 2020. 113(6):391-392. 13 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Older age and the presence of comorbidities are associated with increased risk of mortality in the current pandemic. The high prevalence of functional and cognitive impairment and behavioural symptoms add to the risk posed to nursing home residents, as well as environments which present barriers to infection control. In addition, healthcare professionals globally of all hues have neglected research, recruitment incentivisation and quality improvement in nursing home care relative to other areas of clinical practice. The synergy of these factors is reflected in the first major study of COVID-19 in a nursing home. Nearly two-thirds of residents were infected over a 3-week period, with a death rate of 33%: 50 staff members and 16 visitors were also infected. In Spain, it has been reported that a significant proportion of COVID-19 associated deaths have been nursing home residents. There is also a concern that many jurisdictions are not including nursing home deaths in the COVID-19 death toll. Parallels may be drawn between challenges faced in nursing homes during the current pandemic and those seen in previous infectious outbreaks and

epidemics. Following the severe acute respiratory syndrome epidemic in 2003, a study showed that the majority of residents in a Hong Kong nursing home reported poor knowledge of the condition and staff reported concerns about contracting the condition themselves: the willingness and ability of staff to work, and remain at work, may be impacted upon by a disproportionate level of perceived threat during pandemics and disasters.

Publication Type

Journal article.

<530>

Accession Number

20210048594

Author

Darnhofer, I.

Title

Resilience or how do we enable agricultural systems to ride the waves of unexpected change?

Source

Agricultural Systems; 2021. 187. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

As the unfolding of the COVID-19 pandemic reminds us, change is not only of the planned kind, but often triggered by sudden and unexpected events. The impact of such an event on agricultural systems is unpredictable and can be far reaching. Thus, rather than focusing our research efforts only on increasing the productivity and efficiency of agricultural systems, we may also need to pay attention to what enables them to change and adapt. One approach is to give more attention to relations and processes in a system. This applies to relations within agricultural systems, and between the system and its context; but also to relations between scientific disciplines and between researchers and practitioners. Assessing the fixities and dynamics these relations promote, may enable us to contribute making agricultural systems better able to navigate change processes, may be even enable them to take advantage of openings created by unexpected events.

Publication Type

Journal article.

<531>

Accession Number

20210047911

Author

Sayma Farabi; Saha, N. R.; Md. Hasanuzzaman; Khan, N. A.; Haque, M. S.

Title

Prediction of SARS-CoV-2 main protease inhibitors in medicinal plant derived compounds by molecular docking approach. (Special Issue: COVID-19: conventional therapies, fates, and mechanisms.)

Source

Journal of Advanced Biotechnology and Experimental Therapeutics; 2020. 3(4):79-96. 92 ref.

Publisher

Bangladesh Society for Microbiology, Immunology, and Advanced Biotechnology

Location of Publisher

Dhaka

Country of Publication

Bangladesh

Abstract

Coronaviruses are endemic in humans and infections typically mild, such as the common cold. Still, the cross-species transmission has produced some unusually virulent strains which now causing viral pneumonia, in severe cases, even acute respiratory distress syndrome and death. SARS-CoV-2 is the most threatening issue which leads the world to an uncertainty alongside thousands of regular death scenes. An effective vaccine to cure this virus is not yet available, so it requires concerted efforts at various scales. The viral Main Protease controls coronavirus replication and is a proven drug discovery target for SARS-CoV-2. Comprehensive computational study e.g., molecular docking and ADMET (absorption, distribution, metabolism and excretion) profiling were employed to predict the efficacy of medicinal plant-based bioactive compounds against SARS-CoV-2 MPP. Paritaprevir and lopinavir-previously approved viral main protease inhibitors were used as standards for comparison. MPP was docked with 90 phytochemical compounds, and the screening revealed that four compounds (azadirachtin, -12.5 kcal/mol; rutin, -9 kcal/mol; theaflavin, -9 kcal/mol; astragaloside, -8.8 kcal/mol) showed the highest binding affinity than the controls paritaprevir and lopinavir (-8.7 and -7.9 kcal/mol, respectively). Comparative structural analysis of protein-inhibitor complexes revealed that the compounds have intense interaction with the vital catalytic residue His-41 and Cys-145. Furthermore, the pharmaco-kinetics and drug-likeness properties of the antiviral phytochemicals suggested that the compounds do not have any considerable detrimental effects and can be considered potential drug candidates against SARS-CoV-2. These compounds can be further explored for in vitro experimental validation against SARS-CoV-2.

Publication Type

Journal article.

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<532>

Accession Number

20210046874

Author

Han Mei; Zou JingBo; Li Huan; Wei XiaoYu; Yang Song; Zhang HuiZheng; Wang PengSen; Qiu Qian; Le Le Wang; Chen YaoKai; Pan PinLiang

Title

Fecal nucleic acid test as a complementary standard for cured COVID-19 patients.

Source

Biomedical and Environmental Sciences; 2020. 33(12):935-939. 10 ref.

Publisher

Chinese Center for Disease Control and Prevention

Location of Publisher

Beijing

Country of Publication

China

Abstract

This study aimed observe the effects of polysaccharides of Tiaoheng Recipe on the function and activity of red blood cell complement receptor 1 (CR1) in Lewis lung cancer-bearing mice, and to explore the immunoregulatory mechanism of the polysaccharides of this formula on tumor-bearing erythrocytes. The method was performed in mice according to conventional methods. Inoculate Lewis lung cancer cells under the axilla to establish a metastatic lung cancer model; 8 days after intragastric administration, the effect of Tiaohengfang polysaccharide on tumor body, spleen and thymus index was tested the next day; red blood cell immune wreath experiment was used to observe the red blood cells in the blood The ability of immune adhesion to tumor cells; red blood cell immune complex rosette experiment to observe the activity of red blood cell C3b receptors in tumor-bearing mice; colorimetric method to determine the sialic acid content of red blood cell membranes in tumor-bearing mice. Results Tiaohengfang polysaccharide can improve the spleen and thymus. The index and anti-tumor effect can also increase the red blood cell immune rosette rate in tumor-bearing mice; increase the activity of red blood cells and the number of C R1 receptors in tumor-bearing mice, and the sialic acid content of red blood cell membranes in tumor-bearing mice. It is suggested that Tiao Heng Fang anti-tumor and immunomodulatory effects on polysaccharides may be related to the increase in the amount of sialic acid on the red blood cell membrane of Lewis lung cancer tumor-bearing mice, which in turn increased the number and activity of C R1, and enhanced the adhesion function of red blood cells.

Publication Type

Correspondence.

<533>

Accession Number

20203594746

Author

Bornali Datta; Anand Jaiswal; Pinky Goyal; Ashish Prakash; Tripathy, J. P.; Naresh Trehan

Title

The untimely demise of the TB free block model in the wake of coronavirus disease 2019 in India.

Source

Transactions of the Royal Society of Tropical Medicine and Hygiene; 2020. 114(11):789-791. 8 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The TB Free block project was implemented in the Pataudi block (population of 342,000 living in 142 villages), District Gurgaon, a block that is partly urban and partly rural (agricultural). A total of 31,951 households were covered: 1302 were referred for diagnostic camps, 120 CXRs were suggestive of TB and 42 had a positive CBNAAT. The program had to stop abruptly when the lockdown in India started on 22 March. The program data for case notification of TB during the period November 2019-May 2020 were extracted and comparison was done during the same period in previous years. Another comparison was also done prior to and after COVID-19 lockdown. Chi-square for trend has been reported. The data presented in this study came from the records routinely maintained by the TB control program and from the same block where the TB Free block project was implemented. The project started in December 2019 and witnessed a sharp increase in TB case notification in the subsequent months of January and February 2020, significantly above the figures during the same months in the previous 2 years. This was followed by a sharp decline during the period March-May 2020 (COVID-19 lockdown period), decreasing to 19 in May 2020. This decline is in sharp contrast to the number of TB notifications during the period March-May in the previous 2 years. The decline in notification started in March, even though the lockdown was implemented on 22 March, as by then there were already >350 cases of COVID-19 and several COVID-related deaths in the country. So even before the lockdown, the COVID-19 pandemic might have impacted on-field TB case finding activities. The TB Free project is one of the largest and most robust CSR programs of any organization and definitely of any corporate hospital in the region, however, the future of the project is at risk. Due to the near stoppage of all non-pandemic healthcare activities during the lockdown and the blow to hospital revenue, the CSR fund is at risk and all programs linked to it stand abandoned. Worldwide, there is disruption to key national health programs. Similar disruptions of health services and declines in the utilisation of most programmes, including maternal and child health, TB, human immunodeficiency virus, immunisation,

malnutrition and non-communicable diseases, was observed during the Ebola outbreak in Africa. A significant decline in access to TB testing and diagnosis has also been reported during the fight against COVID-19 in Taiwan and South Africa.

Publication Type

Journal article.

<534>

Accession Number

20203546770

Author

Jamrozik, E.; Heriot, G. S.

Title

Pandemic public health policy: with great power comes great responsibility.

Source

Internal Medicine Journal; 2020. 50(10):1169-1173. 51 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

Based on currently available data, it is already possible to identify at least some policies that are likely to be associated with net benefits, some that are non-beneficial, and some that are unfair or, on balance, harmful. It is a false dichotomy to suggest that multiple interventions must be applied at once or none at all that populations must choose between laissez faire and 'lockdown'. Public health agencies have a responsibility to consider how to achieve overall public health goals with the least restrictive or burdensome strategies, and to weigh each intervention on its merits. Humanity has survived other pandemics, but societies do not flourish in a perpetual state of emergency. Current Australian and New Zealand policies were conceived in a period of fearful uncertainty. These policies have produced significant short-term successes as well as unintended harms revealing and sometimes exacerbating social inequalities. The present has a unique opportunity to re-orient public health priorities, in light of current evidence, toward balanced long-term goals. The overall focus should be on preventing harm from all causes, considering COVID-19 as one public health problem among many. Disproportionate interventions, including those that are unnecessarily restrictive or harmful, should be revised as a matter of urgency. Moreover, difficult decisions must reflect the values of affected communities. Governments implementing emergency powers, such as prolonged international border closures and enhanced police enforcement,

must remember the limit of their mandate, which can only be found through genuine public debate predicated on transparent risk communication. During and after this pandemic, the best inoculation against infectious diseases remains a free, healthy and fair society.

Publication Type

Correspondence.

<535>

Accession Number

20203528289

Author

Leiner, A.; Sammon, M.; Perry, H.; Dunavant, S.

Title

Facing COVID-19 and refugee camps on the U.S. border.

Source

Journal of Emergency Medicine; 2020. 59(1):143-145. 7 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

This article discusses the measures in place for prevention, fortification, and treatment of COVID-19 among refugees in camps on the U.S. border. Social isolation, social distancing, and wearing of face masks are implemented. They are also asked to call the hotline if they are sick so they can stay in their tent and the health care workers can come to check on them. Malnourished individuals are also fortified with multivitamins containing vitamin D and zinc to reduce respiratory tract infections, as well as the utilization of hand-held ultrasound to monitor lung pleura and rapid flu tests to rule out influenzas A and B. For setups with no ventilators, they were given higher dose of zinc and chloroquine, as well as putting them in tents where they were placed on oxygen using concentrators. Despite the limited resources that will bring about challenges, this team of dedicated professionals are relentlessly pushing themselves to deliver innovative, evidence-based solutions and compassionate care to 2000 people fleeing violence and trauma in the face of the COVID-19 pandemic.

Publication Type

Correspondence.

<536>

Accession Number

20203519951

Author

Apisarntharak, A.; Apisarntharak, P.; Siripaparat, C.; Saengaram, P.; Leeprechanon, N.; Weber, D. J.

Title

Impact of anxiety and fear for COVID-19 toward infection control practices among Thai healthcare workers.

Source

Infection Control and Hospital Epidemiology; 2020. 41(9):1093-1094. 7 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

This survey was performed at 2 university hospitals and 2 private hospitals in Thailand. Healthcare personnel (HCP) in the general medicine, ophthalmology, and radiology departments were invited to participate using a standardized data collection tool. Data collected included HCP demographics, perception of risks to contract COVID-19, confidence in policies and hospital preparedness plans for COVID-19 (policy or adequacy of personal protective equipment), confidence in knowledge of disease transmission and infection prevention practices, sources for COVID-19 news, HCP emotions (anxiety and fear), their infection prevention practices including hand hygiene, wearing a mask and PPE, physical distancing, willingness to see admitted patients and willingness to accept new patients, as well as suggestions on how to deal with emotions. In total, 160 HCP participated in this survey (n = 40 HCP per hospital). Among them, 95 HCP (59%) were women, and the median age was 32 years (range, 23-62 years). Most HCP respondents were physicians (32%), nurses (28%), or nurse assistants (1%). Most HCP categorized themselves as being at high risk of contracting COVID-19 (90%) and for being quarantined (85.5%). Most were fearful of COVID-19 (90%), and 68 HCP (42.5%) were categorized as having at least a mild anxiety disorder. On the other hand, fewer HCP reported confidence in hospital infection prevention policy (78%), adequacy of PPE (74.4%) and confidence in their knowledge of disease transmission (74%), and infection prevention (75.6%). Hand washing (95.6%), wearing a mask and PPE (93.1%), physical distancing at hospital (82%) were reported at high rates, while willingness to see admitted patients (48.7%) and willingness to accept new patients (45.1%) were less likely. The sources of COVID-19 news were social media such as the Line application or Facebook, hospital news, and television. HCP had low confidence in social media COVID-19 news 65.6%, but almost all HCP had very high confidence in non-social media COVID-19 news 96.8%. This findings support

the need for hospitals to have good preparedness policies, particularly regarding the PPE stockpile, and ongoing education on disease transmission and infection prevention.

Publication Type

Journal article.

<537>

Accession Number

20203490674

Author

Callary, B.; Brady, A.; Kiosoglous, C.; Clewer, P.; Resende, R.; Mehrtens, T.; Wilkie, M.; Horvath, R.

Title

Making sense of coach development worldwide during the COVID-19 pandemic. (Special Issue: Sport and the coronavirus crisis.)

Source

International Journal of Sport Communication; 2020. 13(3):575-585. 11 ref.

Publisher

Human Kinetics

Location of Publisher

Leeds

Country of Publication

UK

Abstract

The commentary brings together the perspectives of a group of coach developers from across the globe who form a community of practice (CoP) from their involvement as "Cohort 5" in the International Council for Coaching Excellence and Nippon Sport Science University Coach Developer Academy. The CoP includes people from three types of organizations: university professors of sport coaching programs, national sport federations, and national multisport organizations' directors of coach education. While this CoP existed prior to the pandemic, the forced isolation has created a new structure and purpose to the CoP: The authors are all making meaning of the landscape of coach development within which they work by understanding the perspectives of others who work in their domain from across the world and the similar realities that they face in North America, Europe, the United Kingdom, and New Zealand. The authors outline the key themes that emerged from their weekly CoP video conference meetings to shed light on how this pandemic has changed the way they think about coach development.

Publication Type

Journal article.

<538>

Accession Number

20203484631

Author

Iheagwam, F. N.; Rotimi, S. O.

Title

Computer-aided analysis of multiple SARS-CoV-2 therapeutic targets: identification of potent molecules from African medicinal plants.

Source

Scientifica; 2020. 2020(1878410). 86 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

The COVID-19 pandemic, which started in Wuhan, China, has spread rapidly over the world with no known antiviral therapy or vaccine. Interestingly, traditional Chinese medicine helped in flattening the pandemic curve in China. In this study, molecules from African medicinal plants were analysed as potential candidates against multiple SARS-CoV-2 therapeutic targets. Sixty-five molecules from the ZINC database subset (AfroDb Natural Products) were virtually screened with some reported repurposed therapeutics against six SARS-CoV-2 and two human targets. Molecular docking, druglikeness, absorption, distribution, metabolism, excretion, and toxicity (ADMET) of the best hits were further simulated. Of the 65 compounds, only three, namely, 3-galloylcatechin, proanthocyanidin B1, and luteolin 7-galactoside found in almond (*Terminalia catappa*), grape (*Vitis vinifera*), and common verbena (*Verbena officinalis*), were able to bind to all eight targets better than the reported repurposed drugs. The findings suggest these molecules may play a role as therapeutic leads in tackling this pandemic due to their multitarget activity.

Publication Type

Journal article.

<539>

Accession Number

20203479867

Author

Chojnacka, K.; Witek-Krowiak, A.; Skrzypczak, D.; Mikula, K.; Mlynarz, P.

Title

Phytochemicals containing biologically active polyphenols as an effective agent against COVID-19-inducing coronavirus.

Source

Journal of Functional Foods; 2020. 73. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The outbreak of Covid-19 disease caused by SARS-CoV-19, along with the lack of targeted medicaments and vaccines, forced the scientific world to search for new antiviral formulations. In this review, we describe the current knowledge about plant extracts containing polyphenols that inhibit Covid-19. Many plant-derived natural compounds (polyphenols) might provide a starting point for the research on the use of plant extracts in coronavirus treatment and prevention. Antivirus polyphenolic drugs can inhibit coronavirus enzymes, which are essential for virus replication and infection. This group of natural substances (betulinic acid, indigo, aloemodine, luteolin, and quinomethyl triterpenoids, quercetin or gallates) is a potential key to designing antiviral therapies for inhibiting viral proteases. The known pharmacophore structures of bioactive substances can be useful in the elaboration of new anti-Covid-19 formulations. The benefit of using preparations containing phytochemicals is their high safety for patients and no side effects.

Publication Type

Journal article.

<540>

Accession Number

20203476496

Author

Shahzad, F.; Anderson, D.; Najafzadeh, M.

Title

The antiviral, anti-inflammatory effects of natural medicinal herbs and mushrooms and SARS-CoV-2 infection.

Source

Nutrients; 2020. 12(9). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The 2019 novel coronavirus, SARS-CoV-2, producing the disease COVID-19 is a pathogenic virus that targets mostly the human respiratory system and also other organs. SARS-CoV-2 is a new strain that has not been previously identified in humans, however there have been previous outbreaks of different versions of the beta coronavirus including severe acute respiratory syndrome (SARS-CoV1) from 2002 to 2003 and the most recent Middle East respiratory syndrome (MERS-CoV) which was first identified in 2012. All of the above have been recognised as major pathogens that are a great threat to public health and global economies. Currently, no specific treatment for SARS-CoV-2 infection has been identified; however, certain drugs have shown apparent efficacy in viral inhibition of the disease. Natural substances such as herbs and mushrooms have previously demonstrated both great antiviral and anti-inflammatory activity. Thus, the possibilities of natural substances as effective treatments against COVID-19 may seem promising. One of the potential candidates against the SARS-CoV-2 virus may be *Inonotus obliquus* (IO), also known as chaga mushroom. IO commonly grows in Asia, Europe and North America and is widely used as a raw material in various medical conditions. In this review, we have evaluated the most effective herbs and mushrooms, in terms of the antiviral and anti-inflammatory effects which have been assessed in laboratory conditions.

Publication Type

Journal article.

<541>

Accession Number

20203472976

Author

Dall'olio, R.; Blacquiére, T.; Bouga, M.; Brodschneider, R.; Carreck, N. L.; Chantawannakul, P.; Dietemann, V.; Kristiansen, L. F.; Gajda, A.; Gregorc, A.; Ozkirim, A.; Pirk, C.; Soroker, V.; Williams, G. R.; Neumann, P.

Title

COLOSS survey: global impact of COVID-19 on bee research.

Source

Journal of Apicultural Research; 2020. 59(5):731-734. 6 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The socio-economic impacts of COVID-19 on society have yet to be truly revealed; there is no doubt that the pandemic has severely affected the daily lives of most of humanity. It is to be expected that the research activities of scientists could be impacted to varying degrees, but no data exist on how COVID-19 has affected research specifically. Here, we show that the still ongoing COVID-19 pandemic has already diversely and negatively affected bee research at a global level. An online survey disseminated through the global COLOSS honey bee research association showed that every participant (n=230 from 56 countries) reported an impact on one or more of their activities. Activities that require travelling or the physical presence of people (meetings and conferences, teaching and extension) were affected the most, but also laboratory and field activities, daily operations, supervision and other activities were affected to varying degrees. Since the basic activities are very similar for many research fields, it appears as if our findings for bee research can be extrapolated to other fields. In the light of our data, we recommend that stakeholders such as governments and funding bodies who support research should facilitate the wide implementation of web-based information technology required for efficient online communication for research and education, as well as adequately loosened restriction measures with respect to field and laboratory work. Finally, increased flexibility in administration and extension of research grants and fellowships seem to be needed. It is apparent that adequate responses by all stakeholders are required to limit the impact of COVID-19 and future pandemics on bee science and other research fields.

Publication Type

Journal article.

<542>

Accession Number

20203455845

Author

Chen HuaLiang; Song DanDan; Gao TianLai; Yang JingJing; Ma YuTao; Deng Qian

Title

"Qingfei Paidu Decoction"-a possible choice of phytotherapy for severe acute respiratory infection caused by coronavirus disease-19.

Source

American Journal of Plant Sciences; 2020. 11(7):1111-1136. many ref.

Publisher

Scientific Research Publishing

Location of Publisher

Irvine

Country of Publication

USA

Abstract

This work is aimed to study the therapeutics and pharmacology of the treatment of severe acute respiratory infection caused by coronavirus disease-19 (COVID-19) with traditional Chinese medicine (TCM) "Qingfei Paidu Decoction". We analyze the "Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia" (Version I to Version VII) made by China, "Clinical management of severe acute respiratory infection when novel coronavirus (2019-nCoV) infection is suspected-Interim guidance" made by World Health Organization (WHO), "Therapeutic Guidelines: Respiratory" published by Australia, and the origin of classical prescription of Qingfei Paidu Decoction: "Shanghan Lun (Treatise on Febrile Diseases)" and "Jinkui Yaolue (Synopsis of Golden Chamber)". We search the dictionary of traditional Chinese medicine (Version II) manually. We search literatures from 2001 to 2020 on Wiley online library. We conduct a comparative study on the therapeutic options and indications among Qingfei Paidu Decoction, COVID-19 and chronic obstructive pulmonary disease (COPD). And we carry out pharmacological inquiry of Qingfei Paidu Decoction. The therapeutic options and indications of Qingfei Paidu Decoction in China, COVID-19 and COPD are considered to be basically consistent. Qingfei Paidu Decoction has a definite therapeutic effect on the symptoms, basic diseases and complications for COVID-19 and COPD. Qingfei Paidu Decoction is a possible choice of phytotherapy for severe acute respiratory infection caused by COVID-19.

Publication Type

Journal article.

<543>

Accession Number

20210091291

Author

Wilke, J.; Mohr, L.; Tenforde, A. S.; Edouard, P.; Fossati, C.; Gonzalez-Gross, M.; Ramirez, C. S.; Laino, F.; Tan, B.; Pillay, J. D.; Pigozzi, F.; Jimenez-Pavon, D.; Novak, B.; Jaunig, J.; Zhang, M.; Poppel, M. van; Heidt, C.; Willwacher, S.; Yuki, G.; Lieberman, D. E.; Vogt, L.; Verhagen, E.; Hespanhol, L.; Hollander, K.

Title

A pandemic within the pandemic? Physical activity levels substantially decreased in countries affected by COVID-19.

Source

International Journal of Environmental Research and Public Health; 2021. 18(5). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Governments have restricted public life during the COVID-19 pandemic, inter alia closing sports facilities and gyms. As regular exercise is essential for health, this study examined the effect of pandemic-related confinements on physical activity (PA) levels. A multinational survey was performed in 14 countries. Times spent in moderate-to-vigorous physical activity (MVPA) as well as in vigorous physical activity only (VPA) were assessed using the Nordic Physical Activity Questionnaire (short form). Data were obtained for leisure and occupational PA pre- and during restrictions. Compliance with PA guidelines was calculated based on the recommendations of the World Health Organization (WHO). In total, n = 13,503 respondents (39 +or- 15 years, 59% females) were surveyed. Compared to pre-restrictions, overall self-reported PA declined by 41% (MVPA) and 42.2% (VPA). Reductions were higher for occupational vs. leisure time, young and old vs. middle-aged persons, previously more active vs. less active individuals, but similar between men and women. Compared to pre-pandemic, compliance with WHO guidelines decreased from 80.9% (95% CI: 80.3-81.7) to 62.5% (95% CI: 61.6-63.3). Results suggest PA levels have substantially decreased globally during the COVID-19 pandemic. Key stakeholders should consider strategies to mitigate loss in PA in order to preserve health during the pandemic.

Publication Type

Journal article.

<544>

Accession Number

20210090009

Author

Mado, H.; Reichman-Warmusz, E.; Dudek, D.; Warmusz, O.

Title

Is vitamin D supplementation protective against coronavirus disease 2019 (COVID-19)?

Source

Electronic Journal of General Medicine; 2021. 18(2). 50 ref.

Publisher

Modestrum LTD, UK

Location of Publisher

London

Country of Publication

UK

Abstract

Vitamin D, through various mechanisms, affects the immune system, resulting in antiviral effects. Recent studies have also shown that it is effective and safe in the prevention of acute respiratory infections. For this reason, in the era of Coronavirus Disease 2019 pandemic (COVID-19), it is speculated whether vitamin D may also have a positive effect in the course of COVID-19. However, the results of available studies are contradictory, although due to the safety of vitamin D, as well as the information known so far, its regular supplementation in people at risk of deficiency seems to be reasonable.

Publication Type

Journal article.

<545>

Accession Number

20210089990

Author

Scudiero, O.; Lombardo, B.; Brancaccio, M.; Mennitti, C.; Cesaro, A.; Fimiani, F.; Gentile, L.; Moscarella, E.; Amodio, F.; Ranieri, A.; Gragnano, F.; Laneri, S.; Mazzaccara, C.; Micco, P. di; Caiazza, M.; D'Alicandro, G.; Limongelli, G.; Calabro, P.; Pero, R.; Frisso, G.

Title

Exercise, immune system, nutrition, respiratory and cardiovascular diseases during COVID-19: a complex combination.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 123 ref.

Publisher

MDPI AG

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Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Coronaviruses (CoVs) represent a large family of RNA viruses that can infect different living species, posing a global threat to human health. CoVs can evade the immune response, replicate within the host, and cause a rapid immune compromise culminating in severe acute respiratory syndrome. In humans, the immune system functions are influenced by physical activity, nutrition, and the absence of respiratory or cardiovascular diseases. This review provides an in-depth study between the interactions of the immune system and coronaviruses in the host to defend against CoVs disease.

Publication Type

Journal article.

<546>

Accession Number

20210089952

Author

Noor, N. M.; Yusof, R. C.; Mohd Azman Yacob

Title

Anxiety in frontline and non-frontline healthcare providers in kelantan, Malaysia.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 28 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In response to the coronavirus disease 2019 (COVID-19) pandemic, healthcare providers are exposed to psychological and mental health implications, including vicarious traumatization, anxiety, and depression. Gradual increases in the number of COVID-19 cases meant they were inadequately protected from contamination due to a shortage of protective equipment, excessive workloads, emotional exhaustion and

frustration. These circumstances affect their work performance in delivering health services. This study aims to compare the levels of anxiety in frontline and non-frontline healthcare providers during the COVID-19 pandemic. This study applied a comparative cross-sectional design between May and July 2020 at the Hospital Raja Perempuan Zainab II. Convenient sampling was applied in the selection of eligible participants. The case report form contained two self-administered questionnaires, namely, The Hospital Anxiety and Depression Scale and Medical Outcome Study Social Support Survey. Descriptive analysis, analysis of variance, and analysis of covariance were conducted using SPSS version 26. The number of participants recruited was 306, including 160 healthcare providers in the frontline group and 146 in the non-frontline group. The non-frontline healthcare providers reported a significantly higher anxiety mean score of 1.7 than the frontline providers after adjusting for gender, duration of employment, and social support. It indicates that non-frontline healthcare providers require psychological support similar to that of frontline healthcare providers during the COVID-19 pandemic.

Publication Type

Journal article.

<547>

Accession Number

20210089938

Author

Langsi, R.; Osuagwu, U. L.; Goson, P. C.; Abu, E. K.; Mashige, K. P.; Ekpenyong, B.; Ovenseri-Ogbomo, G. O.; Chikasirimobi, T. G.; Miner, C. A.; Ishaya, T.; Oloruntoba, R.; Nwaeze, O.; Charwe, D. D.; Agho, K. E.

Title

Prevalence and factors associated with mental and emotional health outcomes among Africans during the COVID-19 lockdown period - a web-based cross-sectional study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 39 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Mental health and emotional responses to the effects of COVID-19 lockdown in sub-Saharan Africa (SSA) are of serious public health concern and may negatively affect the mental health status of people. Hence, this study assessed the prevalence of mental health symptoms as well as emotional reactions among sub-Saharan Africans (SSAs) and associated factors among SSAs during the COVID-19 lockdown period. This was

a web-based cross-sectional study on mental health and emotional features from 2005 respondents in seven SSA countries. This study was conducted between 17 April and 17 May 2020 corresponding to the lockdown period in most SSA countries. Respondents aged 18 years and above and the self-reported symptoms were feeling anxious, being worried, angry, bored and frustrated. These were the main outcomes and were treated as dichotomous variables. Univariate and multivariate logistic regression analyses were used to identify the factors associated with these symptoms. We found that over half (52.2%) of the participants reported any of the mental health symptoms and the prevalence of feeling bored was 70.5% followed by feeling anxious (59.1%), being worried (57.5%), frustrated (51.5%) and angry (22.3%) during the COVID-19 pandemic. Multivariate analysis revealed that males, those aged >28 years, those who lived in Central and Southern Africa, those who were not married, the unemployed, those living with more than six persons in a household, had higher odds of mental health and emotional symptoms. Similarly, people who perceived low risk of contracting the infection, and those who thought the pandemic would not continue after the lockdown had higher odds of mental health and emotional symptoms. Health care workers had lower odds for feeling angry than non-healthcare workers. During the COVID-19 lockdown periods in SSA, about one in two participants reported mental health and emotional symptoms. Public health measures can be effectively used to identify target groups for prevention and treatment of mental health and emotional symptoms. Such interventions should be an integral component of SSA governments' response and recovery strategies of any future pandemic.

Publication Type

Journal article.

<548>

Accession Number

20210089922

Author

Daou, F.; Abou-Sleymane, G.; Badro, D. A.; Khanafer, N.; Mansour Tobaiqy; Faraj, A. A.

Title

The history, efficacy, and safety of potential therapeutics: a narrative overview of the complex life of COVID-19.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 106 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

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The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic posed a serious public health concern and started a race against time for researchers to discover an effective and safe therapy for coronavirus disease 2019 (COVID-19), the disease caused by SARS-CoV-2. This review aims to describe the history, efficacy, and safety of five potential therapeutics for COVID-19, remdesivir, favipiravir, hydroxychloroquine, tocilizumab, and convalescent plasma. A literature review was conducted through October 2020 to identify published studies evaluating the efficacy and safety of these five potential therapeutics. Clinical improvement was used to assess the efficacy, while reported withdrawals from study participation and adverse events were used to evaluate the safety. In total, 95 clinical studies (6 interventional and 89 observational studies) were obtained, of which 42 were included in this review. The evaluation of the efficacy and safety profiles is challenging due to the limitations of the clinical studies on one hand, and the limited number of randomized controlled trials (RCTs) on the other. Moreover, there was insufficient evidence to support repurposing remdesivir, favipiravir, and tocilizumab for COVID-19.

Publication Type

Journal article.

<549>

Accession Number

20210089912

Author

Zhuo LiJun; Wu Qian; Le Hong; Li Hao; Zheng Ling; Ma GuoQing; Tao HongBing

Title

COVID-19-related intolerance of uncertainty and mental health among back-to-school students in Wuhan: the moderation effect of social support.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 53 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The current wave and future trend of the novel coronavirus disease 2019 (COVID-19) has triggered public uncertainty, causing unbearable psychological pressure on people. A cross-sectional online questionnaire was conducted among back-to-school students in Wuhan from 31 August 2020, to 14 September 2020, by using convenience sampling. A total of 1017 participants voluntarily provided sociodemographic characteristics and accomplished the following scales: the Intolerance of Uncertainty Scale (IUS-12), the

Social Support Scale (SSQ), the Generalized Anxiety Disorder Scale (GAD-7), the Patient Health Questionnaire-9 (PHQ-9), and the Insomnia Severity Index-7 (ISI-7). Results revealed that the levels of anxiety, depression, and insomnia were moderate, moderate and subthreshold, respectively. A one-way multivariate analysis of variance indicated that those with different attitudes toward the trajectory of the COVID-19 epidemic in China showed significantly different results in anxiety and depression ($p < 0.001$). Moderation modeling implicated that social support significantly moderated the predictive relationship between intolerance of uncertainty and mental health variables including anxiety and depression, but failed on insomnia. Findings indicate that back-to-school students in Wuhan experience mental health problems and improving social support measures could buffer the effect of intolerance of uncertainty with respect to COVID-19 on mental health.

Publication Type

Journal article.

<550>

Accession Number

20210089895

Author

Sun YuYing; Lam TaiHing; Cheung YeeTak [Cheung, Y. T. D.]; Wang ManPing; Wu YongDa; Chen JianJiu; Zhang XiaoYu; Li, W. H. C.; Ho, S. Y.

Title

First report on smoking and infection control behaviours at outdoor hotspots during the COVID-19 pandemic: an unobtrusive observational study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 31 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study was to observe smoking behaviours and infection control behaviours in smokers at outdoor smoking hotspots during the COVID-19 pandemic in Hong Kong. We conducted unobtrusive observations at nine hotspots during 1 July 2019-31 January 2020 (pre-outbreak, 39 observations), 1 February-30 April 2020 (outbreak, eight observations), and 1 May-11 June 2020 (since-outbreak, 20 observations). Sex, age group, type of tobacco products used, duration of stay, group smoking behaviours, face mask wearing and infection control behaviours of smokers, and mask wearing of non-smoking pedestrians were observed.

Compared with pre-outbreak, lower volumes of smokers were observed during outbreak and since-outbreak. Smokers gathered more in a group (24.5% and 25.8% vs. 13.4%, respectively) and stayed longer (91.5% and 83.6% vs. 80.6% stayed 1 min) during outbreak and since-outbreak than pre-outbreak. Ninety-six percent smokers possessed a face mask. While smoking, 81.6% of smokers put the mask under the chin and 13.8% carried it in the hand, 32.4% did not wear a mask immediately after smoking, 98.0% did not sanitize hands, and 74.3% did not keep a distance of at least one metre. During the COVID-19 pandemic, smokers gathered closely and stayed longer at the hotspots, and few practised hand hygiene, all of which may increase the risk of infection.

Publication Type

Journal article.

<551>

Accession Number

20210089874

Author

Marome, W.; Shaw, R.

Title

COVID-19 response in Thailand and its implications on future preparedness.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 26 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Thailand has been affected by COVID-19, like other countries in the Asian region at an early stage, and the first case was reported as early as mid-January 2020. Thailand's response to the COVID-19 pandemic has been guided by the "Integrated Plan for Multilateral Cooperation for Safety and Mitigation of COVID-19". This paper analyses the health resources in the country and focuses on the response through community-level public health system and legislative measures. The paper draws some lessons on future preparedness, especially with respect to the four priorities of Sendai Framework for Disaster Risk Reduction. At the end, the paper puts some key learning for future preparedness. While Thailand's response to COVID-19 has been effective in limiting the spread of the disease, it falls short at being able to address the multiple dimensions of the crisis such as the economic and social impacts. The socioeconomic sectors have been hardest hit, with significant impact on tourism sectors. Sociopolitical system also plays an important role in governance

and decision-making for pandemic responses. The analysis suggests that one opportunity for enhancing resilience in Thailand is to strive for more multilevel governance that engages with various stakeholders and to support grassroots and community-level networks. The COVID-19 pandemic recovery is a chance to recover better while leaving no one behind. An inclusive long-term recovery plan for the various impacted countries needs to take a holistic approach to address existing gaps and work towards a sustainable society. Furthering the Health Emergency Disaster Risk Management (HEDRM) Framework may support a coordinated response across various linked sectors rather than straining one particular sector.

Publication Type

Journal article.

<552>

Accession Number

20210089872

Author

Junior, A.; Dula, J.; Mahumane, S.; Koole, O.; Enosse, S.; Fodjo, J. N. S.; Colebunders, R.

Title

Adherence to COVID-19 preventive measures in Mozambique: two consecutive online surveys.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 14 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

We assessed adherence to government recommendations implemented shortly after the introduction of COVID-19 in Mozambique in March 2020, through two online cross-sectional surveys in April and June 2020. We quantified adherence to preventive measures by a composite score comprising of five measures: physical distancing, face mask use, hand hygiene, cough hygiene, and avoidance of touching the face. 3770 and 1115 persons participated in the first and second round respectively. Wearing face masks, regular handwashing and cough hygiene all reached compliance rates of over 90% while physical distancing and avoiding to touch the face reached a compliance rate of 80-90%. A multivariable model investigating factors associated with adherence found that being older, more educated, and belonging to the healthcare sector increased the odds for higher adherence. Private workers and retired people, respondents receiving COVID-19 information through social media, and those who reported flu-like symptoms were less likely to adhere. 6% of respondents reported flu-like symptoms which aligned with the WHO clinical definition of COVID-19,

suggesting low level community transmission. In conclusion, most respondents in this online survey in Mozambique complied well with strategies to prevent COVID-19. Whether the good preventive behaviour explains the low grade COVID-19 transmission requires further study.

Publication Type

Journal article.

<553>

Accession Number

20210089822

Author

Wong YeeMan [Wong, Y. M. B.]; Lam TaiHing; Lai YuenKwan [Lai, Y. K. A.]; Wang ManPing; Ho SaiYin

Title

Perceived benefits and harms of the COVID-19 pandemic on family well-being and their sociodemographic disparities in Hong Kong: a cross-sectional study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

We assessed the perceived benefits and harms of COVID-19 on family and their associations with sociodemographic factors in Chinese adults in Hong Kong. We conducted an online population-based survey and collected 4891 responses in 6 days. Prevalence estimates were weighted by sex, age, and education of the general population, and associations were analyzed using logistic regression. Our results showed both perceived benefits: 19.0% for family physical health, 7.2% family mental health, and 13.5% family relationships; and harms: 2.3% for family physical health, 37.9% family mental health, 18.6% family relationships, and 37.8% decreased family income. More female or older respondents reported perceived benefits but fewer of them reported perceived harms. More respondents with higher than lower socioeconomic scores (SES) reported perceived benefits on family physical and mental health and family relationships, but more respondents with lower than higher SES reported perceived harm on family income. As the pandemic continues with uncertainties, further studies on the dynamics of benefits and harms are needed. Urgent and additional assistance to underprivileged families and at-risk individuals are needed to reduce the inequities amidst the COVID-19 pandemic.

Publication Type

Journal article.

<554>

Accession Number

20210089754

Author

Egendorf, S. P.; Mielke, H. W.; Castorena-Gonzalez, J. A.; Powell, E. T.; Gonzales, C. R.

Title

Soil lead (Pb) in New Orleans: a spatiotemporal and racial analysis.

Source

International Journal of Environmental Research and Public Health; 2021. 18(3). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Spatialized racial injustices drive morbidity and mortality inequalities. While many factors contribute to environmental injustices, Pb is particularly insidious, and is associated with cardio-vascular, kidney, and immune dysfunctions and is a leading cause of premature death worldwide. Here, we present a revised analysis from the New Orleans dataset of soil lead (SPb) and children's blood Pb (BPb), which was systematically assembled for 2000-2005 and 2011-2016. We show the spatial-temporal inequities in SPb, children's BPb, racial composition, and household income in New Orleans. Comparing medians for the inner city with outlying areas, soil Pb is 7.5 or 9.3 times greater, children's blood Pb is ~2 times higher, and household income is lower. Between 2000-2005 and 2011-2016, a BPb decline occurred. Long-standing environmental and socioeconomic Pb exposure injustices have positioned Black populations at extreme risk of adverse health consequences. Given the overlapping health outcomes of Pb exposure with co-morbidities for conditions such as COVID-19, we suggest that further investigation be conducted on Pb exposure and pandemic-related mortality rates, particularly among Black populations. Mapping and remediating invisible environmental Pb provides a path forward for preventing future populations from developing a myriad of Pb-related health issues.

Publication Type

Journal article.

<555>

Accession Number

20210089678

Author

Uyaroglu, O. A.; Basaran, N. C.; Ozisik, L.; Karahan, S.; Tanriover, M. D.; Guven, G. S.; Oz, S. G.

Title

Evaluation of the effect of COVID-19 pandemic on anxiety severity of physicians working in the internal medicine department of a tertiary care hospital: a cross-sectional survey.

Source

Internal Medicine Journal; 2020. 50(11):1350-1358. 33 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

Background Internists who have an important role in the global response to the COVID-19 pandemic are under both physical and psychological pressures. Aims To assess the anxiety among physicians working in the internal medicine department of a tertiary care hospital who are on the frontline of the COVID-19 pandemic. Methods This single-centre, non-intervention, cross-sectional descriptive study was conducted using an online survey questionnaire from 1 April to 14 April 2020. Physicians of the Department of Internal Medicine were invited to participate with a self-administered questionnaire. The degree of symptoms of anxiety was assessed by the Turkish versions of the 7-item Generalised Anxiety Disorder scale and Beck Anxiety Inventory, respectively. Results A total of 113 participants consented for the study and completed the questionnaire. The median age was 29 (IQR=5) years and 53.1% were male. A total of 72 internists (63.7%) worked as 'frontline' healthcare workers directly engaged in diagnosing, treating or caring for patients with or suspected to have COVID-19. Female gender was significantly associated with high scores and levels in all scales compared to the male gender ($P < 0.005$). Having family members over 65 years old and with chronic diseases were significantly associated with high anxiety scores and levels ($P < 0.005$). Conclusions In this survey of internists in a university hospital equipped with clinics, wards and intensive care unit for patients with COVID-19, female gender and having family members over 65 years old and with chronic diseases were associated with increased anxiety levels.

Publication Type

Journal article.

<556>

Accession Number

20210089598

Author

Martei, Y. M.; Rick, T. J.; Fadelu, T.; Ezzi, M. S.; Hammad, N.; Quadri, N. S.; Rodrigues, B.; Simonds, H.; Grover, S.; Incrocci, L.; Vanderpuye, V.

Title

Impact of COVID-19 on cancer care delivery in Africa: a cross-sectional survey of oncology providers in Africa.

Source

JCO Global Oncology; 2021. 7(368-377):368-377. 36 ref.

Publisher

Wolters Kluwer Health

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

PURPOSE: The COVID-19 pandemic has disrupted cancer care globally. There are limited data of its impact in Africa. This study aims to characterize COVID-19 response strategies and impact of COVID-19 on cancer care and explore misconceptions in Africa. **METHODS:** We conducted a web-based cross-sectional survey of oncology providers in Africa between June and August 2020. Descriptive statistics and comparative analysis by income groups were performed. **RESULTS:** One hundred twenty-two participants initiated the survey, of which 79 respondents from 18 African countries contributed data. Ninety-four percent (66 of 70) reported country mitigation and suppression strategies, similar across income groups. Unique strategies included courier service and drones for delivery of cancer medications (9 of 70 and 6 of 70, respectively). Most cancer centers remained open, but > 75% providers reported a decrease in patient volume. Not previously reported is the fear of infectivity leading to staff shortages and decrease in patient volumes. Approximately one third reported modifications of all cancer treatment modalities, resulting in treatment delays. A majority of participants reported 25 confirmed cases (44 of 68, 64%) and 5 deaths because of COVID-19 (26 of 45, 58%) among patients with cancer. Common misconceptions were that Africans were less susceptible to the virus (53 of 70, 75.7%) and decreased transmission of the virus in the African heat (44 of 70, 62.9%). **CONCLUSION:** Few COVID-19 cases and deaths were reported among patients with cancer. However, disruptions and delays in cancer care because of the pandemic were noted. The pandemic has inspired tailored innovative solutions in clinical care delivery for patients with cancer, which may serve as a blueprint for expanding care and preparing for future pandemics. Ongoing public education should address COVID-19 misconceptions. The results may not be generalizable to the entire African continent because of the small sample size.

Publication Type

Journal article.

<557>

Accession Number

20210089307

Author

Godoy, M. G.; Kibenge, M. J. T.; Kibenge, F. S. B.

Title

SARS-CoV-2 transmission via aquatic food animal species or their products: a review.

Source

Aquaculture; 2021. 536.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Outbreaks of COVID-19 (coronavirus disease 2019) have been reported in workers in fish farms and fish processing plants arising from person-to-person transmission, raising concerns about aquatic animal food products' safety. A better understanding of such incidents is important for the aquaculture industry's sustainability, particularly with the global trade in fresh and frozen aquatic animal food products where contaminating virus could survive for some time. Despite a plethora of COVID-19-related scientific publications, there is a lack of reports on the risk of contact with aquatic food animal species or their products. This review aimed to examine the potential for Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2) contamination and the potential transmission via aquatic food animals or their products and wastewater effluents. The extracellular viability of SARS-CoV-2 and how the virus is spread are reviewed, supporting the understanding that contaminated cold-chain food sources may introduce SARS-CoV-2 via food imports although the virus is unlikely to infect humans through consumption of aquatic food animals or their products or drinking water; i.e., SARS-CoV-2 is not a foodborne virus and should not be managed as such but instead through strong, multifaceted public health interventions including physical distancing, rapid contact tracing, and testing, enhanced hand and respiratory hygiene, frequent disinfection of high-touch surfaces, isolation of infected workers and their contacts, as well as enhanced screening protocols for international seafood trade.

Publication Type

Journal article.

<558>

Accession Number

20210089124

Author

Gelemanovic, A.; Vidovic, T.; Stepanic, V.; Trajkovic, K.

Title

Identification of 37 heterogeneous drug candidates for treatment of COVID-19 via a rational transcriptomics-based drug repurposing approach.

Source

Pharmaceuticals; 2021. 14(2). 74 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

A year after the initial outbreak, the COVID-19 pandemic caused by SARS-CoV-2 virus remains a serious threat to global health, while current treatment options are insufficient to bring major improvements. The aim of this study is to identify repurposable drug candidates with a potential to reverse transcriptomic alterations in the host cells infected by SARS-CoV-2. We have developed a rational computational pipeline to filter publicly available transcriptomic datasets of SARS-CoV-2-infected biosamples based on their responsiveness to the virus, to generate a list of relevant differentially expressed genes, and to identify drug candidates for repurposing using LINCS connectivity map. Pathway enrichment analysis was performed to place the results into biological context. We identified 37 structurally heterogeneous drug candidates and revealed several biological processes as druggable pathways. These pathways include metabolic and biosynthetic processes, cellular developmental processes, immune response and signaling pathways, with steroid metabolic process being targeted by half of the drug candidates. The pipeline developed in this study integrates biological knowledge with rational study design and can be adapted for future more comprehensive studies. Our findings support further investigations of some drugs currently in clinical trials, such as itraconazole and imatinib, and suggest 31 previously unexplored drugs as treatment options for COVID-19.

Publication Type

Journal article.

<559>

Accession Number

20210089066

Author

Al-Hatmi, A. M. S.; Mohsin, J.; Al-Huraizi, A.; Khamis, F.

Title

COVID-19 associated invasive candidiasis.

Source

Journal of Infection; 2021. 82(2):e45-e46.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<560>

Accession Number

20210088992

Author

Bielecki, M.; Patel, D.; Hinkelbein, J.; Komorowski, M.; Kester, J.; Ebrahim, S.; Rodriguez-Morales, A. J.; Memish, Z. A.; Schlagenhauf, P.

Title

Air travel and COVID-19 prevention in the pandemic and peri-pandemic period: a narrative review.

Source

Travel Medicine and Infectious Disease; 2021. 39. 98 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Air travel during the COVID-19 pandemic is challenging for travellers, airlines, airports, health authorities, and governments. We reviewed multiple aspects of COVID peri-pandemic air travel, including data on traveller numbers, peri-flight prevention, and testing recommendations and in-flight SARS-CoV-2 transmission, photo-epidemiology of mask use, the pausing of air travel to mass gathering events, and quarantine measures and their effectiveness. Flights are reduced by 43% compared to 2019. Hygiene measures, mask use, and distancing are effective, while temperature screening has been shown to be unreliable. Although the risk of in-flight transmission is considered to be very low, estimated at one case per 27 million travellers, confirmed in-flight cases have been published. Some models exist and predict minimal risk but fail to consider human behavior and airline procedures variations. Despite aircraft high-efficiency filtering, there is some evidence that passengers within two rows of an index case are at higher risk. Air travel to mass gatherings should be avoided. Antigen testing is useful but impaired by time lag to results. Widespread application of solutions such as saliva-based, rapid testing or even detection with the help of "sniffer dogs" might be the way forward. The "traffic light system" for traveling, recently introduced by the Council of the European Union is a first step towards normalization of air travel. Quarantine of travellers may delay introduction or re-introduction of the virus, or may delay the peak of transmission, but the effect is small and there is limited evidence. New protocols detailing on-arrival, rapid testing and tracing are indicated to ensure that restricted movement is pragmatically implemented. Guidelines from airlines are non-transparent. Most airlines disinfect their flights and enforce wearing masks and social distancing to a certain degree. A layered approach of non-pharmaceutical interventions, screening and testing procedures, implementation and adherence to distancing, hygiene measures and mask use at airports, in-flight and throughout the entire journey together with pragmatic post-flight testing and tracing are all effective measures that can be implemented. Ongoing research and systematic review are indicated to provide evidence on the utility of preventive measures and to help answer the question "is it safe to fly?".

Publication Type

Journal article.

<561>

Accession Number

20210088991

Author

Novoa, R. H.; Quintana, W.; Llancari, P.; Urbina-Quispe, K.; Guevara-Rios, E.; Ventura, W.

Title

Maternal clinical characteristics and perinatal outcomes among pregnant women with coronavirus disease 2019. a systematic review.

Source

Travel Medicine and Infectious Disease; 2021. 39. 109 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To describe the maternal clinical characteristics, maternal and perinatal outcomes in COVID-19-positive pregnant women. **Methods:** Articles in all languages on the SARS-CoV-2 infection in pregnant women were sought from MEDLINE, EMBASE, Cochrane Library and LILACS; China National Knowledge Infrastructure Database (CNKI), Chinese Science and Technology Periodical Database (VIP) and Wan Fang Data between December 1, 2019 and April 27, 2020. Bulletins and national reports were also searched. **Results:** From 12,168 retrieved articles, 143 were selected for full-text assessment; 33 for descriptive analyses, and 4 case-controls for meta-analysis. In 322 infected pregnant women, aged 20-45 years, the most frequent maternal comorbidity was obesity (24.2%). Forty-two (28.4%) were asymptomatic at admission. Cough (n = 148,59.7%) and fever (n = 147,59.3%) were the most prevalent symptoms. In the meta-analysis, fever (OR: 0.13,95% CI 0.05 to 0.36) and cough (0.26,95% CI 0.11 to 0.59) were lower in pregnant women with COVID-19 than non-pregnant women with COVID-19.195 (60.6%) delivered, and 125 (38.8%) remained pregnant during the study. Cesarean was reported in 99 (50.8%) women and vaginal delivery in 64 (32.8%). The main adverse obstetric outcome was premature birth (n = 37,18.9%). Thirty patients (10.3%) with COVID-19-related complications required intensive care, one (0.3%) died. SARS-CoV-2 was absent in breast milk, amniotic fluid, placenta or umbilical cord blood. **Conclusions:** The maternal clinical characteristics of COVID-19-positive pregnant include frequently fever and cough; however significantly less frequently than non-pregnant women with COVID-19. Iatrogenic preterm birth is the main adverse obstetric outcome. Current data does not support vertical transmission in the third trimester.

Publication Type

Journal article.

<562>

Accession Number

20210088800

Author

Ak, N.; Vatansever, S.

Title

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"Door to treatment" outcomes of cancer patients during the COVID-19 pandemic.

Source

Chemotherapy (Basel); 2020. 65(5/6):141-146. 16 ref.

Publisher

S Karger AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: The novel coronavirus disease 2019 has become a worldwide threat. We aimed to explore reflections of these unexpected changes to newly diagnosed cancer patients. Method: We searched the 2 months after the index case of our country. The first admission day and the first day of intravenous treatment of newly diagnosed patients were recorded. Results: In the 60 days measured during the pandemic, the total number of patients on polyclinics was 159/weekdays, and the total applied chemotherapy cycles were 276/week. For comparison, the total numbers in the previous year were 267/weekday and 363/week for polyclinic and applied chemotherapy cycles, respectively. The total number of newly admitted patients in 2020 was 283. For comparison, the number of new patients in the same 60-day period in 2019 was 495. Patients who were admitted for adjuvant treatment required a median of 8 days for the first course, those who were admitted for neoadjuvant treatment required 12 days, and metastatic patients required 14 days; there were no significant differences between treatment types ($p = 0.233$). However, the median treatment time was 11.5 and 17 days, in 2020 and in 2019, respectively. A significant difference was observed between the 2 groups ($p < 0.001$). Conclusion: The effective shift of workers and accurate regulations have not resulted in apparent delays in patient care. While a decrease in the number of patients has detected, faster healthcare service was introduced to newly diagnosed patients. The reason for the decrease in the number of patients should be investigated with new studies.

Publication Type

Journal article.

<563>

Accession Number

20210088264

Author

Xu GuoGang; Yang YongShi; Du YingZhen; Peng FuJun; Hu Peng; Wang RunSheng; Yin Ming; Li TianZhi; Tu Lei; Sun JinLyu; Jiang TaiJiao; Chang, C.

Title

Clinical pathway for early diagnosis of COVID-19: updates from experience to evidence-based practice.
(Special Issue: Contemporary issues in allergy and clinical immunology.)

Source

Clinical Reviews in Allergy and Immunology; 2020. 59(1):89-100. 75 ref.

Publisher

Springer US

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

The COVID-19 pandemic is a significant global event in the history of infectious diseases. The SARS-CoV-2 appears to have originated from bats but is now easily transmissible among humans, primarily through droplet or direct contact. Clinical features of COVID-19 include high fever, cough, and fatigue which may progress to ARDS. Respiratory failure can occur rapidly after this. The primary laboratory findings include lymphopenia and eosinopenia. Elevated D-dimer, procalcitonin, and CRP levels may correlate with disease severity. Imaging findings include ground-glass opacities and patchy consolidation on CT scan. Mortality is higher in patients with hypertension, cardiac disease, diabetes mellitus, cancer, and COPD. Elderly patients are more susceptible to severe disease and death, while children seem to have lower rates of infection and lower mortality. Diagnostic criteria and the identification of persons under investigation have evolved as more data has emerged. However, the approach to diagnosis is still very variable from region to region, country to country, and even among different hospitals in the same city. The importance of a clinical pathway to implement the most effective and relevant diagnostic strategy is of critical importance to establish the control of this virus that is responsible for more and more deaths each day.

Publication Type

Journal article.

<564>

Accession Number

20210088099

Author

Alserehi, H. A.; Alqunaibet, A. M.; Al-Tawfiq, J. A.; Alharbi, N. K.; Alshukairi, A. N.; Alanazi, K. H.; Bin Saleh, G. M.; Alshehri, A. M.; Abdulrahman Almasoud; Hashem, A. M.; Alruwaily, A. R.; Alaswad, R. H.; Al-Mutlaq, H. M.; Almudaiheem, A. A.; Othman, F. M.; Aldakeel, S. A.; Abu Ghararah, M. R.; Jokhdar, H. A.; Algwizani, A. R.; Almudarra, S. S.; Albarrag, A. M.

Title

Seroprevalence of SARS-CoV-2 (COVID-19) among healthcare workers in Saudi Arabia: comparing case and control hospitals.

Source

Diagnostic Microbiology and Infectious Disease; 2021. 99(3). 35 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Healthcare workers (HCWs) stand at the frontline for fighting coronavirus disease 2019 (COVID-19) pandemic. This puts them at higher risk of acquiring the infection than other individuals in the community. Defining immunity status among health care workers is therefore of interest since it helps to mitigate the exposure risk. This study was conducted between May 20th and 30th, 2020. Eighty-five hospitals across Kingdom of Saudi Arabia were divided into 2 groups: COVID-19 referral hospitals are those to which RT-PCR-confirmed COVID-19 patients were admitted or referred for management (Case-hospitals). COVID-19 nonaffected hospitals where no COVID-19 patients had been admitted or managed and no HCW outbreak (Control hospitals). Next, seroprevalence of severe acute respiratory syndrome coronavirus 2 among HCWs was evaluated; there were 12,621 HCWs from the 85 hospitals. There were 61 case-hospitals with 9379 (74.3%) observations, and 24 control-hospitals with 3242 (25.7%) observations. The overall positivity rate by the immunoassay was 299 (2.36%) with a significant difference between the case-hospital (2.9%) and the control-group (0.8%) (P value <0.001). There was a wide variation in the positivity rate between regions and/or cities in Saudi Arabia, ranging from 0% to 6.31%. Of the serology positive samples, 100 samples were further tested using the SAS2pp neutralization assay; 92 (92%) samples showed neutralization activity. The seropositivity rate in Kingdom of Saudi Arabia is low and varies across different regions with higher positivity in case-hospitals than control-hospitals. The lack of neutralizing antibodies (NAb) in 8% of the tested samples could mean that assay is a more sensitive assay or that neutralization assay has a lower detection limits; or possibly that some samples had cross-reaction to spike protein of other coronaviruses in the assay, but these were not specific to neutralize severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

Publication Type

Journal article.

<565>

Accession Number

20210087882

Author

Title

Psychosocial and clinical effects of the COVID-19 pandemic in patients with childhood rheumatic diseases and their parents.

Source

Rheumatology International; 2021. 41(3):575-583. 44 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

This study aimed to evaluate the psychological symptoms of children and adolescents with rheumatological diseases (RD) and their parents during the outbreak. A web-based questionnaire survey was conducted in a cross-sectional design in RD patients and healthy controls. The Hospital Anxiety and Depression Scale was used to evaluate parental psychiatric status; while the State-Trait Anxiety Inventory for Child was used for children. Four hundred and fifty-nine patients with RD and their parents completed the present study, as well as 336 healthy peers. The age and gender of the children were similar across groups. Under 12 years of age, the trait anxiety of the children and the psychological symptoms of parents were similar across groups; while over 13 years of age, anxiety and depression scores of the parents, as well as trait anxiety of the children were higher than the control groups' (7.3 +or- 3.4 vs 6.3 +or- 3.8, $p = 0.006$ for parental anxiety; 6.6 +or- 3.8 vs. 5.3 +or- 3.9, $p < 0.001$ for parental depression; 36.1 +or- 8.7 vs. 33.3 +or- 7.9, $p = 0.002$ for child trait anxiety). In patient group, there were no differences in scale scores according to variables such as rheumatological disease diagnosis, the consulting of doctor for treatment, thinking that RD increases the risk of COVID-19, the history of rheumatic disease attack during the pandemic process, and the use of biological agents. The children's trait anxiety was positively correlated with their parents' anxiety ($r = 0.414$, $p < 0.001$) and depression ($r = 0.300$, $p < 0.001$) scores. These findings suggest that clinicians should pay attention to the psychiatric symptoms of both children with RD and their parents during the pandemic.

Publication Type

Journal article.

<566>

Accession Number

20210087712

Author

Isoletta, E.; Vassallo, C.; Brazzelli, V.; Giorgini, C.; Tomasini, C. F.; Sabena, A.; Perlini, S.; Silvestri, A. de; Barruscotti, S.

Title

Emergency accesses in dermatology department during the COVID-19 pandemic in a referral third level center in the north of Italy.

Source

Dermatologic Therapy; 2020. 33(6). 14 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

During the lockdown period, most planned visits have been postponed and the number of accesses to emergency department (ED) has dramatically reduced. The aim of our study is to analyze the impact of the lockdown on the number, type, and severity of Dermatological ED diagnosis. We performed a retrospective review of all dermatological consultations in the ED of IRCSS San Matteo during the lockdown period in Italy (February 22-May 3 2020) and compared them with those from the same period in 2019. We noticed a sharply reduction in the number of dermatological consultations requested in the ED: from 164 patients in 2019 to 33 in 2020. Some diagnostic categories showed a significant difference with a higher incidence of vasculopathic lesions (0.6% vs 12.1%, $P < .0001$), urticarial rashes (8.5% vs 21.2%, $P = .03$), and scabies (3% vs 12.1%, $P = .023$). We observed an increase in the proportion of patients starting medications, before coming to the ED 26.2% in 2019 vs 66.7% in 2020 ($P < .001$). Furthermore, we noticed a significant increase in the average complexity of cases presenting to the ED in 2020, as proven by the increased need for biopsies and systemic therapy.

Publication Type

Journal article.

<567>

Accession Number

20210087678

Author

Altun, E.

Title

The most common pediatric and adult dermatology patient complaints in a month of the COVID-19 pandemic in Turkey.

Source

Dermatologic Therapy; 2020. 33(6). 10 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Severe acute respiratory syndrome coronavirus 2 is the coronavirus strain that causes coronavirus disease 2019 (COVID-19). The World Health Organization (WHO) has designated the ongoing COVID-19 outbreak a Public Health Emergency of International Concern. WHO declared COVID-19 as a pandemic on 11 March 2020. During the pandemic and lockdown period, many dermatologic clinics were temporarily closed in Turkey as well as all over the world. Taking the necessary precautions, the hospital continued to examine all emergent and elective patients who applied to our dermatology clinic. We investigated the most common reasons for admission of pediatric and adult patients who were admitted to our outpatient clinic between 30 March and 30 April 2020, the period with the highest number of COVID-19 patients in Turkey. In children and adult age groups, the most common reason for admission was acne (N: 10 [16.4%] and N: 89 [20.9%], respectively). Of the 99 acne patients, 70 (70.7%) were using systemic isotretinoin and applied to our clinic to repeat the prescription or continue the agent. The number of pediatric patients admitted to the dermatology department drastically reduced during the lockdown period, which was attributed to the curfew for children in the country.

Publication Type

Journal article.

<568>

Accession Number

20210087673

Author

Uzuncakmak, T. K.; Bayazit, S.; Askin, O.; Engin, B.; Kutlubay, Z.

Title

Inpatient dermatology consultations during COVID 19 pandemic in a tertiary referral center.

Source

Dermatologic Therapy; 2020. 33(6). 7 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Since the COVID-19 infection first appeared in December 2019, patient profile of outpatient and inpatient clinics has changed. Various cutaneous findings associated with COVID-19 have been reported in the literature. The main objective of this study was to describe and analyze the profile of the consultations requested from dermatology department during the COVID pandemic. Retrospective, cohort study. In this study, we observed the dermatology consultations of the hospitalized patients over a period of 2 months, corresponding to the peak of COVID outbreak in a tertiary care hospital in Turkey. We reviewed the inpatient dermatology consult database retrospectively. Both pediatric and adult dermatology inpatient consultations were evaluated. A total of 166 inpatient dermatology consultations were requested from dermatology department during March-May, 2020. The mean age of the patients was 53.12 (1-89) years. Almost 32.5% (n = 54) of dermatology consultations were requested from the COVID wards and the COVID intensive care unit. The second most common consultations were requested from internal medicine departments (n = 46, 27.7%). The most common indications for the consultations were cutaneous infections (36%), followed by inflammatory disorders (32%), and urticaria (11%). Dermatology consultations have an essential role on the management of hospitalized patients, especially at that pandemic time. Careful dermatological examination improves diagnostic accuracy in skin disorders and skin manifestations of COVID-19 infection that provides an early diagnosis and treatment, helps to improve the quality of the patient care and management.

Publication Type

Journal article.

<569>

Accession Number

20210087660

Author

Tanacan, E.; Sarac, G. A.; Emeksiz, M. A. C.; Rota, D. D.; Erdogan, F. G.

Title

Changing trends in dermatology practice during COVID-19 pandemic: a single tertiary center experience.

Source

Dermatologic Therapy; 2020. 33(6). 26 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

The aim of this study was to evaluate the changing trends in dermatology clinical practice at a tertiary center during the coronavirus disease 2019 (COVID-19) pandemic. This retrospective cohort study was conducted on patients who were admitted to Ufuk University Hospital with dermatologic complaints/diseases before and during the pandemic. The patients were divided into two groups: (a) the pre-pandemic period (March-May 2019) and (b) the Pandemic period (March-May 2020). Demographic features, clinical characteristics, dermatologic diseases/complaints, dermatologic procedures/interventions, hospitalization rate, and use of biologic agents were compared between the two groups. Total number of hospital admissions have decreased from 1165 to 717. Admission rates for acne, dermatophytosis, and benign neoplasm of the skin significantly lower during the pandemic period (P values were .02, .04, and .006, respectively). Contact dermatitis, acne accompanying dermatitis, cicatricial hair loss, lichen planus, and zona zoster infection rates were significantly higher (P values were .007, <.001, .009, .04, and .03, respectively). Rates of biopsy and electrocautery procedures were decreased significantly (P values were <.001 and .002, respectively). The hospitalization rate was similar between the groups (P = .51). However, the use of biologic agents significantly decreased during the pandemic period (P = .01). Updated clinical protocols should be established for the new normal period in accordance with these findings.

Publication Type

Journal article.

<570>

Accession Number

20210087659

Author

Kutlu, O.; Metin, A.

Title

Relative changes in the pattern of diseases presenting in dermatology outpatient clinic in the era of the COVID-19 pandemic.

Source

Dermatologic Therapy; 2020. 33(6). 27 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

As an increasing number of COVID-19 cases, there were changes in the number of patients who attended the dermatology outpatient clinics. We aimed to investigate the change profiles of dermatologic diseases in the first and second months of the COVID-19 pandemic in Turkey by comparing with the corresponding period of the previous year. The total number and diagnosis of patients, who attended a tertiary care hospital for the dermatology outpatient clinic between 1 April 2020 and 31 May 2020, were included in this study. These data were compared with the corresponding period of the previous year. The percentage of the patients with scabies, contact dermatitis, psoriasis, pityriasis rosea, urticaria, and alopecia areata were statistically significantly increased a month after the occurrence of the COVID-19 pandemic, while the percentage of patients with scabies, alopecia areata, telogen effluvium, acne vulgaris, and xerosis cutis were statistically significantly increased 2 months after the occurrence of the COVID-19 pandemic ($P < 0.05$). An increase in the number of certain diseases such as urticaria and pityriasis rosea may indicate the risk of asymptomatic COVID-19 carriage in these patients. Polymerase chain reaction (PCR) and/or antibody-based further studies should be performed to explore whether certain dermatologic diseases are related to asymptomatic COVID-19 cases.

Publication Type

Journal article.

<571>

Accession Number

20210087642

Author

Arunima Ray; Ipsita Debata; Ishan Agrawal; Maitreyee Panda

Title

COVID-19 and immunosuppressants: an opinion pool of practicing dermatologists of India.

Source

Dermatologic Therapy; 2020. 33(6). 10 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Publication Type

Correspondence.

<572>

Accession Number

20210087264

Author

Zhang YanHong; He LiWei; Chen HuiXin; Lu ShuangYan; Xiong YongFen; Liu Juan; Zheng Yao; Wang Shun; Liu Lei

Title

Manifestations of blood coagulation and its relation to clinical outcomes in severe COVID-19 patients: retrospective analysis.

Source

International Journal of Laboratory Haematology; 2020. 42(6):766-772. 16 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Introduction: Characteristics of blood coagulation and its relation to clinical outcomes in COVID-19 patients are still rarely reported. We aimed to investigate the blood coagulation function and its influences on clinical outcomes of patients with syndrome coronavirus 2 (SARS-CoV-2) infection. Methods: A total of 71 severe patients with confirmed SARS-CoV-2 infection who were treated in Wuhan First Hospital from February 12 to March 20, 2020, were enrolled. The blood coagulation data in these patients and in 61 healthy controls were collected. The patients with COVID-19 were divided into two groups: the aggravated group and the nonaggravated group, respectively, basing on whether the patients' conditions turned to critically ill or not after admission. Results: Compared with healthy controls, patients with COVID-19 had significant performances with coagulation dysfunction, including dramatically elevated values of FIB, PT, APTT, INR, FDP, and D-Dimers but markedly reduced AT value ($P < .05$). Importantly, more noteworthy coagulation disorders similar to the differences between patients and controls were found in the aggravated patients with conditions deterioration after admission than those in the nonaggravated patients without conditions deterioration ($P < .05$). Moreover, the aggravated patients possessed a longer hospital stay and a higher mortality compared with the nonaggravated patients ($P < .001$). The coagulation parameters of COVID-19 patients were widely and closely related to the indexes of liver function and

inflammation ($P < .05$), indicating the coagulation dysfunction of these patients may be caused by liver injury and inflammatory storm. Conclusion: Severe patients with SARS-CoV-2 infection often possess coagulation dysfunction on admission. A certain correlation exists in coagulation disorder and adverse clinical outcome among severe COVID-19 patients.

Publication Type

Journal article.

<573>

Accession Number

20210087187

Author

Feter, N.; Caputo, E. L.; Smith, E. C.; Doring, I. R.; Cassuriaga, J.; Leite, J. S.; Reichert, F. F.; Silva, M. C. da; Coombes, J. S.; Rombaldi, A. J.

Title

Association between physical activity and subjective memory decline triggered by the COVID-19 pandemic: findings from the PAMPA cohort.

Source

Preventive Medicine; 2021. 145. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Implementation of social distancing reduced the incidence of coronavirus disease (COVID-19) cases. Nevertheless, this strategy has other undesirable effects such as physical inactivity and psychological distress, which are associated with cognitive impairment. We aimed to examine whether physical activity during social distancing restrictions could reduce the risk of subjective memory decline in adults. Participants ($n=2321$) completed the baseline assessment of PAMPA cohort (Prospective Study About Mental and Physical Health), a ambispective cohort study conducted in southern Brazil. An online-based, self-administered questionnaire assessed physical activity and self-rated memory in two different periods: before and during social distancing. Data collection was executed from June 22nd to July 23rd 2020. Adjusted Poisson regression models were performed and values reported in prevalence ratio (PR) with 95% confidence interval (CI). Participants presented with a mean age of 38.2 (95%CI: 37.5, 38.9) years. Most were women (76.6%), had at least a university degree (66.7%), and were overweight or obese (53.3%). Subjective memory decline was reported by 30.0% (95%CI: 27.7%, 32.4%) of respondents. Most individuals

with subjective memory decline reported being physically inactive during the pandemic of COVID-19. Participants were less likely to experience subjective memory decline if they either became (PR: 0.56; 95%CI: 0.36, 0.89) or remained (PR: 0.68; 95%CI: 0.49, 0.93) physically active compared to inactive respondents. Physical activity participation during social distancing reduced the likelihood of subjective memory decline in adults. Physical activity should be highlighted as a potential alternative to reduce the burden of the COVID-19 pandemic on cognitive function and mental health.

Publication Type

Journal article.

<574>

Accession Number

20210086859

Author

Vikas Goel; Naba Hazarika; Mayank Kumar; Vikram Singh; Thamban, N. M.; Tripathi, S. N.

Title

Variations in Black Carbon concentration and sources during COVID-19 lockdown in Delhi.

Source

Chemosphere; 2021. 270. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

A nationwide lockdown was imposed in India due to COVID-19 pandemic in five phases from 25th March to May 31, 2020. The lockdown restricted major anthropogenic activities, primarily vehicular and industrial, thereby reducing the particulate matter concentration. This work investigates the variation in Black Carbon (BC) concentration and its sources (primarily Fossil Fuel (ff) burning and Biomass Burning (bb)) over Delhi from 18th February to July 31, 2020, covering one month of pre-lockdown phase, all the lockdown phases, and two months of successive lockdown relaxations. The daily average BC concentration varied from 0.22 to 16.92 g/m³, with a mean value of 3.62 ± 2.93 g/m³. During Pre-Lockdown (PL, 18th Feb-24th March 2020), Lockdown-1 (L1, 25th March-14th April 2020), Lockdown-2 (L2, 15th April-3rd May 2020), Lockdown-3 (L3, 4th-17th May 2020), Lockdown-4 (L4, 18th-31st May 2020), Unlock-1 (UN1, June 2020), and Unlock-2 (UN2, July 2020) the average BC concentrations were 7.93, 1.73, 2.59, 3.76, 3.26, 2.07, and 2.70 g/m³, respectively. During the lockdown and unlock phases, BC decreased up to 78% compared to the PL period. The BC source apportionment studies show that fossil fuel burning was the dominant BC source during the

entire sampling period. From L1 to UN2 an increasing trend in BCff contribution was observed (except L3) due to the successive relaxations given to anthropogenic activities. BCff contribution dipped briefly during L3 due to the intensive crop residue burning events in neighboring states. CWT analysis showed that local emission sources were the dominant contributors to BC concentration over Delhi.

Publication Type

Journal article.

<575>

Accession Number

20210086694

Author

Cordova, M. R.; Nurhati, I. S.; Riani, E.; Nurhasanah; Iswari, M. Y.

Title

Unprecedented plastic-made personal protective equipment (PPE) debris in river outlets into Jakarta Bay during COVID-19 pandemic.

Source

Chemosphere; 2021. 268. 27 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Increased plastic uses during COVID-19 pandemic challenges efforts to reduce marine plastic debris. Despite recent observations of increased plastic-made personal protection equipment (PPE) waste in coastal areas, comparative data before and during the pandemic lacked. We present in situ monitoring data on riverine debris releases into Jakarta Bay, Indonesia, during COVID-19 pandemic relative to the 2016 baseline data. River debris at two river outlets - the Cilincing and Marunda Rivers, revealed a 5% increase in the abundance of debris and a 23-28% decrease in the weight of debris releases in March-April 2020 compared to March-April 2016, suggesting a compositional shift towards lighter debris. Plastics continued to dominate river debris at 46% (abundance) or 57% (weight). Unique to the pandemic, we observed an unprecedented presence of PPE (medical masks, gloves, hazard suits, face shields, raincoats) that accounted for 15-16% of the collected river debris of 780 +or- 138 items (abundance) or 0.13 +or- 0.02 tons (weight) daily. The observed increased plastic-made PPE in river outlets urges for improved medical waste management of domestic sources during the prolonged pandemic.

Publication Type

Journal article.

<576>

Accession Number

20210086548

Author

Peng SiHui; Yang XiaozhaoYousef; Yang TingZhong; Zhang WeiFang; Cottrell, R. R.

Title

Uncertainty stress, and its impact on disease fear and prevention behavior during the COVID-19 epidemic in China: a panel study.

Source

American Journal of Health Behavior; 2021. 45(2):334-341.

Publisher

PNG Publications

Location of Publisher

Star City

Country of Publication

USA

Abstract

Objectives: We examined changing trends of uncertainty stress, and its impact on disease fear and prevention behaviors during the Chinese COVID-19 epidemic, using a prospective observational study. **Methods:** We employed a longitudinal design. We recruited participants for an online panel survey from chat groups on social media platforms. There were 5 waves of interviews. Information on uncertainty stress and related variables were collected via the online survey. Descriptive statistics and the GIM program were used for data analysis. **Results:** Participants numbered 150 for the linkable baseline survey and 102 (68%) for the final survey. Uncertainty stress ($\beta = -.047$, $SE = .118$, $p > .05$) did not show a statistically significant temporal change trend over the observation period. Disease fear manifested a statistically significant downwards trend ($\beta = -.342$, $SE = .157$, $p < .05$), and prevention behaviors indicated an upwards trend ($\beta = .048$, $SE = .021$, $p < .05$) during the observation period. Uncertainty stress was positively associated with disease fear ($\beta = .45046$, $SE = .05964$, $p < .001$), and negatively associated with self-efficacy ($\beta = -.6698$, $SE = .01035$, $p < .001$), and prevention behaviors ($\beta = -.02029$, $SE = .00876$, $p = .021$). **Conclusion:** This study yielded new information about uncertainty stress among Chinese people during the COVID-19 epidemic. Policy changes and public education are essential for minimizing the negative effects of uncertainty stress in disease prevention.

Publication Type

Journal article.

<577>

Accession Number

20210086502

Author

Kumar, A.; Sathyapalan, D.; Ramachandran, A.; Subhash, K.; Biswas, L.; Beena, K. V.

Title

SARS-CoV-2 antibodies in healthcare workers in a large university hospital, Kerala, India.

Source

Clinical Microbiology and Infection; 2021. 27(3):481-483.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<578>

Accession Number

20210086498

Author

Ripa, M.; Galli, L.; Poli, A.; Oltolini, C.; Spagnuolo, V.; Mastrangelo, A.; Muccini, C.; Monti, G.; Luca, G. de; Landoni, G.; Dagna, L.; Clementi, M.; Rovere Querini, P.; Ciceri, F.; Tresoldi, M.; Lazzarin, A.; Zangrillo, A.; Scarpellini, P.; Castagna, A.

Title

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Secondary infections in patients hospitalized with COVID-19: incidence and predictive factors.

Source

Clinical Microbiology and Infection; 2021. 27(3):451-457.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objectives The aim of our study was to describe the incidence and predictive factors of secondary infections in patients with coronavirus disease 2019 (COVID-19). **Methods** This was a cohort study of patients hospitalized with COVID-19 at IRCCS San Raffaele Hospital between 25th February and 6th April 2020 (NCT04318366). We considered secondary bloodstream infections (BSIs) or possible lower respiratory tract infections (pLRTIs) occurring 48 hours after hospital admission until death or discharge. We calculated multivariable Fine-Gray models to assess factors associated with risk of secondary infections. **Results** Among 731 patients, a secondary infection was diagnosed in 68 patients (9.3%); 58/731 patients (7.9%) had at least one BSI and 22/731 patients (3.0%) at least one pLRTI. The overall 28-day cumulative incidence was 16.4% (95%CI 12.4-21.0%). Most of the BSIs were due to Gram-positive pathogens (76/106 isolates, 71.7%), specifically coagulase-negative staphylococci (53/76, 69.7%), while among Gram-negatives (23/106, 21.7%) *Acinetobacter baumannii* (7/23, 30.4%) and *Escherichia coli* (5/23, 21.7%) predominated. pLRTIs were caused mainly by Gram-negative pathogens (14/26, 53.8%). Eleven patients were diagnosed with putative invasive aspergillosis. At multivariable analysis, factors associated with secondary infections were low baseline lymphocyte count (0.7 versus >0.7 per 10⁹/L, subdistribution hazard ratios (sdHRs) 1.93, 95%CI 1.11-3.35), baseline PaO₂/FiO₂ (per 100 points lower: sdHRs 1.56, 95%CI 1.21-2.04), and intensive-care unit (ICU) admission in the first 48 hours (sdHR 2.51, 95%CI 1.04-6.05). **Conclusions** Patients hospitalized with COVID-19 had a high incidence of secondary infections. At multivariable analysis, early need for ICU, respiratory failure, and severe lymphopenia were identified as risk factors for secondary infections.

Publication Type

Journal article.

<579>

Accession Number

20210086468

Author

Khodabandeh, M.; Mirnia, K.; Eshaghi, H.; Borhani, K.

Title

Is COVID-19 infection transmitted through food?

Source

Journal of Nutrition and Food Security; 2021. 6(1):3-5. 9 ref.

Publisher

Shahid Sadoughi University of Medical Sciences

Location of Publisher

Yazd

Country of Publication

Iran

Abstract

Coronavirus disease (COVID) has had a growing outbreak around the world. China reported COVID-19 infection for the first time in December 2019. Symptoms of this disease often include respiratory symptoms, but gastrointestinal symptoms (nausea, vomiting, and diarrhea) were also reported in COVID-19 infection. Coronavirus transmits through direct droplets, contact, or fomites. However, other modes of transmission include airborne, fecal-oral, blood-borne, and mother-to-child transmission. Furthermore, studies showed that the virus was excreted through the feces. Case presentation: In this study, we introduced two cases of the disease in a mother and her daughter, who were contaminated with the disease through contact with the contaminated food. Conclusion: Due to the possibility of oral-fecal transmission, food hygiene is recommended.

Publication Type

Journal article.

<580>

Accession Number

20210086448

Author

Sullivan, M.; Bouffet, E.; Rodriguez-Galindo, C.; Luna-Fineman, S.; Khan, M. S.; Kearns, P.; Hawkins, D. S.; Challinor, J.; Morrissey, L.; Fuchs, J.; Marcus, K.; Balduzzi, A.; Basset-Salom, L.; Caniza, M.; Baker, J. N.; Kebudi, R.; Hessissen, L.; Sullivan, R.; Pritchard-Jones, K.

Title

The COVID-19 pandemic: a rapid global response for children with cancer from SIOP, COG, SIOP-E, SIOP-PODC, IPSO, PROS, CCI, and St Jude global.

Source

Pediatric Blood & Cancer; 2020. 67(7). 94 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

The COVID-19 pandemic is one of the most serious global challenges to delivering affordable and equitable treatment to children with cancer we have witnessed in the last few decades. This Special Report aims to summarize general principles for continuing multidisciplinary care during the SARS-CoV-2 (COVID-19) pandemic. With contributions from the leadership of the International Society for Pediatric Oncology (SIOP), Children's Oncology Group (COG), St Jude Global program, and Childhood Cancer International, we have sought to provide a framework for healthcare teams caring for children with cancer during the pandemic. We anticipate the burden will fall particularly heavily on children, their families, and cancer services in low- and middle-income countries. Therefore, we have brought together the relevant clinical leads from SIOP Europe, COG, and SIOP-PODC (Pediatric Oncology in Developing Countries) to focus on the six most curable cancers that are part of the WHO Global Initiative in Childhood Cancer. We provide some practical advice for adapting diagnostic and treatment protocols for children with cancer during the pandemic, the measures taken to contain it (e.g., extreme social distancing), and how to prepare for the anticipated recovery period.

Publication Type

Journal article.

<581>

Accession Number

20210086353

Author

Vogel, J. P.; Tendal, B.; Giles, M.; Whitehead, C.; Burton, W.; Chakraborty, S.; Cheyne, S.; Downton, T.; Navarro, D. F.; Gleeson, G.; Gordon, A.; Hunt, J.; Kitschke, J.; McDonald, S.; McDonnell, N.; Middleton, P.; Millard, T.; Murano, M.; Oats, J.; Tate, R.; White, H.; Elliott, J.; Roach, V.; Homer, C. S. E.

Title

Clinical care of pregnant and postpartum women with COVID-19: living recommendations from the national COVID-19 clinical evidence taskforce.

Source

Australian and New Zealand Journal of Obstetrics and Gynaecology; 2020. 60(6):840-851. 90 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

To date, 18 living recommendations for the clinical care of pregnant and postpartum women with COVID-19 have been issued by the National COVID-19 Clinical Evidence Taskforce. This includes recommendations on mode of birth, delayed umbilical cord clamping, skin-to-skin contact, breastfeeding, rooming-in, antenatal corticosteroids, angiotensin-converting enzyme inhibitors, disease-modifying treatments (including dexamethasone, remdesivir and hydroxychloroquine), venous thromboembolism prophylaxis and advanced respiratory support interventions (prone positioning and extracorporeal membrane oxygenation). Through continuous evidence surveillance, these living recommendations are updated in near real-time to ensure clinicians in Australia have reliable, evidence-based guidelines for clinical decision-making.

Publication Type

Journal article.

<582>

Accession Number

20210086151

Author

Besufekad Mekonnen; Nahom Solomon; Wondimagegn Wondimu

Title

Healthcare waste status and handling practices during COVID-19 pandemic in Tepi General Hospital, Ethiopia.

Source

Journal of Environmental and Public Health; 2021. 2021(6614565). 21 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

Background. Mismanagement of healthcare waste (HCW) during the COVID-19 pandemic can facilitate the transmission of coronavirus. Regarding this problem, there is gap of evidence in Ethiopia, and this study aimed to assess the HCW generation rate and management in Tepi General Hospital, southwest Ethiopia. Methods. Institution-based cross-sectional and case studies were conducted. The total amount of waste generated and its type among various case teams were compared using the Kruskal-Wallis test. Spearman's rank correlation coefficient (r) was used to assess the correlation between the total numbers of patients and the total amount of HCW generated. Qualitative data were transcribed verbatim, translated to English, and analyzed with Open Code version 4.02 software, and content analysis was followed. Results. The total mean weight (\pm SD) of waste generation rate in all service units of the hospital was 492.5 \pm 11.5 kg/day. The higher proportion (61.9%) of the total HCW produced was general waste and the remaining (38.1%) was hazardous waste. There was a statistically significant ($\chi^2 = 82.1, p < 0.001$) difference in daily HCW generation rate among different case teams. Similarly, the hospital waste generation amount and total patient flow had a strong positive linear relationship ($r = 0.7, p = 0.032$). COVID-19-related medical wastes were not properly handled, segregated, stored, and disposed. There was a scarcity of resources needed to manage HCW, and available resources were utilized poorly. Overall, healthcare wastes were managed as usual (pre-COVID-19). Conclusion. The mean HCW generation rate in Tepi General Hospital was high. Overall, wastes were mismanaged, and COVID-19-related HCWs have been managed as usual. Availing of important resources and training the concerned bodies should be considered during the crisis of COVID-19.

Publication Type

Journal article.

<583>

Accession Number

20210086069

Author

Jadhav, V. A.; Sujata Ingle; Ahmed, R.

Title

Inhibitory activity of palmatine on main protease complex (mpro) of SARS-CoV-2.

Source

Romanian Journal of Biophysics; 2021. 31(1):27-40. 34 ref.

Publisher

Editura Academiei Romane

Location of Publisher

Bucharest

Country of Publication

Romania

Abstract

The pandemic situation caused by SARS-CoV-2 is responsible for the coronavirus infectious disease-19 (COVID-19) around the globe. Recently reported highly modulated enzyme main protease complex (Mpro) was responsible for coronavirus replication and transcription. This significant function of Mpro attracts as potential candidates for drug targets. Naturally, *Tinospora cordifolia* was found effective against cancer, HIV, viral infections and diabetes. One of the most effective alkaloid palmatine present in *T. cordifolia*. In present study, we have investigated potential activity of palmatine against Mpro. Physico-chemical properties were analyzed by the ProtParam tool; structure prediction and homology modeling were carried out by the SWISS-MODEL server. Significant superimposition structure, equal global model quality estimation (GMQE) and quaternary structure quality estimate (QSQE) values were found for eight highly similar templates. Ramachandran plot (97.67% favored), local quality estimate ratio (>0.6), and higher qualitative model energy analysis (QMEAN) score (y-axis) assessments were performed for structural validation of Mpro. Further, the SwissDock server was used to perform docking between validated targets Mpro with ligand palmatine. The significant G value -8.281919 kcal.mol⁻¹ indicates reliable docking interaction. Comparative docking among palmatine, gingerol and berberine suggests palmatine interacts efficiently with Mpro. Thus, an attempt was made to find a potent inhibitor, as there is no promising and specific antiviral drug or vaccine available for the prevention and treatment of COVID-19 infections. However, in vitro studies are required to validate our predictions. Whereas, toxicological studies reported against palmatine for acute effect (135 mg/kg body weight) on mouse model LD50.

Publication Type

Journal article.

<584>

Accession Number

20210085927

Author

Wang Yu; Yang Qing

Title

Post abortion care and management after induced abortion during the COVID-19 pandemic: a Chinese expert consensus.

Source

Advances in Therapy; 2021. 38(2):1011-1023. 48 ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

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The rapid spread of novel coronavirus (COVID-19) has posed complex challenges to global public health. During this pandemic period, access to essential services including post-abortion care (PAC) has been disrupted. Along with the clinical management of the disease in women, protection of the healthcare workers and medical staff from nosocomial infection is important to ensure infection control. Thus, in order to implement the proper contraceptive measures and to reduce the rate of repeated abortion, the family planning group of minimally invasive gynecological branch of the Liaoning Medical Association organized a committee of experts to formulate guidance and suggestions to ensure the timely treatment and surgery of women opting for abortion, the implementation of PAC, implementation of safe contraceptive measures after surgery, and the protection of healthcare professionals and medical staff from infection. We believe these guidelines might be helpful for obstetrics and gynecology departments in China and globally, as well for women who wish to undergo abortion during these unprecedented times.

Publication Type

Journal article.

<585>

Accession Number

20210085875

Author

Long, H.; Zhao, H.; Chen, A.; Yao, Z.; Cheng, B.; Lu, Q.

Title

Protecting medical staff from skin injury/disease caused by personal protective equipment during epidemic period of COVID-19: experience from China.

Source

Journal of the European Academy of Dermatology and Venereology; 2020. 34(5):e210-e211. 11 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<586>

Accession Number

20210085714

Author

Stoian, A. P.; Catrinoiu, D.; Rizzo, M.; Ceriello, A.

Title

Hydroxychloroquine, COVID-19 and diabetes. why it is a different story.

Source

Diabetes/Metabolism Research and Reviews; 2020. 37(2). 15 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Hydroxychloroquine has been proposed for the cure of the COVID-19 due to its anti-inflammatory and anti-viral action. People with diabetes are more prone to severe outcome if affected by COVID-19 and the use of Hydroxychloroquine might have some benefit in this setting. However, the use of Hydroxychloroquine in diabetes deserves particular attention for its documented hypoglycemic action.

Publication Type

Journal article.

<587>

Accession Number

20210085644

Author

Raukar, N. P.; Cooper, L. T.

Title

Implications of SARS-CoV-2-associated myocarditis in the medical evaluation of athletes.

Source

Sports Health; 2021. 13(2):145-148. 57 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

Context: Myocarditis is a known cause of death in athletes. As we consider clearance of athletes to participate in sports during the COVID-19 pandemic, we offer a brief review of the myocardial effects of SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) through the lens of what is known about myocarditis and exercise. All athletes should be queried about any recent illness suspicious for COVID-19 prior to sports participation. Evidence Acquisition: The PubMed database was evaluated through 2020, with the following keywords: myocarditis, COVID-19, SARS-CoV-2, cardiac, and athletes. Selected articles identified through the primary search, along with position statements from around the world, and the relevant references from those articles, were reviewed for pertinent clinical information regarding the identification, evaluation, risk stratification, and management of myocarditis in patients, including athletes, with and without SARS-CoV-2. Study Design: Systematic review. Level of Evidence: Level 3. Results: Since myocarditis can present with a variety of symptoms, and can be asymptomatic, the sports medicine physician needs to have a heightened awareness of athletes who may have had COVID-19 and be at risk for myocarditis and should have a low threshold to obtain further cardiovascular testing. Symptomatic athletes with SARS-CoV-2 may require cardiac evaluation including an electrocardiogram and possibly an echocardiogram. Athletes with cardiomyopathy may benefit from cardiac magnetic resonance imaging in the recovery phase and, rarely, endocardial biopsy. Conclusion: Myocarditis is a known cause of sudden cardiac death in athletes. The currently reported rates of cardiac involvement of COVID-19 makes myocarditis a risk, and physicians who clear athletes for participation in sport as well as sideline personnel should be versed with the diagnosis, management, and clearance of athletes with suspected myocarditis. Given the potentially increased risk of arrhythmias, sideline personnel should practice their emergency action plans and be comfortable using an automated external defibrillator.

Publication Type

Journal article.

<588>

Accession Number

20210085642

Author

Ghosh, A.; Sarkar, S.

Title

The coronavirus (COVID-19) pandemic's impact on maternal mental health and questionable healthcare services in rural India.

Source

International Journal of Health Planning and Management; 2020. 35(6):1626-1628. 11 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Publication Type

Correspondence.

<589>

Accession Number

20210085640

Author

Keri, V. C.; R. L, B.; Sinha, T. P.; Naveet Wig; Sanjeev Bhoi

Title

Tele-healthcare to combat COVID-19 pandemic in developing countries: a proposed single centre and integrated national level model.

Source

International Journal of Health Planning and Management; 2020. 35(6):1617-1619. 8 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Publication Type

Correspondence.

<590>

Accession Number

20210085625

Author

Nessaibia, I.; Siciliano, D.; Tahraoui, A.

Title

Why nobody discusses the adverse psychiatric effects of chloroquine in case it might become the future treatment against COVID-19?

Source

International Journal of Health Planning and Management; 2020. 35(6):1311-1313. 10 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Chloroquine represents at least a basic prototype antimalarial drug, widely applied in several branches of medicine and also recently against a new zoonotic origin coronavirus. At present, there is little awareness of chloroquine's psychiatric side effects, which appear to be overlooked by the Scientific Committee, although they may manifest in a worryingly wide range of symptoms. This is likely to interfere with the course of specifically long-term (high-dose) COVID-19 treatment in some aggravated forms (25% of coronavirus patients were still carrying the virus 6 days after taking hydroxychloroquine). Besides, symptoms of infection, adverse effects from the 600 mg hydroxychloroquine daily plus azithromycin, including insomnia, headaches, skin reactions, digestive upset with nausea, vomiting, and diarrhea, blurred vision, and local pain, may lead to increased anxiety and mental distress.

Publication Type

Journal article.

<591>

Accession Number

20210085624

Author

Sarwer, A.; Javed, B.; Soto, E. B.; Mashwani, Z. U. R.

Title

Impact of the COVID-19 pandemic on maternal health services in Pakistan.

Source

International Journal of Health Planning and Management; 2020. 35(6):1306-1310. 17 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Throughout the world as health systems are being prepared to deal with the SARS-CoV-2 outbreak which will affect the management of HIV, diabetes, mental health and mainly maternal healthcare systems. As all efforts are focused on understanding the epidemiology, clinical features, transmission patterns, and management of the COVID-19 outbreak, there has been very little concern expressed over the effects on maternal health services. It is highly likely that the present situation may exacerbate maternal mortality in suburban and rural areas. The present situation requires governments and NGOs to make necessary arrangements to support people with prenatal and postnatal care.

Publication Type

Journal article.

<592>

Accession Number

20210085623

Author

Ogunkola, I. O.; Adebisi, Y. A.; Imo, U. F.; Odey, G. O.; Esu, E.; Lucero-Prisno, D. E., III

Title

Rural communities in Africa should not be forgotten in responses to COVID-19.

Source

International Journal of Health Planning and Management; 2020. 35(6):1302-1305. 9 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Rural areas in Africa make up a large proportion of the continent. Since the emergence of COVID-19 on the continent, major attention and responses have been placed on urban areas. Rural areas are typified by certain challenges which may serve as limitations to the provision of resources and tools for COVID-19 responses in these areas. These major challenges include limited access to these areas due to poor road networks which may hamper the possibility of conveying resources and manpower. Shortage of healthcare workforce in these areas, poor health facilities/structures and limited access to COVID-19 diagnostics services may also make containment challenging. It is therefore important that investment should be made in these areas towards providing the necessary tools, resources, and manpower to ensure effective containment of COVID-19 and to alleviate the plight caused by the pandemic in rural Africa. Rural communities in Africa should not be left behind in COVID-19 responses.

Publication Type

Journal article.

<593>

Accession Number

20210085622

Author

Al-Taweel, D.; Al-Haqan, A.; Bajis, D.; Al-Bader, J.; Al-Taweel, A. M.; Al-Awadhi, A.; Al-Awadhi, F.

Title

Multidisciplinary academic perspectives during the COVID-19 pandemic.

Source

International Journal of Health Planning and Management; 2020. 35(6):1295-1301. 26 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

To date, the outbreak of the novel coronavirus (COVID-19) has infected more than 5 million people and caused around 350 000 deaths globally. In most countries, the world as we knew it came to a sudden stop and this led to the biggest shift of employees to remotely conduct their work. Academic institutions were extensively affected, as teaching and assessment activities were hampered, and graduation ceremonies were cancelled. In addition, there was an imminent disruption in academic and research activities including face-to-face conferences and conventions. Among many challenges, academics had to grapple to remain engaged professionally and socially with students and colleagues. Digital technology being an integral part of life has become essential for connectivity and communication. In this commentary, multidisciplinary academics from Kuwait and Saudi Arabia share perspectives and experiences in adapting to the COVID-19 reality. From healthcare sciences to engineering, and from business to education, this paper highlights the role academics play in combating professional and social challenges during COVID-19.

Publication Type

Journal article.

<594>

Accession Number

20210085601

Author

Cereda, E.; Bogliolo, L.; Stefano, L. de; Caccialanza, R.

Title

A brief discussion of the benefit and mechanism of vitamin D supplementation on coronavirus disease 2019.

Source

Current Opinion in Clinical Nutrition and Metabolic Care; 2021. 24(1):102-107.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Purpose of review: Vitamin D exerts extraskeletal functions, including immunomodulatory activity, protection against respiratory tract infections and pleiotropic effects on the cardiovascular system. Since the outbreak of the coronavirus disease-2019 (COVID-19) pandemic, several articles have suggested the potential involvement of vitamin D in reducing the risk and severity of the disease. Recent findings: Epidemiological and observational studies support the hypothesis of a protective role of vitamin D but most studies are retrospective or based on small samples. However, the pandemic progression and the increased knowledge on the pathogenesis of COVID-19 have challenged the first evidence, suggesting also potential negative consequences derived by adequate vitamin D status. A cautious interpretation of the significance of low vitamin D25OH levels is advisable. The balance between over-activation of innate immunity and the exhaustibility of the adaptive immune response still needs to be clarified. In addition, the modulation of endothelial function, the down-regulation of renin, angiotensin-converting-enzyme (ACE) and angiotensin genes and the up-regulation of ACE2 expression is still an area of research. Summary: Speculative hypotheses and observational data have suggested a protective role of vitamin D in COVID-19. However, many unanswered questions remain, aberrant detrimental effects of adequate vitamin D25OH levels cannot be excluded and whether its adequacy may prevent the infection or improve clinical outcomes needs to be assessed by adequately sized and designed population-based studies and intervention trials.

Publication Type

Journal article.

<595>

Accession Number

20210085592

Author

Biesalski, H. K.

Title

Obesity, vitamin D deficiency and old age a serious combination with respect to coronavirus disease-2019 severity and outcome.

Source

Current Opinion in Clinical Nutrition and Metabolic Care; 2021. 24(1):18-24.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Purpose of review: Old age, obesity and vitamin D deficiency are considered as independent risk factors for severe courses of COVID-19. The aim of the review is to discuss common features of these risk factors and the impact of vitamin D. Recent findings: The recently discovered relationship between vitamin D and the infection pathway of the virus via the renin--angiotensin system (RAS) and the adipokines leptin and adiponectin play an important role. The frequency of studies showing a relationship between a low vitamin D status in comorbidities and severe COVID-19 courses makes an impact of vitamin D effects likely.

Summary: There is a direct relationship between vitamin D, body fat and age in COVID-19 courses. With age, the ability of the skin to synthesize vitamin D decreases, and leads to vitamin D-deficits. If the skin is insufficiently exposed to sunlight, severe deficits can develop. As vitamin D plays an important role not only in the immune system but also in the RAS, and thus at the point where the virus attacks, a good vitamin D supply is an important basis for reducing the risk of severe COVID-19 processes. Treatment with vitamin D supplements should be based on severity of the vitamin D deficiency.

Publication Type

Journal article.

<596>

Accession Number

20210085315

Author

Padrao, E. M. H.; Valente, F. S.; Besen, B. A. M. P.; Rahhal, H.; Mesquita, P. S.; Alencar, J. C. G. de; Costa, M. G. P. da; Wanderley, A. P. B.; Emerenciano, D. L.; Bortoleto, F. M.; Fortes, J. C. L.; Marques, B.; Souza, S. F. B. de; Marchini, J. F. M.; Neto, R. A. B.; Souza, H. P. de

Title

Awake prone positioning in COVID-19 hypoxemic respiratory failure: exploratory findings in a single-center retrospective cohort study.

Source

Academic Emergency Medicine; 2020. 27(12):1249-1259. 30 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Background: Awake prone positioning has been widely used in patients with COVID-19 respiratory failure to avoid intubation despite limited evidence. Our objective was to evaluate if prone positioning is associated with a reduced intubation rate when compared to usual care. Methods: This was a retrospective

cohort study in the emergency department of a large quaternary hospital in Sao Paulo. We retrieved data from all admitted patients in need of oxygen supplementation (>3 L/min) and tachypnea (>24 ipm) from March 1 to April 30, 2020, excluding those who had any contraindication to the prone position or who had an immediate need for intubation. The primary endpoint was endotracheal intubation up to 15 days. Secondary outcomes included a 6-point clinical outcome ordinal scale, mechanical ventilation-free days, admission to the intensive care unit, and need of hemodialysis and of vasoactive drugs, all assessed at or up to 15 days. We analyzed unadjusted and adjusted effect estimates with Cox proportional hazards models, logistic regression, quantile regression, and sensitivity analyses using propensity score models. Results: Of 925 suspected COVID-19 patients admitted off mechanical ventilation, 166 patients fulfilled inclusion and exclusion criteria: 57 were exposed to prone positioning and 109 to usual care. In the intervention group, 33 (58%) were intubated versus 53 (49%) in the control group. We observed no difference in intubation rates in the univariate analysis (hazard ratio = 1.21, 95% confidence interval [CI] = 0.78 to 1.88, p = 0.39) nor in the adjusted analysis (hazard ratio = 0.90, 95% CI = 0.55 to 1.49, p = 0.69). Results were robust to the sensitivity analyses. Secondary outcomes did not differ between groups. Conclusions: Awake prone positioning was not associated with lower intubation rates. Caution is necessary before widespread adoption of this technique, pending results of clinical trials.

Publication Type

Journal article.

<597>

Accession Number

20210085186

Author

Bandeira, I. P.; Chara, B. S.; Carvalho, G. M. de; Goncalves, M. V. M.

Title

Diffuse skin rash in tropical areas: dengue fever or COVID-19?

Source

Anais Brasileiros de Dermatologia; 2021. 96(1):85-87. 4 ref.

Publisher

Sociedade Brasileira de Dermatologia

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

There have been several clinical manifestations associated with SARS-CoV-2 infection since 2019, including dermatological signs and symptoms. In this article, the authors report a case of a previously healthy patient

with COVID-19 who was mistakenly diagnosed with dengue fever due to a skin rash. By the time the patient's investigation was initiated, Joinville (Santa Catarina, Brazil) had approximately 5,000 confirmed cases of dengue fever and 1,700 cases of COVID-19 in 2020. Thus, the authors emphasize that in endemic regions such as Brazil, the two diseases must be considered until proven otherwise. Finally, the authors warn of the possibility of co-infection with these two viruses in regions that are facing both epidemics at the same time.

Publication Type

Journal article.

<598>

Accession Number

20210085160

Author

Chagas, S. C. C.; Moreira, F. S. M.; Barbosa, I. C. F.; Leal Junior, O. de S.; Leal, L. B.; Santana, D. P. de

Title

Critical analysis on the use of cholecalciferol as a COVID-19 intervention: a narrative review.

Source

Sao Paulo Medical Journal; 2020. 139(1):81-87. 39 ref.

Publisher

Associacao Paulista de Medicina (APM)

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

BACKGROUND: The World Health Organization has declared that a pandemic situation exists in relation to the disease caused by the new coronavirus, COVID-19. So far, the absence of a vaccine against the new coronavirus has led people worldwide to seek various therapeutic alternatives, including use of cholecalciferol. **DESIGN AND SETTING:** Narrative review developed by a research group at a public university in Recife (PE), Brazil. **METHODS:** We searched the literature on the use of cholecalciferol for prevention or treatment of COVID-19, using the MEDLINE and LILACS databases, with the keywords "vitamin D", "cholecalciferol", "SARS-CoV-2", "COVID-19" and "coronavirus", from January 1, 2020, to June 10, 2020. Narrative reviews, cohort studies and ecological studies were selected. **RESULTS:** We retrieved 32 references, of which 8 were considered eligible for intensive review and critical analysis. These comprised five narrative reviews, two observational studies and one protocol proposal. Most of the studies selected reported positive effects from use of vitamin D for prevention or treatment of COVID-19. However, there was little quantitative data to assess the real impact of using this vitamin as an intervention against this

disease. CONCLUSIONS: Current studies on vitamin D used for purposes other than bone health promotion cannot be taken as support to justify its use in a disease as recent as COVID-19. Studies of greater robustness, with higher levels of clinical evidence, need to be conducted. Rational use of this vitamin needs to be ensured, thereby minimizing the impacts on the patient and the public healthcare system.

Publication Type

Journal article.

<599>

Accession Number

20210085158

Author

Alves, M. R.; Souza, R. A. G. de; Calo, R. dos S.

Title

Poor sanitation and transmission of COVID-19 in Brazil.

Source

Sao Paulo Medical Journal; 2021. 139(1):72-76. 46 ref.

Publisher

Associacao Paulista de Medicina (APM)

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

Coronavirus is a family of viruses that cause respiratory infections. From cases first recorded in China at the end of 2019, a new type of virus in this family, named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was discovered. The disease caused by this virus, COVID-19, was brought into Brazil by people in social classes with greater purchasing power, but groups with larger demographic dimensions have tended to become more affected over time. Poor sanitation can generate risky situations and behavior among people who live in spaces with characteristics that limit their quality of life. Installation of piped water in homes and basic education for the population are fundamental measures for disease control, including in relation to COVID-19. In this updating article, the COVID-19 pandemic was analyzed in the context of iniquities in Brazil (comparing these with the situation in other countries). A bibliographic search of texts relating to basic sanitation, socioeconomic development and transmission of COVID-19 in Brazil and worldwide was conducted.

Publication Type

Journal article.

<600>

Accession Number

20210085123

Author

Osaki, Y.; Otsuki, H.; Imamoto, A.; Kinjo, A.; Fujii, M.; Kuwabara, Y.; Kondo, Y.

Title

Why are COVID-19 mortality rates by country or region so different?: an ecologic study of factors associated with mortality from novel coronavirus infections by country.

Source

Yonago Acta Medica; 2021. 64(1):80-91. 38 ref.

Publisher

Tottori University Faculty of Medicine

Location of Publisher

Yonago

Country of Publication

Japan

Abstract

Background: In order to find out the factors associated with the large disparities in COVID-19 mortality rates by country, we conducted an ecological study by linking existing statistics. In Japan, a large variation was observed in between geographical areas when assessing mortality. We performed a regional correlation analysis to find factors related to regional mortality. Methods: This study design was an ecologic study. A multiple regression analysis was performed with COVID-19 mortality rates of different countries as the dependent variable together with various health care and economic factors. We calculated the cumulative mortality rate as of June 30, 2020. For the regional correlation analysis of Japan, 47 prefectures were divided into nine regions. The factors examined were health care and tourism. Data for 33 Organization for Economic Cooperation and Development (OECD) countries were analyzed. In Japan's regional analysis, the whole country was classified into nine regions. Results: Factors related to mortality were the incidence of Kawasaki disease (KD), number of computed tomographies (CTs), and alcohol consumption. Mortality was low in countries with high incidence of KD and high number of CTs, as well as in countries with high alcohol consumption. In European countries, high smoking prevalence and a high Gini coefficient were positively related to high mortality. According to a regional analysis in Japan, mortality was related to proportion of population in the densely inhabited districts, the number of foreign visitors per capita, and the number of Chinese visitors per capita. Conclusion: Low mortality in East Asia was associated with specific disease morbidity (KD), alcohol consumption, and CT numbers. It was suggested that the mortality gap in Japan was related to the number of foreign tourists and the proportion of population in the densely inhabited districts.

Publication Type

Journal article.

<601>

Accession Number

20210085090

Author

Tan, B.; Ay, B.; Ozdemir, J.; Caliyurt, O.

Title

Fear of COVID-19 among medical students and associated factors.

Source

Turkish Medical Student Journal; 2021. 8(1):13-16. 15 ref.

Publisher

Trakya University

Location of Publisher

Edirne

Country of Publication

Turkey

Abstract

Aims: To determine the level of COVID-19 fear among Turkish medical students, and show the relationship the types of education (online, hybrid, face to face), age, gender, grade, and level of fear. **Methods:** The study was conducted with 536 medical students from 30 different universities in Turkey. The questionnaire comprised 1 open-ended and 6 multiple choice questions for assessment of the demographic structure, in addition to 7 Likert-type questions within the 'Fear of COVID-19 Scale'. **Results:** Participants comprised 352 (65.7%) female and 184 (34.3%) male students, with a mean age of 20.04 +or- 2.59 years and they showed significantly different Fear of COVID-19 Scale scores with regard to gender. The past or current presence of COVID-19 was determined as another variable that created a significant difference in the Fear of COVID-19 Scale scores. However, no relation between the past or current presence of COVID-19 in a family member and the Fear of COVID-19 Scale scores were found. **Conclusion:** In this study, it is demonstrated that fear of COVID-19 is higher among females and non-infected medical students compared to males and infected ones, respectively. These results can be used in assessing the fear level of COVID-19 among medical students concerning their gender their gender and infection history. **Keywords:** COVID-19, medical students, fear, distance education, medical education.

Publication Type

Journal article.

<602>

Accession Number

20210085045

Author

Sindhu Sivanandan; Deepak Chawla; Praveen Kumar; Deorari, A. K.

Title

COVID-19 in neonates: a call for standardized testing.

Source

Indian Pediatrics; 2020. 57(12):1166-1171. 33 ref.

Publisher

Springer (India) Private Limited

Location of Publisher

New Delhi

Country of Publication

India

Abstract

The limited evidence on neonatal Coronavirus disease (COVID-19) suggests that vertical transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is rare, and most neonates seem to acquire the infection postnatally through respiratory droplets and contact. Testing of neonates with perinatal or postnatal exposure to COVID-19 infection plays a vital role in the early diagnosis, management and institution of infection prevention measures thereby cutting off the chain of epidemic transmission. A recently concluded online neonatal COVID-19 conference conducted by the National Neonatology Forum (NNF) of India and a nationwide online survey pointed to substantial variation in neonatal testing strategies. We, herein, summarize the relevant literature about the incidence and outcomes of neonatal COVID-19 and call for a universal and uniform testing strategy for exposed neonates. We anticipate that the testing strategy put forth in this article will facilitate better management and safe infection prevention measures among all units offering neonatal care in the country.

Publication Type

Journal article.

<603>

Accession Number

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20210085042

Author

Pavan Kalamdani; Thaslima Kalathingal; Swati Manerkar; Jayashree Mondkar

Title

Clinical profile of SARS-CoV-2 infected neonates from a tertiary government hospital in Mumbai, India.

Source

Indian Pediatrics; 2020. 57(12):1143-1146. 13 ref.

Publisher

Springer (India) Private Limited

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Objectives: To describe the clinical and laboratory profile of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infected neonates. **Methods:** This is a review of hospital records, conducted in a tertiary care public hospital. Medical records of neonates born from 1 April, 2020 to 31 May, 2020 were reviewed. Women admitted in labor were screened for SARS-CoV-2 infection based on the guidelines issued by Indian Council for Medical Research. Neonates were tested for SARS-CoV-2 infection once mother tested positive, which was after day 2 of life. Demographic, clinical features, laboratory tests and chest radiographs of SARS-CoV-2 infected neonates were reviewed and neonates were telephonically followed up till the age of 2 months. **Results:** Out of 1229 mothers, 185 tested positive (15.05%); 12 neonates (6.48%) tested positive for SARS-CoV-2 infection. All neonates were exclusively breastfed. Symptoms, if any, were mild and self-limiting. Serum lactate dehydrogenase and liver enzymes were elevated. All neonates were healthy and thriving well on follow-up. **Conclusion:** SARS-CoV-2 infected neonates are mostly asymptomatic and thrive well on exclusive breastfeeding.

Publication Type

Journal article.

<604>

Accession Number

20210085024

Author

Tushar Jagzape; Goel, A. K.; Bhaskar Shenoy

Title

Inclusion of multisystem inflammatory syndrome in children and adolescents temporally related to COVID-19 in the differential diagnosis of Kawasaki disease.

Source

Indian Pediatrics; 2021. 58(2):192-192. 4 ref.

Publisher

Springer (India) Private Limited

Location of Publisher

New Delhi

Country of Publication

India

Publication Type

Correspondence.

<605>

Accession Number

20210085021

Author

Bhavya Shah; Vaidehi Dande; Sudha Rao; Sanjay Prabhu; Minnie Bodhanwala

Title

Outcome of COVID-19 positive newborns presenting to a tertiary care hospital.

Source

Indian Pediatrics; 2020. 58(2):177-179. 8 ref.

Publisher

Springer (India) Private Limited

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Neonatal data regarding SARS-CoV-2 is sparse from India. On review of hospital records from April-August, 2020, 18/423 (4.25%) neonates were SARS-CoV-2 RT-PCR positive. 15 (83.3%) neonates recovered

and 3 (16.6%) succumbed. Only 50% of the positive babies had positive mothers/caretakers, a contact could not be traced in others.

Publication Type

Journal article.

<606>

Accession Number

20210084975

Author

Staunton, P.; Gibbons, J. P.; Keogh, P.; Curtin, P.; Cashman, J. P.; O'Byrne, J. M.

Title

Regional trauma patterns during the COVID-19 pandemic.

Source

The Surgeon; 2021. 19(2):e49-e52.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The current pandemic has impacted heavily on health systems, making unprecedented demands on resources, and forcing reconfiguration of services. Trauma and orthopaedic units have cancelled elective surgery, moved to virtual based clinics and have been forced to reconsider the provision of trauma. Our national elective orthopaedic centre has been re-designated as a trauma centre to allow tertiary centres re-direct triaged trauma. Many governments, as part of their COVID-19 management, have significantly restricted activity of the general population. We proposed that trauma patterns would change alongside these changes and maintaining existing standards of treatment would require dedicated planning and structures. **Methods:** Referrals over a six-week period (March 15th to April 30th) were retrospectively reviewed. Data was collected directly from our referral database and a database populated. Analysis was performed to assess trauma volume, aetiology, and changes in trends. **Results:** There were one hundred and fifty-nine referrals from three individual hospitals within the timeframe. Mean age of patient's referred was 55 (range17-92). Males accounted for 45% of cases. F&A injuries were the most common (32%), followed by H&W (28%), UL (17%), H&F (16%) and K&T (7%). In comparison to the corresponding time-period in 2019, trauma theatre activity reduced by almost one half (45.3%)**Conclusion:** The majority of trauma referred to our Dublin based centre during COVID-19 related population restrictions appears to be home based and trauma volumes have decreased. Significant reductions are apparent in work and sport

related injuries suggestive of compliance with COVID-19 activity guidelines. Maintaining existing standards of treatment requires dedicated planning.

Publication Type

Journal article.

<607>

Accession Number

20210084928

Author

Hassanein, M.; Alamoudi, R. M.; Majd-Aldeen Kallash; Aljohani, N. J.; Alfadhli, E. M.; El-Tony, L.; Khogeer, G. S.; Alfadhly, A. F.; Khater, A. E.; Ahmedani, M. Y.; Buyukbese, M. A.; Shaltout, I.; Belkhadir, J.; Hafidh, K.; Chowdhury, T. A.; Zanariah Hussein; Elbarbary, N. S.

Title

Ramadan fasting in people with type 1 diabetes during COVID-19 pandemic: the DaR global survey. (Special issue on diabetes and Ramadan.)

Source

Diabetes Research and Clinical Practice; 2021. 172. 31 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objectives: The DaR Global survey was conducted to determine the impact of the COVID-19 pandemic on the intentions to fast and the outcomes of fasting in < 18 years versus 18 years age groups with type 1 diabetes mellitus (T1DM). **Methods:** Muslim people with T1DM were surveyed in 13 countries between June and August 2020, shortly after the end of Ramadan (23rd April-23rd May 2020) using a simple questionnaire. **Results:** 71.1% of muslims with T1DM fasted during Ramadan. Concerns about COVID-19 were higher in individuals 18 years ($p = 0.002$). The number of participants who decided not to fast plus those who received Ramadan-focused education were significantly higher in the 18-year group ($p < 0.05$). Hypoglycemia (60.7%) as well as hyperglycemia (44.8%) was major complications of fasting during Ramadan in both groups irrespective of age. **Conclusion:** COVID-19 pandemic had minor impact on the decision to fast Ramadan in T1DM cohort. This was higher in the age group of 18 years compared to those < 18 years group. Only regional differences were noted for fasting attitude and behavior among T1DM groups. This survey highlights the need for Ramadan focused diabetes education to improve glucose control and prevent complications during fasting.

Publication Type

Journal article.

<608>

Accession Number

20210084923

Author

Eman Sheshah; Shaun Sabico; Albakr, R. M.; Sultan, A. A.; Alghamdi, K. S.; Al-Madani, K.; Alotair, H. A.; Al-Daghri, N. M.

Title

Prevalence of diabetes, management and outcomes among COVID-19 adult patients admitted in a specialized tertiary hospital in Riyadh, Saudi Arabia.

Source

Diabetes Research and Clinical Practice; 2021. 172. 24 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

This retrospective study aimed to characterize comorbidities and associated with mortality among hospitalized adults with Covid-19 managed as per the Saudi Ministry of Health protocol in a specialized tertiary hospital in Riyadh, Saudi Arabia. Medical records of 300 adult patients with PCR-confirmed SARS-CoV2 infection and admitted in King Salman Hospital (KSH) from May 1 to July 31, 2020 were included. Medical history, management and outcomes were noted. Males significantly outnumber females (259 versus 41). South Asians comprise 41% of all admitted patients. Mortality rate was 10% and highest among Saudi males (28.9%). Type 2 diabetes mellitus (T2DM) was the most common comorbidity (45.7%). Almost all patients (99%) had pneumonia. Patients > 50 years were three times more likely to die (confidence interval, CI 1.3-6.9; p = 0.01) from Covid-19. Congestive heart failure (odds ratio OR 19.4, CI-1.5-260.0; p = 0.02) and acute kidney injury (OR 11.7, CI-4.7-28.6; p < 0.001) were significantly associated with higher mortality. Dexamethasone use significantly improved the final outcome based on net reclassification improvement (NRI) and integrated discrimination improvement (IDI) (p < 0.05). In this single-center study, T2DM was very common among hospitalized Covid-19 patients. Patients > 50 years, those with congestive heart failure and acute kidney injury are at higher risk for worse Covid-19 outcome.

Publication Type

<609>

Accession Number

20210084630

Author

Liu, W.; Liu, Y.; Xu, Z.; Jiang, T.; Kang, Y.; Zhu, G.; Chen, Z.

Title

Clinical characteristics and predictors of the duration of SARS-CoV-2 viral shedding in 140 healthcare workers.

Source

Journal of Internal Medicine; 2020. 288(6):725-736. 24 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Epidemiological and clinical features of patients with COVID-19 have been reported, but none of them focused on medical staff, and few predictors of the duration of viral shedding have been reported. It is urgent to help healthcare workers prevent and recover quickly from the coronavirus disease 2019 (COVID-19). Methods: We enrolled 140 medical workers with COVID-19 in Wuhan. Epidemiological, demographic, clinical, laboratory, radiological treatment and clinical outcome data were collected, and predictors of the duration of viral shedding were explored through multivariable linear regression analysis. Results The medical staff with COVID-19 presented mild clinical symptoms and showed a low frequency of abnormal laboratory indicators. All the medical staff were cured and discharged, of whom 96 (68.6%) were female, 39 (27.9%) had underlying diseases, the median age was 36.0 years, and 104 (74.3%) were infected whilst working in hospital. The median duration of viral shedding was 25.0 days (IQR:20.0-30.0). Multivariable linear regression analysis showed reducing viral shedding duration was associated with receiving recombinant human interferon alpha (rIFN-a) treatment, whilst the prolonged duration of viral shedding correlated with the use of glucocorticoid treatment, the durations from the first symptom to hospital admission and the improvement in chest computed tomography (CT) evidence. Moreover, infected healthcare workers with lymphocytes less than $1.1 \times 10^9/L$ on admission had prolonged viral shedding. Conclusion: Medical staff with timely medical interventions show milder clinical features. Glucocorticoid treatment and lymphocytes less than $1.1 \times 10^9/L$ are associated with prolonged viral shedding. Early admission and rIFN-a treatment help shorten the duration of viral shedding.

Publication Type

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<610>

Accession Number

20210084429

Author

Bertrand, L.; Shaw, K. A.; Ko JongBum; Deprez, D.; Chilibeck, P. D.; Zello, G. A.

Title

The impact of the coronavirus disease 2019 (COVID-19) pandemic on university students' dietary intake, physical activity, and sedentary behaviour.

Source

Applied Physiology, Nutrition and Metabolism; 2021. 46(3):265-272. 41 ref.

Publisher

NRC Research Press

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

University students are a vulnerable group for poor dietary intake, insufficient physical activity and sedentary behaviour. The purpose of this study was to examine the impact of coronavirus disease (COVID-19) on university students' dietary intake, physical activity, and sedentary behaviour. Participants were students (n = 125) from the Universities of Saskatchewan and Regina. An online questionnaire was administered retrospectively (for prepandemic) and prospectively (during the pandemic) to examine students' dietary intake, physical activity, and sedentary behaviour. Overall, nutrient and caloric intakes were significantly reduced ($p < 0.05$) during the pandemic, and alcohol intake increased ($p = 0.03$). Before the pandemic, 16% and 54% of the participants were meeting the Canadian 24-Hour Movement Guidelines for Adults (18-64 years) of 150 min of moderate-vigorous physical activity and 8 h or less of sedentary activity, respectively. Only 10% met the guidelines for physical activity while 30% met the guidelines for sedentary behaviour during the pandemic. The minutes per week spent engaging in moderate to vigorous physical activity during the pandemic decreased by approximately 20% ($p < 0.001$). The hours spent in sedentary activities increased by 3 h per day ($p < 0.001$). Our findings confirm that during the pandemic, students' inadequate dietary intake, high alcohol consumption, low physical activity, and high sedentary behaviour were significantly compounded. Novelty: During COVID-19, the nutrient and caloric intakes of university students decreased, and alcohol intake increased significantly. University students' physical activity levels decreased, and sedentary activity increased significantly during COVID-19. During COVID-19 students did not engage in sufficient physical activity to offset the increased sedentary behaviour.

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Journal article.

<611>

Accession Number

20210084376

Author

Rio, R. del; Perez, E. D.; Gabriel, M. A. M.

Title

Multi-centre study showed reduced compliance with the World Health Organization recommendations on exclusive breastfeeding during COVID-19.

Source

Acta Paediatrica; 2021. 110(3):935-936. 5 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Publication Type

Journal article.

<612>

Accession Number

20210084359

Author

Naveen, R.; Sundaram, T. G.; Vikas Agarwal; Latika Gupta

Title

Teleconsultation experience with the idiopathic inflammatory myopathies: a prospective observational cohort study during the COVID-19 pandemic.

Source

Rheumatology International; 2021. 41(1):67-76. 26 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Teleconsultation has assumed a central role in the management of chronic and disabling rheumatic diseases, such as the idiopathic inflammatory myopathies (IIM), during COVID-19. However, the feasibility, challenges encountered, and outcomes remain largely unexplored. Here, we describe our teleconsultation experience in a prospectively followed cohort of adult and juvenile IIM. 250 IIM enrolled into the MyoCite cohort (2017-ongoing) were offered the option of audio/visual teleconsultation using WhatsApp during the nationwide lockdown. Clinical outcomes (major/minor relapse) and prescription changes were compared between IIM subsets. Socio-demographic and clinico-serological characteristics of those who sought teleconsultation were compared with those who did not. 151 teleconsultations were sought over a 93 day period by 71 (52.2%) of 136 IIM (median age 38 years, F:M 4.5:1). Nearly one-third (38%) consulted on an emergency basis, with voice consultations being the primary medium of communication. Over a quarter (26.8%) reported relapse (15.5% minor, 11.3% major), these being more common in JDM [71.4%, OR 8.9 (1.5-51)] as compared with adult IIM, but similar across various antibody-based IIM subtypes. Patients who relapsed required more consultations [2(2-3) vs 1(1-2), p 0.009]. The demographic and socioeconomic profile of the patients seeking consultation (n=71) was not different from those who did not (n=65). Voice-based teleconsultations may be useful to diagnose and manage relapses in IIM during the pandemic. Patient education for meticulous and timely reporting may improve care, and larger multicentre studies may identify subsets of IIM that require greater care and early tele-triage for effective management of the condition.

Publication Type

Journal article.

<613>

Accession Number

20210084333

Author

Oliveira, A. B.; Madeira, A. S.; Paz, D. A. de S.

Title

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Aspects of the diffusion of COVID-19 in the immediate geographic region of Imperatriz, Maranhao, Brazil.
[Portuguese]

Source

Caderno de Geografia; 2021. 31(64):170-191. 28 ref.

Publisher

Pontificia Universidade Catolica de Minas Gerais

Location of Publisher

Belo Horizonte

Country of Publication

Brazil

Abstract

The present study aims to discuss aspects of the diffusion of covid-19 in the immediate geographic region of the city of Imperatriz, in Maranhao. The period analyzed comprises the first 100 days of the pandemic in the state. Data on ICU spatialization, hospital beds and mechanical ventilators/ventilators in the state are considered, and information on viral evolution and geographic origin of patients in this period. The main data sources are Datasus and the State Department of Health of Maranhao. The aspects studied suggest that the concentration of medical-hospital equipment in Imperatriz is a significant bottleneck in the fight against pandemic the Sars-CoV-2, in that it triggers flows of people from centres with less offer of services in search of medical care, resulting in wide areas of contagion and distortions as to the geographical origin of the cases.

Publication Type

Journal article.

<614>

Accession Number

20210084275

Author

Abualfadl, E.; Ismail, F.; El-Shereef, R. R.; Hassan, E.; Tharwat, S.; Mohamed, E. F.; Abda, E. A.; Radwan, A. R.; Fawzy, R. M.; Moshrif, A. H.; Noor, R. A.; Senara, S.; Elazim, M. I. A.; Abaza, N. M.; Raafat, H. A.; El-Gazzar, I. I.; El-Hammady, D. H.; Hammam, N.; Gheita, T. A.; El-Mallah, R.

Title

Impact of COVID-19 pandemic on rheumatoid arthritis from a Multi-Centre patient-reported questionnaire survey: influence of gender, rural-urban gap and north-south gradient.

Source

Rheumatology International; 2021. 41(2):345-353. 36 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

During the coronavirus disease-2019 (COVID-19) pandemic there were several barriers to treatment access and medication adherence in rheumatoid arthritis (RA) patients. There is no information regarding the RA patient health status in Egypt during the COVID-19. Thus, the aim of this work was to study the impact of the pandemic on RA patients through a patient-reported questionnaire and to determine the influence of gender, geographic regions. This multi-centre study initiated by the Egyptian College of Rheumatology (ECR) was conducted on 1037 RA patients attending rheumatology clinics from 10 governorates. The questionnaire provided covered socio-demographic data, health/disease status, information/knowledge about COVID-19 and medical/family history of the infection. Patients mean age was 44.2 +or- 12.3 years;855 females and 182 males; 539(52%) from rural and 497(48%) from urban areas. 41.8% reported a striking difficulty to obtain hydroxychloroquine during the pandemic. The majority (70%) considered maintaining a regular visit to the rheumatologist in addition to remote contact mainly by phone (44.4%) or via WhatsApp (33.1%), in particular among male and urban patients. Urban patients were more likely to be infected by COVID-19 (12.9% vs 6.2%; $p < 0.0001$) than rural. Northern cities had more patients with suspected COVID-19 (13.9% vs 6.1%; $p < 0.0001$); was significantly associated with more disease flares (30.8% vs 5.8%) with subsequent change in the RA treatment (20.9% vs 6.4%; $p < 0.0001$). Patients with RA faced remarkable difficulty to obtain their medications with subsequent change in their disease status. The challenges of the pandemic have hastened changes in the way we deliver health care.

Publication Type

Journal article.

<615>

Accession Number

20210083914

Author

Prem Rajak; Abhratanu Ganguly; Saurabh Sarkar; Moutushi Mandi; Moumita Dutta; Sayanti Podder; Salma Khatun; Sumedha Roy

Title

Immunotoxic role of organophosphates: an unseen risk escalating SARS-CoV-2 pathogenicity. (Special Issue: COVID-19 and treatments: particular emphasis on potential toxic effects.)

Source

Food and Chemical Toxicology; 2021. 149. many ref.

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Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Consistent gathering of immunotoxic substances on earth is a serious global issue affecting people under pathogenic stress. Organophosphates are among such hazardous compounds that are ubiquitous in nature. They fuel oxidative stress to impair antiviral immune response in living entities. Aside, organophosphates promote cytokine burst and pyroptosis in broncho-alveolar chambers leading to severe respiratory ailments. At present, we witness COVID-19 outbreak caused by SARS-CoV-2. Infection triggers cytokine storm coupled with inflammatory manifestations and pulmonary disorders in patients. Since organophosphate-exposure promotes necroinflammation and respiratory troubles hence during current pandemic situation, additional exposure to such chemicals can exacerbate inflammatory outcome and pulmonary maladies in patients, or pre-exposure to organophosphates might turn-out to be a risk factor for compromised immunity. Fortunately, antioxidants alleviate organophosphate-induced immunosuppression and hence under co-exposure circumstances, dietary intake of antioxidants would be beneficial to boost immunity against SARS-CoV-2 infection.

Publication Type

Journal article.

<616>

Accession Number

20210083912

Author

Zhang Feng; Huang Jian; Liu Wei; Wang ChaoRan; Liu YanFang; Tu DongZhu; Liang XinMiao; Yang Ling; Zhang WeiDong; Chen HongZhuan; Ge GuangBo

Title

Inhibition of drug-metabolizing enzymes by Qingfei Paidu decoction: implication of herb-drug interactions in COVID-19 pharmacotherapy. (Special Issue: COVID-19 and treatments: particular emphasis on potential toxic effects.)

Source

Food and Chemical Toxicology; 2021. 149. 46 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Corona Virus Disease 2019 (COVID-19) has spread all over the world and brings significantly negative effects on human health. To fight against COVID-19 in a more efficient way, drug-drug or drug-herb combinations are frequently used in clinical settings. The concomitant use of multiple medications may trigger clinically relevant drug/herb-drug interactions. This study aims to assay the inhibitory potentials of Qingfei Paidu decoction (QPD, a Chinese medicine compound formula recommended for combating COVID-19 in China) against human drug-metabolizing enzymes and to assess the pharmacokinetic interactions in vivo. The results demonstrated that QPD dose-dependently inhibited CYPs1A, 2A6, 2C8, 2C9, 2C19, 2D6 and 2E1 but inhibited CYP3A in a time- and NADPH-dependent manner. In vivo test showed that QPD prolonged the half-life of lopinavir (a CYP3A substrate-drug) by 1.40-fold and increased the AUC of lopinavir by 2.04-fold, when QPD (6 g/kg) was co-administrated with lopinavir (160 mg/kg) to rats. Further investigation revealed that Fructus Aurantii Immaturus (Zhishi) in QPD caused significant loss of CYP3A activity in NADPH-generating system. Collectively, our findings revealed that QPD potentially inactivated CYP3A and significantly modulated the pharmacokinetics of CYP3A substrate-drugs, which would be very helpful for the patients and clinicians to avoid potential drug-interaction risks in COVID-19 treatment.

Publication Type

Journal article.

<617>

Accession Number

20210083889

Author

Ku MinWen; Bourguine, M.; Authie, P.; Lopez, J.; Nemirov, K.; Moncoq, F.; Noirat, A.; Vesin, B.; Nevo, F.; Blanc, C.; Souque, P.; Tabbal, H.; Simon, E.; Hardy, D.; Dudal, M. le; Guinet, F.; Fiette, L.; Mouquet, H.; Anna, F.; Martin, A.; Escriou, N.; Majlessi, L.; Charneau, P.

Title

Intranasal vaccination with a lentiviral vector protects against SARS-CoV-2 in preclinical animal models.

Source

Cell Host & Microbe; 2021. 29(2):236-249.e6. many ref.

Publisher

Cell Press

Location of Publisher

Cambridge

Country of Publication

USA

Abstract

To develop a vaccine candidate against coronavirus disease 2019 (COVID-19), we generated a lentiviral vector (LV) eliciting neutralizing antibodies against the Spike glycoprotein of SARS-CoV-2. Systemic vaccination by this vector in mice, in which the expression of the SARS-CoV-2 receptor hACE2 has been induced by transduction of respiratory tract cells by an adenoviral vector, confers only partial protection despite high levels of serum neutralizing activity. However, eliciting an immune response in the respiratory tract through an intranasal boost results in a >3 log₁₀ decrease in the lung viral loads and reduces local inflammation. Moreover, both integrative and non-integrative LV platforms display strong vaccine efficacy and inhibit lung deleterious injury in golden hamsters, which are naturally permissive to SARS-CoV-2 replication and closely mirror human COVID-19 physiopathology. Our results provide evidence of marked prophylactic effects of LV-based vaccination against SARS-CoV-2 and designate intranasal immunization as a powerful approach against COVID-19.

Publication Type

Journal article.

<618>

Accession Number

20210083743

Author

Radcliffe, J.; Skinner, K.; Spring, A.; Picard, L.; Benoit, F.; Dodd, W.

Title

Virtual barriers: unpacking the sustainability implications of online food spaces and the Yellowknife farmers market's response to COVID-19.

Source

Nutrition Journal; 2021. 20(12):(29 January 2021). 52 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Through their support of local agriculture, relationships, and healthy diets, farmers markets can contribute to a sustainable food system. Markets like the Yellowknife Farmers Market (YKFM) are social spaces that support local food, yet the COVID-19 pandemic has forced changes to their current model. We explore the potential of online marketplaces to contribute to a resilient, sustainable food system through a case study of the YKFM. Methods: In 2019, a collaborative mixed-method evaluation was initiated by the YKFM and university partners in the Northwest Territories (NWT), Canada. The evaluation included an in-person Rapid Market Assessment dot survey and questionnaire of market patrons from two YKFM dates prior to the pandemic. Due to COVID-19, a vendor survey and interviews were deferred. Data collected from the two patron surveys, alongside researcher observations, available literature, public announcements, and informal email and phone discussions, inform the discussion. Results: For the patron surveys, 59 dot survey and 31 questionnaire participants were recruited. The top motivators for attendance were eating dinner, atmosphere, and supporting local businesses, and most patrons attended as couples and spent over half of their time talking to others. The YKFM did not move online; instead, they proposed and implemented a "Shop, don't stop" market. Informal conversations suggested the small scale of the market and technology challenges were perceived barriers to moving online. The physically-distanced market was well-attended and featured in local media. Conclusions: NWT food strategies rely on farmers markets to nurture a local food system. Data suggest a potential incongruence between an online model and important market characteristics such as the event-like atmosphere. Available literature suggests online markets can support local food by facilitating purchasing and knowledge-sharing, yet they do not replicate the open-air or social experience. The decision not to move online for the YKFM reflects market patron characteristics and current food context in Yellowknife and the NWT. While online adaptation does not fit into the YKFM plan today, online markets may prove useful as a complementary strategy for future emerging stressors to enhance the resiliency of local systems.

Publication Type

Journal article.

<619>

Accession Number

20210083457

Author

Christensen, R. A. G.; Sturrock, S. L.; Arneja, J.; Brooks, J. D.

Title

Measures of adiposity and risk of testing positive for SARS-CoV-2 in the UK Biobank study.

Source

Journal of Obesity; 2021. 2021(8837319). 29 ref.

Publisher

Hindawi

Location of Publisher

London

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Country of Publication

UK

Abstract

Objective. To assess if body mass index (BMI) and high waist circumference (HWC) are associated with testing positive for the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). **Methods.** 9,386 UK Biobank study participants tested for SARS-CoV-2 from March 16th 2020 to June 29th 2020 were analyzed. A forward model building approach was used to estimate adjusted risk ratios (RR) and 95% confidence intervals (95% CI). Analyses were stratified by age due to a significant first-order interaction between age and HWC. **Results.** Approximately 17% (n = 1,577) of participants tested positive for SARS-CoV-2. BMI category had a linear association with testing positive for SARS-CoV-2 among participants <65 years (RR = 1.09, 95% CI 1.02-1.17). For participants 65 years, only obesity class II (RR = 1.38, 95% CI 1.10-1.74) had a significantly greater risk of testing positive for SARS-CoV-2 than those who were underweight/normal weight. While HWC was not associated with testing positive for SARS-CoV-2 in those <65 years, having an HWC was associated with an increased risk of testing positive for SARS-CoV-2 in participants 65 years (RR = 1.12, 95% CI 1.00-1.27). **Conclusion.** The associations of BMI and HWC with testing positive for SARS-CoV-2 differed by age. Notably, HWC was associated with testing positive in those 65 years, but not those who were younger, independent of BMI. This suggests that measures of adiposity in addition to BMI may be used to identify older individuals at greater risk of testing positive for SARS-CoV-2.

Publication Type

Journal article.

<620>

Accession Number

20210083328

Author

Ming ZiWen; Han Sukkyun; Deng Kai; Reyes, E.; Ha Youngsil; Kim Sungsoo; Zhao Yu; Dobritsa, A.; Wu MeiTing; Zhang DanDan; Cox, D. P.; Joyner, E.; Kulasekara, H.; Kim SeongHong; Jang YongSeog; Fowler, C.; Fei Xing; Akasaki, H.; Themeli, E.; Agapov, A.; Bruneau, D.; Thao Tran; Szczesny, C.; Kienzle, C.; Tenney, K.; Geng Hao; Myoda, S.; Samadpour, M.

Title

Prevalence of SARS-CoV-2 contamination on food plant surfaces as determined by environmental monitoring.

Source

Journal of Food Protection; 2021. 84(3):352-358. 19 ref.

Publisher

International Association for Food Protection

Location of Publisher

Des Moines

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Country of Publication

USA

Abstract

The SARS-CoV-2 pandemic has presented new challenges to food manufacturers. During the early phase of the pandemic, several large outbreaks of coronavirus disease 2019 (COVID-19) occurred in food manufacturing plants resulting in deaths and economic loss, with approximately 15% of personnel diagnosed as asymptomatic for COVID-19. Spread by asymptomatic and presymptomatic individuals has been implicated in large outbreaks of COVID-19. In March 2020, we assisted in implementation of environmental monitoring programs for SARS-CoV-2 in zones 3 and 4 of 116 food production facilities. All participating facilities had already implemented measures to prevent symptomatic personnel from coming to work. During the study period, from 17 March to 3 September 2020, 1.23% of the 22,643 environmental samples tested positive for SARS-CoV-2, suggesting that infected individuals were actively shedding virus. Virus contamination was commonly found on frequently touched surfaces such as doorknobs, handles, table surfaces, and sanitizer dispensers. Most processing plants managed to control their environmental contamination when they became aware of the positive findings. Comparisons of positive test results for plant personnel and environmental surfaces in one plant revealed a close correlation. Our work illustrates that environmental monitoring for SARS-CoV-2 can be used as a surrogate for identifying the presence of asymptomatic and presymptomatic personnel in workplaces and may aid in controlling infection spread.

Publication Type

Journal article.

<621>

Accession Number

20210083312

Author

Yu, Y.; Ye, J.; Chen, M.; Jiang, C.; Lin, W.; Lu, Y.; Ye, H.; Li, Y.; Wang Y; Liao, Q.; Zhang DongMei; Li DongLiang

Title

Malnutrition prolongs the hospitalization of patients with COVID-19 infection: a clinical epidemiological analysis.

Source

Journal of Nutrition, Health & Aging; 2020. 25(3):369-373. 20 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

Objectives: During the 2019 Coronavirus disease (COVID-19) outbreak, malnutrition may contribute to COVID-19 adverse outcomes. We conducted a clinical epidemiological analysis to investigate the association of malnutrition with hospitalized duration in patients with COVID-19. **Design:** Retrospective survey study. **Setting:** Taikang Tongji (Wuhan) hospital in Wuhan, China. **Participants:** 139 patients with COVID-19. **Methods:** In total, 139 patients with COVID-19 from patients in the Infection Department of Taikang Tongji (Wuhan) hospital from February 2020 to April 2020 were analyzed retrospectively. We used the "Global leadership Initiative on Malnutrition(GLIM)" assessment standard published in 2019 to assess nutritional status. Prolonged hospitalization was lasting more than the median value of the hospitalized days (17 days) in this population. **Results:** According to the assessment results of GLIM nutrition assessment, the patients were divided into malnutrition group and normal nutrition group. Compared with the patients in the normal nutrition group, the hospitalization time was longer(15.67+or-6.26 days versus 27.48+or-5.04 days, P = 0.001). Kaplan-Meier analysis showed patients with malnutrition were more likely to be hospitalized longer compared with those normal nutrition (mean with 95% confidence interval [CI]: 28.91[27.52-30.30] versus 22.78[21.76-23.79], P = 0.001). COX regression analysis showed that malnutrition (hazard ratio [HR] = 3.773, P for trend = 0.001) was proportional associated with being discharged from hospital delayed. **Conclusion and implications:** Present findings suggested that malnutrition contributed to predicting a probability of prolonged hospitalization in patients with COVID-19 infection, to whom extra attentions and precautions should be paid during clinical treatments. Based on the existing results, it is recommended that inpatients with nutritional risk or malnutrition start nutritional support treatment as soon as possible.

Publication Type

Journal article.

<622>

Accession Number

20210083305

Author

Woo, J.; Leung, D.; Yu, R.; Lee, R.; Wong, H.

Title

Factors affecting trends in societal indicators of ageing well in Hong Kong: policies, politics and pandemics.

Source

Journal of Nutrition, Health & Aging; 2020. 25(3):325-329. 31 ref.

Publisher

Springer

Location of Publisher

Paris

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Country of Publication

France

Abstract

Objectives: To document the trend in a quality of life indicator for the older Hong Kong population as an assessment of the impact of age friendly city policies, political conflicts and the covid-19 pandemic. **Design:** Random telephone survey and collection of government data over four years (2017-2020). **Setting:** Community living older people. **Participants:** People aged 50 years and over. **Measurements:** The Hong Kong Quality of Life Index covering four domains of income security, health status, capability and enabling environment. **Results:** From 2017-9, improvements were seen in various domains in parallel with the adoption of the World Health Organization's Age Friendly City concept by government policy together with a territory wide initiative supported by a major philanthropic organization. However scores of all domains dropped markedly as a result of political conflicts as well as the onset of the pandemic. **Conclusion:** The documentation of the trend in HKEQOL shows that while it may be used as a macro indicator that is able to reflect policies affecting the well-being of older people, it is also able to reflect the impact of societal unrest and pandemics, and that the latter may override the effect of existing ageing policies. It also follows that during social unrest and pandemics, specific policies targeting older people may be needed to maintain well-being.

Publication Type

Journal article.

<623>

Accession Number

20210083303

Author

Schorr, A. V.; Yehuda, I.; Tamir, S.

Title

Ethnic differences in loneliness, depression, and malnutrition among older adults during COVID-19 quarantine.

Source

Journal of Nutrition, Health & Aging; 2020. 25(3):311-317. 50 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

Background: Depression in older adults may result from a variety of reasons such as loneliness feelings and malnutrition. Background: To examine the direct and indirect effect of loneliness feelings on depressive symptoms, mediated by malnutrition, among older adults from different cultures during the Coronavirus disease 2019 (Covid-19) pandemic quarantine. Method: A convenience sample of 101 Arabs and 100 Jewish older adults aged 65 and over was interviewed. Using bootstrapping, we tested the strength and significance of the conditional indirect effect of malnutrition (mediator) on the relationship between loneliness feelings and depressive symptoms. Results: The relationship between loneliness feelings and depressive symptoms was mediated by malnutrition and Arab older adults reported a higher level than Jewish older adults of loneliness, depression, and malnutrition during the Covid-19 pandemic quarantine. Conclusions and implications: To reduce loneliness feelings, depressive symptoms, and malnutrition in times of crisis like the Covid-19 pandemic, it is essential to develop new communication methods for and with older adults in general, with particular attention paid to ethnic differences, that will be effective in reducing loneliness and in promoting nutrition intervention. Possible solutions include new social network technologies for reducing loneliness, with continued reliance on phone communication for combined intervention that includes psychological support accompanied by instructions for a healthy lifestyle and malnutrition prevention.

Publication Type

Journal article.

<624>

Accession Number

20210083277

Author

Ciric, M. R.; Ilic, D. S.; Ignjatijevic, S. D.; Brkanlic, S. D.

Title

Consumer behaviour in online shopping organic food during the COVID-19 pandemic in Serbia.

Source

Food and Feed Research; 2020. 47(2):149-158. 20 ref.

Publisher

Institute of Food Technology

Location of Publisher

Novi Sad

Country of Publication

Serbia

Abstract

The purpose of this paper was to determine whether the Covid-19 Pandemic influenced the change in the extent of online shopping of organic food in Serbia and whether it has led to a change in organic food consumer behaviour. The survey was carried out in Serbia by using a questionnaire developed specifically for this purpose. The total sample size included 1022 respondents of which 90 respondents were online buying organic food during Covid-19 Pandemic. Descriptive statistics and Chi-square test were used to analyse data obtained from the survey. The results indicate that the Covid-19 Pandemic influenced the increase in the percentage of consumers who purchase organic food online. Also, the changes in the type and volume of organic food consumption were identified. Besides, the consumption of organic food varied in relation to the sociodemographic characteristics of consumers who purchased online.

Publication Type

Journal article.

<625>

Accession Number

20210083110

Author

Karahan, S.; Katkat, F.

Title

Impact of serum 25(OH) vitamin D level on mortality in patients with COVID-19 in Turkey.

Source

Journal of Nutrition, Health & Aging; 2021. 25(2):189-196. 31 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

Background: Because of the lack of sufficient data, we aimed to investigate the role of serum 25(OH) vitamin D level on COVID severity and related mortality. **Methods:** This was a retrospective observational study. Data, including sociodemographic features, clinical characteristics, and laboratory data, and 25(OH) vitamin D levels were recorded for each study participant. Patients were stratified into different vitamin D groups; Normal (Serum 25(OH) vitamin D level >30 ng/mL), Vitamin D insufficiency (21-29 ng/mL), and deficiency (<20 ng/mL). The severity of COVID was classified according to the Chinese Clinical Guideline for classification of COVID-19 severity. Mortality data were determined for participants. Univariate and multivariate Logistic regression analysis was performed to determine independent predictors of in-hospital mortality. **Results:** Overall, 149 COVID-19 patients (females 45.6%, mean age 63.5 +- 15.3 (range 24-90

years) years) were included. Forty-seven patients (31.5%) had moderate COVID-19, whereas 102 patients (68.5%) had severe-critical COVID-19. The mean 25(OH) vitamin D level was 15.2 +or- 10.3 ng/mL. Thirty-four (22.8%) and 103 (69.1%) patients had vitamin D insufficiency and deficiency, respectively. Mean serum 25(OH) vitamin D level was significantly lower in patients with severe-critical COVID-19 compared with moderate COVID-19 (10.1 +or- 6.2 vs. 26.3 +or- 8.4 ng/mL, respectively, $p < 0.001$). Vitamin D insufficiency was present in 93.1% of the patients with severe-critical COVID-19. Multivariate logistic regression analysis revealed that only lymphocyte count, white blood cell count, serum albumin and, 25(OH) vitamin D level were independent predictors of mortality. Conclusion: Serum 25(OH) vitamin D was independently associated with mortality in COVID-19 patients.

Publication Type

Journal article.

<626>

Accession Number

20210083093

Author

Zhou, J.; Ma, Y.; Liu, Y.; Xiang, Y.; Tao, C.; Yu, H.; Huang, J.

Title

A correlation analysis between the nutritional status and prognosis of COVID-19 patients.

Source

Journal of Nutrition, Health & Aging; 2021. 25(1):84-93. 14 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

Purpose: The present study investigated the correlation between the nutritional status and prognosis of COVID-19 patients, and analyzed the epidemiological characteristics of COVID-19 patients with different nutritional status. **Methods:** 429 patients who were diagnosed positive for COVID-19 in Hubei Provincial Hospital of Traditional Chinese Medicine from December 2019 to March 2020 were selected and divided into different groups based on Controlling Nutritional Status (CONUT) score (0-4: the low CONUT score group; 5-12: the high CONUT score group). Multivariate logistic regression analysis was applied to investigate the effects of CONUT score on prognosis. **Results:** The total score of admission status of patients with higher CONUT score was higher than that of those with lower CONUT score ($X^2 = 7.152$, $P = 0.007$). The number of adverse outcomes of female was higher than that of male ($X^2 = 10.253$, $P = 0.001$). The

number of adverse outcomes was higher for patients with smoking history ($P = 0.004$) or hypertension ($X^2 = 11.240$, $P = 0.001$) than those without. Also, the number of adverse outcomes was higher for older patients than younger ones ($X^2 = 15.681$, $P < 0.001$). Patients with adverse outcomes had lower urine red blood cell count than patients without adverse outcomes ($X^2 = 5.029$, $P = 0.025$). However, BMI, drinking history and diabetes did not show correlation with the prognosis of COVID-19 ($P > 0.05$). Among patients 61 years old, the risk of adverse outcomes in the high CONUT score group was 6.191 times that of the low CONUT score group (OR = 6.191, 95% CI: 1.431-26.785). Among the non-diabetic patients, the risk of adverse outcomes in the high CONUT group was 11.678 times that of the low CONUT group (OR = 11.678, 95% CI: 2.754-49.41). For the patients who had a total score of admission status < 6 , the risk of adverse outcomes in the high CONUT score group was 8.216 times that of the low CONUT score group (OR = 8.216, 95% CI: 2.439-27.682). Conclusion: COVID-19 patients with good nutritional status showed a small chance to have adverse outcomes. Gender, age, hypertension, the number of urine red blood cell count and CONUT score affected the adverse outcomes of patients.

Publication Type

Journal article.

<627>

Accession Number

20210083084

Author

Dai, S. P.; Zhao, X.; Wu JinHui

Title

Effects of comorbidities on the elderly patients with COVID-19: clinical characteristics of elderly patients infected with COVID-19 from Sichuan, China.

Source

Journal of Nutrition, Health & Aging; 2021. 25(1):18-24. 28 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

Objectives: The co-occurrence of chronic diseases in the elderly is a common problem. However, the relationship between comorbidities and the prognosis of elderly patients with COVID-19 was not clear. This study was supposed to describe the clinical characteristics of elderly patients with COVID-19 infection from Sichuan province and the effects of comorbidity. **Design:** A retrospective study. **Settings and participants:**

COVID-19 patients from Public Health Clinical Center of Chengdu between December 16, 2019 and February 26, 2020 were included in this study. Patients were divided into elderly group (60 years old) and non-elderly group (< 60 years old). Results: Elderly patients with COVID-19 indicated relatively higher proportion of comorbidities, and the most common were atherosclerotic cardiovascular disease (56.5%), hypertension (43.5%) and chronic pulmonary disease (21.7%). The proportion of severe cases was higher in elderly group than that in non-elderly group (73.9% and 42.2%, respectively, P=0.012). During hospitalization, elderly patients indicated relatively higher proportion of complications, such as shock (21.7%), respiratory failure (21.7%). The proportion of patients with a decreased number of CD8+ lymphocytes (82.6%) and B lymphocytes (77.8%) in elderly patients was significantly higher than that in non-elderly group (48.9% and 44.8%, respectively). All 3 deaths were elderly patients with comorbidities and the cell counts of T lymphocyte subsets, B and NK cells of them were significantly decreased at admission. Conclusions: Elderly patients with COVID-19 had a high proportion of severe cases and comorbidities, more likely to show low immune function, and indicate higher proportion of complications.

Publication Type

Journal article.

<628>

Accession Number

20210083081

Author

Kotlar, B.; Gerson, E.; Petrillo, S.; Langer, A.; Tiemeier, H.

Title

The impact of the COVID-19 pandemic on maternal and perinatal health: a scoping review.

Source

Reproductive Health; 2021. 18(10):(18 January 2021). 112 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction The Covid-19 pandemic affects maternal health both directly and indirectly, and direct and indirect effects are intertwined. To provide a comprehensive overview on this broad topic in a rapid format behooving an emergent pandemic we conducted a scoping review. **Methods** A scoping review was conducted to compile evidence on direct and indirect impacts of the pandemic on maternal health and provide an overview of the most significant outcomes thus far. Working papers and news articles were

considered appropriate evidence along with peer-reviewed publications in order to capture rapidly evolving updates. Literature in English published from January 1st to September 11 2020 was included if it pertained to the direct or indirect effects of the COVID-19 pandemic on the physical, mental, economic, or social health and wellbeing of pregnant people. Narrative descriptions were written about subject areas for which the authors found the most evidence. Results The search yielded 396 publications, of which 95 were included. Pregnant individuals were found to be at a heightened risk of more severe symptoms than people who are not pregnant. Intrauterine, vertical, and breastmilk transmission were unlikely. Labor, delivery, and breastfeeding guidelines for COVID-19 positive patients varied. Severe increases in maternal mental health issues, such as clinically relevant anxiety and depression, were reported. Domestic violence appeared to spike. Prenatal care visits decreased, healthcare infrastructure was strained, and potentially harmful policies implemented with little evidence. Women were more likely to lose their income due to the pandemic than men, and working mothers struggled with increased childcare demands. Conclusion Pregnant women and mothers were not found to be at higher risk for COVID-19 infection than people who are not pregnant, however pregnant people with symptomatic COVID-19 may experience more adverse outcomes compared to non-pregnant people and seem to face disproportionate adverse socio-economic consequences. High income and low- and middle-income countries alike faced significant struggles. Further resources should be directed towards quality epidemiological studies.

Publication Type

Journal article.

<629>

Accession Number

20210082997

Author

Aceves-Gonzalez, C.; Rodriguez, Y.; Escobar-Galindo, C. M.; Perez, E.; Gutierrez-Moreno, B.; Hignett, S.; Lang, A. R.

Title

Frontiers in human factors: integrating human factors and ergonomics to improve safety and quality in Latin American healthcare systems. (Human factors and ergonomics in healthcare.)

Source

International Journal for Quality in Health Care; 2021. 33(Suppl.1):45-50. 31 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

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Background: The importance of human factors/ergonomics (HFE) is well established in all high-reliability systems but only applied in the healthcare sector relatively recently. Across many sectors, low-/middle-income countries (LMICs) lag behind more economically developed countries in their application of this safety science, due to resource and, in some cases, awareness and expertise. Most previous applications of HFE related to occupational ergonomics rather than healthcare safety. Methods: The paper details how the reputation of HFE is being developed within healthcare communities of Latin America (LatAm), through increasing awareness and understanding of its role as safety science in the healthcare sector. It starts by articulating the need for HFE and then provides examples from Mexico, Colombia and Peru. Results: The practical examples for research and education illustrate a developing awareness of the relevance of HFE to the healthcare sectors in LatAm and an appreciation of its worth to improve health service quality and patient safety through healthcare community engagement. A new LatAm Network of HFE in Healthcare Systems (RELAESA) was formed in 2019, which has provided a platform for HFE advice during the COVID-19 pandemic. Conclusion: There is a real opportunity in LatAm and other LMIC health services to make more rapid and sustainable progress in healthcare-embedded HFE than has been experienced within healthcare services of more developed nations.

Publication Type

Journal article.

<630>

Accession Number

20210082981

Author

Scagnolari, C.; Bitossi, C.; Viscido, A.; Frasca, F.; Oliveto, G.; Scordio, M.; Petrarca, L.; Mancino, E.; Nenna, R.; Riva, E.; Vito, C. de; Midulla, F.; Antonelli, G.; Pierangeli, A.

Title

ACE2 expression is related to the interferon response in airway epithelial cells but is that functional for SARS-CoV-2 entry?

Source

Cytokine; 2021. 140. 15 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

In vitro interferon (IFN) treatment of primary human upper airway basal cells has been shown to drive ACE2 expression, the receptor of SARS-CoV-2. The protease furin is also involved in mediating SARS-CoV-2 and other viral infections, although its association with early IFN response has not been evaluated yet. In order to assess the in vivo relationship between ACE2 and furin expression and the IFN response in nasopharyngeal cells, we first examined ACE2 and furin levels and their correlation with the well-known marker of IFNs' activation, ISG15, in children (n = 59) and adults (n = 48), during respiratory diseases not caused by SARS-CoV-2. A strong positive correlation was found between ACE2 expression, but not of furin, and ISG15 in all patients analyzed. In addition, type I and III IFN stimulation experiments were performed to examine the IFN-mediated activation of ACE2 isoforms (full-length and truncated) and furin in epithelial cell lines. Following all the IFNs treatments, only the truncated ACE2 levels, were upregulated significantly in the A549 and Calu3 cells, in particular by type I IFNs. If confirmed in vivo following IFNs' activation, the induction of the truncated ACE2 isoform only would not enhance the risk of SARS-CoV-2 infection in the respiratory tract.

Publication Type

Journal article.

<631>

Accession Number

20210082975

Author

Yin Yue; Chu XiaoTian; Han XinXin; Cao Yu; Di Hong; Zhang Yun; Zeng XueJun

Title

General practitioner trainees' career perspectives after COVID-19: a qualitative study in China.

Source

BMC Family Practice; 2021. 22(18):(11 January 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) has been a worldwide public health emergency that has put great pressure on medical workers and the medical system. General Practitioners (GPs) played an important role in controlling the epidemic, and GP trainees also took an active part in this approach. This study was to explore Chinese GP trainees' career perspectives after COVID-19. **Methods:** We conducted a qualitative research study which included 12 GP trainees from three teaching hospitals in China. Semi-

structured telephone interviews were conducted. Grounded theory and thematic analysis were used to code the data and identify categories and factors. Results: Eleven participants chose to continue a GP career after COVID-19, and nearly half of the participants strengthened their determination to dedicate themselves to this career. Only one participant decided to change the career choice because of interest in another specialty. Four main themes influencing GP trainees' perceptions of career development after COVID-19 emerged from the interviews: changes of GPs' work content in COVID-19, challenges of being a GP, psychological changes of the career, how to provide better primary care. Although some negative psychological changes existed, most of participants were inspired by role models and medical colleagues. They had more in-depth understanding of GPs' role and responsibility during COVID-19, and exhibited intentions for self-improvement in career development, especially in public health education and self-protection in preventing infectious diseases. In addition, the wide use of telemedicine provided a new work way for GP trainees. However, challenges, such as increased workloads, low income, lack of resources in primary medical institutions, and distrust of GPs are faced by trainees during the outbreak. Conclusions: Overall, no substantial changes were seen in the career choice of GP trainees after COVID-19 outbreak. However, they were inspired and had an in-depth understanding about the GP's work and responsibility during an epidemic. Owing to the challenges faced by the GPs, measures are needed to improve the GP education and work environment in the training phase.

Publication Type

Journal article.

<632>

Accession Number

20210082915

Author

Khoury, D. S.; Wheatley, A. K.; Ramuta, M. D.; Reynaldi, A.; Cromer, D.; Subbarao, K.; O'Connor, D. H.; Kent, S. J.; Davenport, M. P.

Title

Measuring immunity to SARS-CoV-2 infection: comparing assays and animal models.

Source

Nature Reviews Immunology; 2020. 20(12):727-738. 78 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

The rapid scale-up of research on coronavirus disease 2019 (COVID-19) has spawned a large number of potential vaccines and immunotherapies, accompanied by a commensurately large number of in vitro assays and in vivo models to measure their effectiveness. These assays broadly have the same end-goal - to predict the clinical efficacy of prophylactic and therapeutic interventions in humans. However, the apparent potency of different interventions can vary considerably between assays and animal models, leading to very different predictions of clinical efficacy. Complete harmonization of experimental methods may be intractable at the current pace of research. However, here we analyse a selection of existing assays for measuring antibody-mediated virus neutralization and animal models of infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and provide a framework for comparing results between studies and reconciling observed differences in the effects of interventions. Finally, we propose how we might optimize these assays for better comparison of results from in vitro and animal studies to accelerate progress.

Publication Type

Journal article.

<633>

Accession Number

20210082871

Author

Fawole, O. I.; Okedare, O. O.; Reed, E.

Title

Home was not a safe haven: women's experiences of intimate partner violence during the COVID-19 lockdown in Nigeria.

Source

BMC Women's Health; 2021. 21(32):(20 January 2021). 31 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background Emergency situations, including epidemics, increase incidence of violence against women, especially intimate partner violence (IPV). This paper describes specific scenarios of IPV reported by women during the COVID-19 pandemic in Nigeria to provide insight for policy and programmatic efforts. Methods This paper draws on seven de-identified case reports from organisations serving women experiencing IPV as well as media coverage of IPV cases in Nigeria, between April and May, 2020. Results In most cases,

reports identified IPV that was occurring prior to the lockdown, but increased in severity or involved new types of violence during the lockdown. The case scenarios included descriptions of many forms of IPV commonly reported, including physical, economic, psychological and sexual violence, often concurrently. Several women also reported threats of being thrown out of their homes by perpetrators, which threatens women's ability to protect themselves from exposure to COVID-19, but could also leave women stranded with no access to transportation, social services, or other resources during the lockdown. Several women also reported IPV that involved custody of children, as well as IPV that disrupted women's income generation. IPV was also reported in relation to economic stressors associated with the lockdown. Reports highlight how the lockdown disrupted women's social support, hindering accessibility of formal and informal sources of help. Conclusion The lockdowns in Nigeria may have inadvertently placed women already experiencing partner violence at risk for experiencing more severe violence, new challenges to cope with violent experiences, and other forms of violence, including violence that used the lockdown as a way to threaten women's security and ability to protect themselves from the virus. Hence, there is need for innovative approaches to support victims, with emphasis on ways in which perpetrators of IPV may be using the threat of COVID-19 to further gain power and control over partners.

Publication Type

Journal article.

<634>

Accession Number

20210082814

Author

Gupta, M. S.; Kumar, T. P.

Title

The potential of ODFS as carriers for drugs/vaccines against COVID-19.

Source

Drug Development and Industrial Pharmacy; 2021. 47(2):179-188. 134 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

COVID-19 has spread out its wings across the globe and is taking away many lives. Millions of people are (self) quarantined to prevent the spread of this viral disease. World Health Organization (WHO) has affirmed that there is not any medicine for COVID-19. Besides, there is also no single drug that is approved

by any regulatory agency for usage against this dangerous disease. Researchers across the globe are working tirelessly to fix an end to this virus and to save precious lives. While the research is in full swing, one is not sure whether they would come up with a chemical/herbal drug or a vaccine. Irrespective of the type of active ingredient for COVID-19, one needs to have a proper system to deliver the identified active ingredient to subjects/patients across the globe. Orodispersible films (ODFs) are excellent and attractive drug delivery carriers that have the potential to deliver drugs, herbal extracts, and vaccines. They are apt for patients who have a problem consuming traditional drug products such as tablets or capsules. The beauty of this dosage form is that it does not need water to consume by the subjects and can be readily administered to the tongue. The present review highlights the true potential of ODFs to act as a carrier for the delivery of various antiviral drugs/herbs/vaccines.

Publication Type

Journal article.

<635>

Accession Number

20210082719

Author

Milisavljevic, N.; Konkolova, E.; Kozak, J.; Hodek, J.; Veselovska, L.; Sykorova, V.; Cizek, K.; Pohl, R.; Eyer, L.; Svoboda, P.; Ruzek, D.; Weber, J.; Nencka, R.; Boura, E.; Hocek, M.

Title

Antiviral activity of 7-substituted 7-deazapurine ribonucleosides, monophosphate prodrugs, and triphosphates against emerging RNA viruses.

Source

ACS Infectious Diseases; 2021. 7(2):471-478.

Publisher

American Chemical Society

Location of Publisher

Washington

Country of Publication

USA

Abstract

A series of 7-deazaadenine ribonucleosides bearing alkyl, alkenyl, alkynyl, aryl, or hetaryl groups at position 7 as well as their 5'-O-triphosphates and two types of monophosphate prodrugs (phosphoramidates and S-acylthioethanol esters) were prepared and tested for antiviral activity against selected RNA viruses (Dengue, Zika, tick-borne encephalitis, West Nile, and SARS-CoV-2). The modified triphosphates inhibited the viral RNA-dependent RNA polymerases at micromolar concentrations through the incorporation of the modified nucleotide and stopping a further extension of the RNA chain. 7-

Deazaadenosine nucleosides bearing ethynyl or small hetaryl groups at position 7 showed (sub)micromolar antiviral activities but significant cytotoxicity, whereas the nucleosides bearing bulkier heterocycles were still active but less toxic. Unexpectedly, the monophosphate prodrugs were similarly or less active than the corresponding nucleosides in the in vitro antiviral assays, although the bis(S-acylthioethanol) prodrug 14h was transported to the Huh7 cells and efficiently released the nucleoside monophosphate.

Publication Type

Journal article.

<636>

Accession Number

20210082707

Author

Apinderpreet Singh; Pravin Salunke; Rajesh Chhabra; Sunil Sethi; Sahoo, S. K.; Madhivanan Karthigeyan; Chandrasekhar Gendle; Rakesh Kumar; Sunil Gupta

Title

The risk of spread of infection during craniotomy/craniostomy on patients with active coronavirus disease 2019 (COVID-19) infection: myth or fact?

Source

World Neurosurgery; 2021. 147:e272-e274. 10 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Objectives: Craniotomies/craniostomies have been categorized as aerosol-generating procedures and are presumed to spread coronavirus disease 2019 (COVID-19). However, the presence of severe acute respiratory distress syndrome coronavirus 2 virus in the generated bone dust has never been proved. Our objective is to evaluate the presence of virus in the bone dust (aerosol) generated during emergency neurosurgical procedures performed on patients with active COVID-19. This would determine the true risk of disease transmission during the surgery. **Methods:** Ten patients with active COVID-19 infection admitted to our institute in 1 month required emergency craniotomy/craniostomy. The bone dust and mucosal scrapings from paranasal sinuses (if opened) collected during these procedures were tested for the virus using reverse transcription polymerase chain reaction. The entire surgical team was observed for any symptoms related to COVID-19 for 14 days following surgery. **Results:** Nine patients had moderate viral load in their nasopharyngeal cavity, as detected on reverse transcription polymerase chain reaction. None

of the samples of bone dust from these 10 patients tested positive. Mucosal scrapping obtained in 1 patient in which mastoid air cells were inadvertently opened tested negative as well. No health workers from the operating room developed COVID-19-related symptoms. Conclusions: The bone dust generated during craniotomy/stomy of active patients does not contain the virus. The procedure on an active patient is unlikely to spread the disease. However, a study with larger cohort would be confirmatory.

Publication Type

Journal article.

<637>

Accession Number

20210082704

Author

Cheserem, J. B.; Esene, I. N.; Mahmud, M. R.; Kalangu, K.; Sanoussi, S.; Musara, A.; El-Ghandour, N. M. F.; Fieggen, G.; Qureshi, M.

Title

A continental survey on the impact of COVID-19 on neurosurgical training in Africa.

Source

World Neurosurgery; 2021. 147:e8-e15. 41 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Background: Containment measures for COVID-19 have affected surgical training globally. We sought to assess how neurosurgical training has been affected across Africa in April 2020. **Methods:** A cross-sectional survey was distributed to African Neurosurgical trainees seeking to review demographics and effects of COVID on training. **Results:** A total of 123 neurosurgery trainees responded from 23 African countries and a further 6 were abroad. A total of 91.80% were men, and 96.70% were training in public institutions. Only 41% had received training in COVID-19 with 61.79% worried that they would contract COVID-19 while performing their clinical duties. There was a marked reduction in clinical activities including a median reduction of elective surgery (-80%), clinics (-83%), and emergency surgery (-38.50%). A total of 23.58% of residents did not receive a formal salary, with 50% on less than \$1000 USD gross per month. **Conclusions:** This is the first continental survey of neurosurgery trainees in Africa. COVID-19 has significantly affected clinical and learning opportunities. There are concerns of the long-term effects on their training activities

for an uncertain period of time during this pandemic. Although there has been a global increase in e-learning, there is need to evaluate if this is accessible to all trainees.

Publication Type

Journal article.

<638>

Accession Number

20210082689

Author

Li XiaoLing; Lin HaoWen; Wang Qu; Cui Liao; Luo Hui; Luo LianXiang

Title

Chemical composition and pharmacological mechanism of Shenfu decoction in the treatment of novel coronavirus pneumonia (COVID-19).

Source

Drug Development and Industrial Pharmacy; 2020. 46(12):1947-1959. 37 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Purpose: Shenfu decoction has outstanding curative effects in the treatment of COVID-19. This study aimed to explore the material basis and molecular mechanism of Shenfu Decoction through network pharmacology and molecular mechanisms, to provide a research basis for clinical medication and clues for subsequent research. **Methods:** The active components and targets of Shenfu decoction were searched in the Traditional Chinese Medicine Systems Pharmacology Database and Analysis Platform (TCMSP), and the COVID-19-associated genes were collected using the Gene Cards platform. The target protein-protein interaction network map was constructed by mapping two genes, and the 'drug-active ingredient-target' network was constructed using Cytoscape software. The Gene Ontology (GO) function and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway enrichment of the mapping targets were analyzed. **Result:** Based on Traditional Chinese medicine, Shenfu Decoction can take effect in the lung, spleen, kidney and heart. Considering oral bioavailability (OB) 30% and drug-like (DL) 0.18 as the standard, 43 active compounds were screened and 114 Shenfu decoction action targets were collected. The key targets were CASP3, MAPK8, PTGS2, IL1B, PPARG, ICAM1, IFNG, RELA, NOS2, NOS3, HMOX1, CASP8, STAT1, and TGFB1. According to the standard of $p < .05$, GO function was enriched in 108 biological processes, 16 cell processes and 27 molecular processes. Sixty-three signaling pathways were enriched by KEGG, which can

be divided into four types: viral infection pathways, signal pathways, biological process pathways and different disease pathways. The comparison of negative and positive prescriptions further reflects the positive effect of Shenfu decoction against COVID-19. Finally, the effective ingredients with the high degree were molecular docked with Mpro, Rdrp and Spro proteins to further confirm the intervention effect of Shenfu Decoction on COVID-19. Conclusion: Shenfu decoction played an important role in regulating the anti-virus process, regulating immunity, inhibiting inflammation and regulating apoptosis through the interrelated regulation mechanism of multi-components and multi-targets, to treat patients with severe COVID-19.

Publication Type

Journal article.

<639>

Accession Number

20210082585

Author

Bigdeli, M.; Taheri, M.; Mohammadian, A.

Title

Spatial sensitivity analysis of COVID-19 infections concerning the satellite-based four air pollutants levels.

Source

International Journal of Environmental Science and Technology; 2021. 18(3):751-760. 48 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

The novel coronavirus (COVID-19), first reported in late December 2019, has affected the lives of many people throughout the world. Significant studies have been conducted on this pandemic, some of which have addressed understanding the relationship between different air pollutants and confirmed cases. In this study, the effects of four air pollutants (carbon monoxide, nitrogen dioxide, ozone, and sulfur dioxide) were assessed from February 19 to March 22, 2020 to explore how they can affect COVID-19 contagion in Iran. The mean concentrations of air pollutants were extracted from Sentinel 5P data. The COVID-19 confirmed case densities of two provinces, Semnan and Qom, were more than all other provinces. The effect of pollutants on the confirmed case densities was analyzed using multiple linear regression in order to estimate the impact coefficients for individual provinces. The impact coefficients determine the level of each pollutant's contribution to the density of total confirmed cases. Carbon monoxide, nitrogen dioxide,

sulfur dioxide, and ozone had both considerable negative and positive correlations with the density of confirmed COVID-19 cases, although sulfur dioxide was correlated more negatively than positively. In Semnan, a high hot spot province, nitrogen dioxide had the most significant effect on the density of confirmed cases among all pollutants, while the effect of carbon monoxide was greater in Qom. The results indicated that even short-term exposure to higher concentrations of the pollutants could lead to an increased risk of COVID-19 outbreaks, which should be considered in adopting adequate and appropriate control policies to manage the disease.

Publication Type

Journal article.

<640>

Accession Number

20210082494

Author

O'Brien, M. M. C.; McLoughlin, J. M.; Mulkerrin, E. C.

Title

Opportunistic diagnosis of extensive pulmonary embolus following "COVID-19 blood battery" in very frail older patients.

Source

Journal of Nutrition, Health & Aging; 2020. 24(10):1116-1119. 20 ref.

Publisher

Springer

Location of Publisher

Paris

Country of Publication

France

Abstract

D-dimer is routinely measured to exclude the diagnosis of venous thromboembolism and is its main biomarker. Appropriate age-adjusted D-dimer testing improves D-dimer specificity, could decrease inappropriate CT pulmonary angiograms in the older person, and prevent unnecessary radiation exposure. A "COVID-19 blood battery", designed to increase the efficiency of evaluation of COVID-19 suspected patients is used in our institution. It includes D-dimers which are elevated in COVID-19 infections and potentially an index of severe infection. These 3 very frail patients presented late to the emergency department, all acutely and non-specifically unwell, with high prevalence of comorbidities and were transferred in by ambulance. They were triaged to the COVID-19 pathway of our hospital, and subsequently had negative COVID-19 swabs. All had an incidental finding of markedly elevated D-dimers, with potential causes of their symptoms other than pulmonary embolus. They were transferred to an acute geriatric ward

specifically designated to manage older patients (> 75 years) who had negative nasopharyngeal swab results. They were all ultimately diagnosed with extensive pulmonary emboli with evidence of raised pulmonary pressures on CTPA and/or echocardiogram. It is possible that these patients had false negative COVID-19 swabs. Allowing for the novel nature of COVID-19, prospective evaluation for new symptoms and complications such as thromboembolic disease in those affected by milder symptoms should be considered. In the absence of clinical improvement following treatment of other conditions in frail older patients, D-dimer testing could be indicated with pursuit of specific diagnostic evaluation for venous thromboembolism when significantly elevated.

Publication Type

Journal article.

<641>

Accession Number

20210082406

Author

Zhu Fan

Title

Frozen steamed breads and boiled noodles: quality affected by ingredients and processing.

Source

Food Chemistry; 2021. 349.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Chinese steamed breads (CSB) and noodles are staple foods for many people. The production of frozen steamed products and boiled noodles has kept increasing. This is due to the increasing demand of ready-to-eat frozen food products from the market. Frozen storage significantly increases the self-life of the products and reduces the production costs. On the other hand, the freezing and frozen storage lead to quality loss of the frozen products. This review summarizes effects of freezing and frozen storage on diverse quality attributes (e.g., structural and textural properties) of frozen northern-type steamed breads and boiled noodles. Food safety of the frozen products related to the COVID-19 pandemic is discussed. To counteract the quality loss of the frozen products, suitable processing methods, selection of basic ingredients and uses of various food additives can be done. Research gaps to improve the textural, cooking and nutritional quality of frozen CSB and noodles are suggested.

Publication Type

Journal article.

<642>

Accession Number

20210082069

Author

Rajyalakshmi, B.; Srinivas Samavedam; Reddy, P. R.; Narmada Aluru

Title

Prognostic value of "cycle threshold" in COVID-19-confirmed patients.

Source

Indian Journal of Critical Care Medicine; 2021. 25(3):322-326. 15 ref.

Publisher

Jaypee Brothers Medical Publishers Pvt. Ltd.

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Objective: To study the correlation between the cycle threshold (CT) of reverse transcription-polymerase chain reaction (RT-PCR) test in confirmed COVID-19 patients and the severity of disease. **Background:** RT-PCR test is a standard method for the diagnosis of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infections. This test is based upon the amplification of the fluorescent signal. The number of cycles that the fluorescent signal undergoes to reach the threshold is called "cycle threshold." It is inversely related to the nucleic acid content of the sample. **Patients and methods:** This is a single-centered, retrospective observational study. We have included a total of 192 patients. SARS-CoV-2 infection was confirmed by the RT-PCR test. Entire data have been collected from the electronic medical records. The primary outcome was 28-day mortality, whereas the secondary outcomes were intensive care unit (ICU) admission, invasive ventilation, acute kidney injury, renal replacement therapy, shock, and COVID-19 reporting and data system (CO-RADS) score on high-resolution computed tomography of the chest, total length of stay in the hospital, and the number of ICU days and ventilator days. **Results:** We have calculated the mean CT value for all groups and calculated the p-value for statistical significance. For the total length of stay in the hospital and the number of ICU days and ventilator days, we applied the Pearson correlation coefficient. The p-value was statistically significant for mortality, ICU admission, and shock groups. The CT values and the length of ICU stay were inversely correlated with the statistically significant p-value. **Conclusion:** Low CT value is associated with increased ICU admission, high mortality, shock, and increased length of ICU stay.

Publication Type

Journal article.

<643>

Accession Number

20210082068

Author

Verma, C. V.; Arora, R. D.; Mistry, H. M.; Kubal, S. V.; Kolwankar, N. S.; Patil, P. C.; Dalvi, A. A.; Vichare, S. A.; Akhila Natesan; Mangaonkar, A. N.; Kanakia, D. D.; Jere, G. S.; Bansode, K. Y.; Patil, M. R.; Sheth, R. D.; Dudhavade, S. D.; Mhatre, S. D.; Patel, S. K.; Mohite, A. G.; Bhavsar, A. N.; Alfonso, J. E.; Syed, M. N. A.; Savla, N. P.; Rajgond, R. N.; Bute, R. A.; Mane, S. M.; Jaiswal, S. R.; Parab, V. A.; Kasbe, A. M.; Joshi, M. A.; Bharmal, R. N.

Title

Changes in mode of oxygen delivery and physiological parameters with physiotherapy in COVID-19 patients: a retrospective study.

Source

Indian Journal of Critical Care Medicine; 2021. 25(3):317-321. 21 ref.

Publisher

Jaypee Brothers Medical Publishers Pvt. Ltd.

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Background: Coronavirus disease (COVID-19) is an infectious disease caused by SARS-CoV-2, clinically presenting with common symptoms of fever, dry cough, and breathlessness within 14 days of exposure. Its severity ranges from mild to severe, latter manifesting into severe acute respiratory syndrome. As a part of multidisciplinary team, physiotherapy along with medical management was administered to patients with COVID-19 in an acute care setup. This retrospective study aims to explore various patient characteristics and will aid in identifying the impairments associated with the disease, giving a direction to the physiotherapy community in planning future management strategy to improve quality of life. Patients and methods: The present study is a unicentric study wherein prospective analysis of retrospective data of patients referred for physiotherapy from May 13 to July 31, 2020, was performed. (i) Characteristics of patients, (ii) associated comorbidities, (iii) hospital course since the time of admission to discharge, (iv) mode of oxygen delivery, (v) pre- and post-physiotherapy treatment values of oxygen saturation and heart rate, and (vi) physiotherapy treatment were recorded. The archived data were analyzed using the commercially available SPSS software version 24. Wilcoxon's matched pair test was used to compare pre- and post-treatment oxygen saturation and heart rate, and McNemar's test was used to compare mode of

oxygen delivery and pre- and post-physiotherapy treatment. Results: Descriptive analysis of data showed a better outcome in terms of grade of dyspnea and rate of discharge on day 14 of physiotherapy treatment. Hence, a comparative analysis of day 1 and day 14 was performed for mode of oxygen delivery, oxygen saturation, and heart rate. A statistically significant improvement was observed in the heart rate ($p=0.001$) and oxygen delivery ($p=0.000$). However, no significant difference in the level of oxygen saturation was found ($p=0.6433$). Conclusions: Physiotherapy treatment in conjunction with medical treatment can be effectively administered in patients with COVID-19 in acute care setup taking into consideration the health status and the hemodynamic stability of the patients. It emphasizes the role of physiotherapy in the alleviation of symptoms, facilitating early weaning and recovery enabling early discharge from the hospital.

Publication Type

Journal article.

<644>

Accession Number

20210081840

Author

Reid, A.; Ronda-Perez, E.; Schenker, M. B.

Title

Migrant workers, essential work, and COVID-19.

Source

American Journal of Industrial Medicine; 2020. 64(2):73-77. 49 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Globally, migrant and immigrant workers have borne the brunt of the COVID-19 pandemic as essential workers. They might be a Bulgarian worker at a meat processing plant in Germany, a Central American farmworker in the fields of California, or a Filipino worker at an aged-care facility in Australia. What they have in common is they are all essential workers who have worked throughout the coronavirus pandemic and have been infected with coronavirus at work. COVID-19 has highlighted the inequitable working conditions of these workers. In many instances, they are employed precariously, and so are ineligible for sick leave or social security, or COVID-19 special payments. If these are essential workers, they should get at least the same health and safety benefits of all nonessential workers. Improving the working and living conditions of migrant workers can and should be a positive outcome of the coronavirus pandemic.

Publication Type

Journal article.

<645>

Accession Number

20210081818

Author

Xu Xin; Huang Tian; Zhang YunJing; Yang ShiBiao; Xiao Yan; Zhao WenHua; Deng JunHua; Huang BaiCheng; Tian KeGong

Title

Analysis of s gene and protein structure difference between porcine coronavirus and SARS-CoV-2.
[Chinese]

Source

Zhongguo Yufang Shouyi Xuebao / Chinese Journal of Preventive Veterinary Medicine; 2021. 43(1):83-87.

Publisher

Chinese Journal of Preventive Veterinary Medicine

Location of Publisher

Harbin

Country of Publication

China

Abstract

The pandemic of COVID-19 (Corona virus disease 2019) caused by severe acute respiratory syndrome coronavirus 2(SARS-CoV-2) poses a huge threat to human health worldwide since December 2019. In order to study the correlation between SARS-CoV-2 and porcine coronavirus, the phylogenetic analysis of spike (S) protein amino acid sequence of human coronavirus and porcine coronavirus, the similarity analysis of the spatial structure of S1 subunit receptor binding domain (RBD) of S protein were conducted by bioinformatics analysis, moreover, the double- antigen sandwich ELISA kit was utilized to detect the SARS-CoV-2 antibody in common porcine coronavirus positive serum. The results of phylogenetic analysis showed a low identity of S protein amino acid sequence between SARS-CoV-2 and porcine coronavirus, indicating a long distance of genetic evolution, and the S1 subunit RBD spatial structure showed huge differences, meanwhile, all of the porcine coronavirus positive serum samples tested were negative of SARS-CoV-2 antibody. Our data suggested the huge differences in gene and protein level between SARS-CoV-2 and porcine coronavirus, which indicating that SARS-CoV-2 shows a minimal risk of achieving cross-species transmission by infecting pigs to threaten public health security. This research provides a basis for studying COVID-19 pathogen traceability and biosafety analysis of cross-species transmission.

Publication Type

Journal article.

<646>

Accession Number

20210081677

Title

When the future is now.

Source

Veterinary Record; 2020. 187(Suppl. 1):1-1.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Overnight, the Covid-19 pandemic brought a need to use technology with which vets might not previously have grappled - most notably telemedicine. Here Daniella Dos Santos, president of the BVA throughout the first national lockdown, reflects on leading the profession through a sudden acceleration towards the future and questions what might come next.

Publication Type

Journal article.

<647>

Accession Number

20210081662

Author

Sandip Saha; Sherpa, P. L.; Nilanjana Ghosh; Biplab Mandal

Title

Precautionary behaviour for COVID-19 among general population in hills, West Bengal, India : a pilot study.

Source

Journal of the Indian Medical Association; 2021. 119(2):22-25. 17 ref.

Publisher

Indian Medical Association (IMA)

Location of Publisher

Kolkata

Country of Publication

India

Abstract

Background : Precautionary behaviour is important for prevention of disease spread. Preparedness for pandemic requires understanding and monitoring of disease-related perceptions and psychological responses in the general public and can be assessed by Health Behavioural Model (HBM). Objectives : This study aims to assess the COVID-19 related precautionary behaviour among population in hills of West Bengal, India conforming to the health belief models. Methods: A descriptive cross-sectional study was conducted among 351 participants with purposive sampling. The questions were formed in simple way to make it easier for the general population to understand and answer respectively. Based on Health Belief Model with its 6 constructs answers were rated on 5-point Likert scale with 5 being highest score and 1 the lowest. Data was analysed using principles of descriptive and inferential statistics. Result: Majority of subjects were educated and males. Risk perception and vaccination intent was high. Majority study subjects agreed that perceived severity and susceptibility was high and disagree that perceived benefits were high. Majority stated that they were not sure how they will respond to others in times of need. Interpretation and Conclusion: Study concludes that risk perception is high and perceived preventive behaviours were higher among majority of subjects. However, a larger study is recommended.

Publication Type

Journal article.

<648>

Accession Number

20210081645

Author

Stewart, T.; Lambourne, J.; Thorp-Jones, D.; Thomas, D. W.

Title

Implementation of early management of iron deficiency in pregnancy during the SARS-CoV-2 pandemic.

Source

European Journal of Obstetrics & Gynecology and Reproductive Biology; 2021. 258:60-62. 11 ref.

Publisher

Elsevier Ireland

Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

Iron deficiency is the commonest cause for anaemia worldwide making it a formidable issue particularly during pregnancy because of increased iron demands. This study looked at establishing a lower limit of normal for haemoglobin concentration (Hb) in our population and to proactively address potentially symptomatic iron deficiency during the current SARS-CoV-2 pandemic. The lower limit of normal for Hb in our 1715 first trimester pregnancy cohort was 116 g/L. This is in contrast with guidance suggesting Hb levels down to 110 g/L are normal. In addition there was evidence of limited testing performed to look for iron deficiency with only 18% having a serum ferritin checked. Most anaemia was normocytic suggesting that microcytosis is only a late marker of iron deficiency lacking sensitivity. A strategy to avoid hospital contact during the COVID-19 pandemic is proposed.

Publication Type

Journal article.

<649>

Accession Number

20210081624

Author

Cedillo-Alvarez, C.; Gallardo-Ortiz, I. A.; Lopez, L. T.; Montes, S.; Paez-Martinez, N.

Title

COVID-19: a basic approach to understanding potential treatments. [Spanish]

Source

Gaceta Medica de Mexico; 2020. 156(6):580-585. 47 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

SARS-CoV-2 virus has been identified as the causative agent of the COVID-19 pandemic. Even when no standard treatment is available, antivirals such as remdesivir and other drugs such as chloroquine and ivermectin, which interfere with viral replication, have been assayed. Some strategies aimed to reduce immune mechanisms, such as the use of tocilizumab and natural antioxidants, have also been tested. The use of drugs related to the renin-angiotensin system has been controversial. Pathogenicity mechanisms, as well as controlled treatments, still have to be studied in detail in order to propose a viable therapeutic option that prevents the entry and replication of the virus or enhances the host immune system.

Publication Type

Journal article.

<650>

Accession Number

20210081477

Author

Panfili, F. M.; Roversi, M.; D'Argenio, P.; Rossi, P.; Cappa, M.; Fintini, D.

Title

Possible role of vitamin D in COVID-19 infection in pediatric population.

Source

Journal of Endocrinological Investigation; 2021. 44(1):27-35. 70 ref.

Publisher

Springer International Publishing AG

Location of Publisher

Cham

Country of Publication

Switzerland

Abstract

Purpose: Covid-19 is a pandemic of unprecedented proportion, whose understanding and management is still under way. In the emergency setting new or available therapies to contrast the spread of COVID-19 are urgently needed. Elderly males, especially those affected by previous diseases or with comorbidities, are more prone to develop interstitial pneumonia that can deteriorate evolving to ARDS (acute respiratory distress syndrome) that require hospitalization in Intensive Care Units (ICUs). Even children and young patients are not spared by SARS-CoV 2 infection, yet they seem to develop a milder form of disease. In this

setting the immunomodulatory role of Vitamin D, should be further investigated. Methods: We reviewed the literature about the immunomodulatory role of Vitamin D collecting data from the databases Medline and Embase. Results: Vitamin D proved to interact both with the innate immune system, by activating Toll-like receptors (TLRs) or increasing the levels of cathelicidins and beta-defensins, and adaptive immune system, by reducing immunoglobulin secretion by plasma cells and pro-inflammatory cytokines production, thus modulating T cells function. Promising results have been extensively described as regards the supplementation of vitamin D in respiratory tract infections, autoimmune diseases and even pulmonary fibrosis. Conclusions: In this review, we suggest that vitamin D supplementation might play a role in the prevention and/or treatment to SARS-CoV-2 infection disease, by modulating the immune response to the virus both in the adult and pediatric population.

Publication Type

Journal article.

<651>

Accession Number

20210081291

Author

Prejit Nambiar

Title

India to envision One Health movement for confronting emerging health threats: from concept to approach toward institutionalization.

Source

International Journal of One Health; 2020. 6(2):165-176. 59 ref.

Publisher

Veterinary World

Location of Publisher

Wankaner

Country of Publication

India

Abstract

The author's key role in advocating and leading One Health (OH) initiatives in India (especially in Kerala), review the need for and progress of OH from concept to approach and proposes its institutionalization as the way forward. India is currently facing many health threats such as antimicrobial resistance, environmental health hazards, and food safety risks and most importantly, zoonotic diseases such as Nipah, Avian Influenza, Scrub typhus, Congo fever, Kyasanur forest disease, COVID-19, and leptospirosis that grossly impact country's economy. The recent pandemics had exposed the gaps in public health policy and government is prepared to commit on the OH approach and to invest more on public health infrastructure.

Further, as challenges have increased in recent years, OH approach was clearly advocated by the experts not only to cope up the pandemic but also to manage the infodemic by promoting the timely dissemination of accurate information. Right from the endorsement of OH in 2007 by India's Prime minister to the present fight against COVID-19 pandemic, the actions to control and manage the disease was ideally oriented toward a collaborative approach. Last year (2019), the representatives from relevant ministries and department had a ground-breaking dialog to develop charter and constitute a National policy on OH. Recently, Health Ministers of the Member States of the World Health Organization South-East Asia signed "Delhi declaration" where the key essence was to implement intersectoral coordination mechanisms following the "OH" approach. India's future policy intervention will emphasize on strengthening of integrated public health labs and contributing to building a national institutional platform for OH to boost research initiatives. Taking stock of OH happenings, resources, challenges, and priorities, the implementation strategy has been proposed across human, animal and environmental health. The article further highlights the key areas that need OH intervention in India, the country's progress in OH and the success stories of OH for a sustainable action to confront emerging health threats.

Publication Type

Journal article.

<652>

Accession Number

20210081231

Author

Mohd Helmi Ali; Norhidayah Suleiman; Norlin Khalid; Tan KimHua; Tseng MingLang; Mukesh Kumar

Title

Supply chain resilience reactive strategies for food SMEs in coping to COVID-19 crisis.

Source

Trends in Food Science & Technology; 2021. 109:94-102.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The ability of small- and medium-sized enterprises in the food industry (FSMEs) in cultivating resilience against the COVID-19 pandemic is vital food security. However, there is limited supply chain resilience literature to guide FSMEs in overcoming disruptions caused by pandemic. **Scope and approach:** This review aims to provide a broad view of SCRes reactive strategies for FSMEs in dealing with crises in the

context of COVID-19. Attention is given to the literature on resilience in other types of supply chain and situated in the context of food settings. The factors are monitored or controlled to contribute to FSME resiliency. Key findings and conclusion: Four quadrants, i.e., (1) rapid with low cost, (2) rapid with high cost, (3) slow with low cost and (4) slow with high cost, are offered based on the limitations and the time needed to react, and the strategies of each quadrant are explained in depth. This review also provides a better understanding of and guidance on reactive strategies for SCRes as options for FSMEs in dealing with the COVID-19 pandemic. This review suggests future directions as extensions based on the logical flow of this review.

Publication Type

Journal article.

<653>

Accession Number

20210081226

Author

Han SangHa; Roy, P. K.; Hossain, M. I.; Byun KyeHwan; Choi ChangSun; Ha SangDo

Title

COVID-19 pandemic crisis and food safety: implications and inactivation strategies.

Source

Trends in Food Science & Technology; 2021. 109:25-36. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic that emerged in 2019 has imposed huge consequences, including economic losses and threats to human health, which are still affecting many aspects throughout the world. **Scope and approach:** This review provides an overview of SARS-CoV-2 infection, the cause of COVID-19, and explores its impact on the food supply system and food safety. This review examines the potential risk of transmission through food and environmental surfaces before discussing an effective inactivation strategy to control the COVID-19 pandemic in the aspect of food safety. This article also suggests effective food safety management post-COVID-19. **Key findings and conclusions:** Respiratory viruses including SARS-CoV-2 are responsible for huge impacts on the global economy and human health. Although food and water are not currently considered priority transmission routes of SARS-CoV-2, infection through contaminated food and environmental surfaces where the virus can persist for several days cannot be ignored, particularly

when the surrounding environment is unhygienic. This approach could help determine the exact transmission route of SARS-CoV-2 and prepare for the post-COVID-19 era in the food safety sector.

Publication Type

Journal article.

<654>

Accession Number

20210081131

Author

Semerci, R.; Kudubes, A. A.; Esref, F. C.

Title

Assessment of Turkish oncology nurses' knowledge regarding COVID-19 during the current outbreak in Turkey.

Source

Supportive Care in Cancer; 2021. 29(4):1999-2006. 27 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

Purpose: To assess Turkish oncology nurses' knowledge regarding novel coronavirus (COVID-19) during the current outbreak in Turkey. **Methods:** This descriptive study was carried out with the 185 oncology nurses between April and May 2020 in Turkey. Research data were collected through online survey using "Nurse Information Form" and "Nurse Information Scale for COVID-19." Multilinear regression analysis was used in determining the factors affecting oncology nurses' information regarding COVID-19. **Results:** According to the data delivered from 185 oncology nurses, 57.7% of the participants had an undergraduate degree, 74.1% were working in adult oncology units, and 52.4% of them were working as clinical nurses, 48.1% of the nurses received education for COVID-19 (51.9% did not receive) and 70.3% followed and read the COVID-19 Guidelines published by the Ministry of Health (29.7% did not follow guidelines). Using multiple regression analysis, a model based on the relationship between the variables was created. In the model, the descriptive characteristics of the oncology nurses and their experiences of COVID-19 were found to explain 29.1% of their knowledge level for COVID-19. Nurses' education level, the presence of a relative diagnosed with COVID-19, and following the COVID-19 guidelines were found to statistically significantly affect the knowledge levels of COVID-19. **Conclusion:** These findings suggest that hospital management and

the Ministry of Health should provide more information for the oncology nurses to better control of cancer patients from the infectious disease.

Publication Type

Journal article.

<655>

Accession Number

20210081109

Author

Mendy, A.; Wu Xiao; Keller, J. L.; Fassler, C. S.; Apewokin, S.; Mersha, T. B.; Xie ChangChun; Pinney, S. M.

Title

Long-term exposure to fine particulate matter and hospitalization in COVID-19 patients.

Source

Respiratory Medicine; 2021. 178. 9 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Ecological evidence suggests that exposure to air pollution affects coronavirus disease 2019 (COVID-19) outcomes. However, no individual-level study has confirmed the association to date. Methods: We identified COVID-19 patients diagnosed at the University of Cincinnati hospitals and clinics and estimated particulate matter 2.5 m (PM2.5) exposure over a 10-year period (2008-2017) at their residential zip codes. We used logistic regression to evaluate the association between PM2.5 exposure and hospitalizations for COVID-19, adjusting for socioeconomic characteristics and comorbidities. Results: Among the 1128 patients included in our study, the mean (standard deviation) PM2.5 was 11.34 (0.70) g/m³ for the 10-year average exposure and 13.83 (1.03) g/m³ for the 10-year maximal exposures. The association between long-term PM2.5 exposure and hospitalization for COVID-19 was contingent upon having pre-existing asthma or chronic obstructive pulmonary (COPD) (Pinteraction = 0.030 for average PM2.5 and Pinteraction = 0.001 for maximal PM2.5). In COVID-19 patients with asthma or COPD, the odds of hospitalization were 62% higher with 1 g/m³ increment in 10-year average PM2.5 (odds ratio [OR]: 1.62, 95% confidence interval [CI]: 1.00-2.64) and 65% higher with 1 g/m³ increase in 10-year maximal PM2.5 levels (OR: 1.65, 95% CI: 1.16-2.35). However, among COVID-19 patients without asthma or COPD, PM2.5 exposure was not associated with higher hospitalizations (OR: 0.84, 95% CI: 0.65-1.09 for average PM2.5

and OR: 0.78, 95% CI: 0.65-0.95 for maximal PM2.5). Conclusions: Long-term exposure to PM2.5 is associated with higher odds of hospitalization in COVID-19 patients with pre-existing asthma or COPD.

Publication Type

Journal article.

<656>

Accession Number

20210081083

Author

Chaziya, J.; Freyne, B.; Lissauer, S.; Nielsen, M.; Langton, J.; O'Hare, B.; Molyneux, L.; Moxon, C.; Tam, P. Y. I.; Hoskyns, L.; Masanjala, H.; Ilepere, S.; Ngwira, M.; Kawaza, K.; Mumba, D.; Chimalizeni, Y.; Dube, Q.

Title

COVID-19 in Malawi: lessons in pandemic preparedness from a tertiary children's hospital.

Source

Archives of Disease in Childhood; 2021. 106(3):238-240. 10 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

This article established a multidisciplinary COVID-19 task force to work with hospital, district and national leaders in the coordination of activities aimed at mitigating the direct and indirect risks of the COVID-19 pandemic on staff and paediatric patients, as well as reflecting on the initial lessons in pandemic preparedness in the Department of Paediatrics at QECH. Despite the mild direct effects of COVID-19 on children at QECH, the risk of service disruption and indirect effects on child health remain. To date, the study has documented a significant drop in both ED and outpatient department attendances. There was a simultaneous rise in the number of children who were pronounced dead on arrival to hospital and a spike of admissions to the 'One Stop' family centre for sexual assault at the time of school closures. These research methods require few resources outside of the team and are supported by online tools including the WHO Tropical disease research implementation toolkit and the Medecin sans Frontiers/UNION SORT-IT toolkit for operational research. Embedding operational and implementation research into the departmental response provides training opportunities, fosters team spirit and promotes sustainability.

Publication Type

Journal article.

<657>

Accession Number

20210080093

Author

Jang MinSu; Park RackHyun; Park YealIn; Cha YeoEun; Yamamoto, A.; Lee, J. I.; Park JunSoo

Title

EGCG, a green tea polyphenol, inhibits human coronavirus replication in vitro.

Source

Biochemical and Biophysical Research Communications; 2021. 547:23-28. 17 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

COVID-19 pandemic results in record high deaths in many countries. Although a vaccine for SARS-CoV-2 is now available, effective antiviral drugs to treat coronavirus diseases are not available yet. Recently, EGCG, a green tea polyphenol, was reported to inhibit SARS-CoV-2 3CL-protease, however the effect of EGCG on coronavirus replication is unknown. In this report, human coronavirus HCoV-OC43 (beta coronavirus) and HCoV-229E (alpha coronavirus) were used to examine the effect of EGCG on coronavirus. EGCG treatment decreases 3CL-protease activity of HCoV-OC43 and HCoV-229E. Moreover, EGCG treatment decreased HCoV-OC43-induced cytotoxicity. Finally, we found that EGCG treatment decreased the levels of coronavirus RNA and protein in infected cell media. These results indicate that EGCG inhibits coronavirus replication.

Publication Type

Journal article.

<658>

Accession Number

20210080087

Author

Duarte, C.; Akkaoui, J.; Ho, A.; Garcia, C.; Yamada, C.; Movila, A.

Title

Age-dependent effects of the recombinant spike protein/SARS-CoV-2 on the M-CSF- and IL-34-differentiated macrophages in vitro.

Source

Biochemical and Biophysical Research Communications; 2021. 546:97-102. 27 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The SARS-CoV-2 virus causes elevated production of senescence-associated secretory phenotype (SASP) markers by macrophages. SARS-CoV-2 enters macrophages through its Spike-protein aided by cathepsin (Cat) B and L, which also mediate SASP production. Since M-CSF and IL-34 control macrophage differentiation, we investigated the age-dependent effects of the Spike-protein on SASP-related pro-inflammatory-cytokines and nuclear-senescence-regulatory-factors, and CatB, L and K, in mouse M-CSF- and IL-34-differentiated macrophages. The Spike-protein upregulated SASP expression in young and aged male M-CSF-macrophages. In contrast, only young and aged male IL-34-macrophages demonstrated significantly reduced pro-inflammatory cytokine expression in response to the Spike-protein in vitro. Furthermore, the S-protein elevated CatB expression in young male M-CSF-macrophages and young female IL-34-macrophages, whereas CatL was overexpressed in young male IL-34- and old male M-CSF-macrophages. Surprisingly, the S-protein increased CatK activity in young and aged male M-CSF-macrophages, indicating that CatK may be also involved in the COVID-19 pathology. Altogether, we demonstrated the age- and sex-dependent effects of the Spike-protein on M-CSF and IL-34-macrophages using a novel in vitro mouse model of SARS-CoV-2/COVID-19.

Publication Type

Journal article.

<659>

Accession Number

20210079991

Author

Intawong, K.; Olson, D.; Chariyalertsak, S.

Title

Application technology to fight the COVID-19 pandemic: lessons learned in Thailand. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:231-237. 15 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Demands to address the COVID-19 pandemic rapidly surpassed global resources. Successful implementation of application technology resulting in people taking greater control of their own health and medical and public health personnel improving efficiency was requested by authorities in Thailand to reduce the demand on health resources to meet the health needs of the people. This paper examines the creation and implementation of three real-time application technologies using a bottom-up approach in an attempt to examine COVID-19 challenges and highlight control measures. These lessons learned represent participatory action research methods involving the people who were responsible for taking actions to improve their own and their communities' health. The objective was to build participation of users, academics and service organizations in a novel technology enhanced system leading to quality management of the COVID-19 pandemic. A new technology enhanced system for medical field personnel encouraged network participation resulting in co-creation of a health data center. Application technology assisted COVID-19 infected patients and high-risk people to identify their own symptoms and to provide a rapid tracking method that could be employed until public health surveillance was achieved. A patient and hospital management system employing new application technology was effective in monitoring COVID-19 patients utilizing an interconnected hospital network. Application technology was beneficial in promoting health, enhancing patient satisfaction, reducing readmission rates and extending health resources.

Publication Type

Journal article.

<660>

Accession Number

20210079980

Author

Carafoli, E.

Title

Chloroquine and hydroxychloroquine in the prophylaxis and therapy of COVID-19 infection. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:156-162.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

At the end of last century a prominent biochemist once opened the discussion of a controversial issue in the field of Bioenergetics with the following statement: "This is a long story, that shouldn't be long, but it will take a long time to make it short". As it happens, such a statement would apply perfectly well to the story of chloroquine (CQ) and hydroxychloroquine (HCQ) in the COVID-19 infection: it has become a veritable saga, with conflicting views that have often gone beyond the normal scientific dialectic, and with conclusions that have frequently been polluted by non scientific opinions: thus, for instance, when National Agencies have taken positions against CQ and HCQ, the move has been seen as a pro-vaccine attempt to block low cost therapy means. And it is difficult to avoid the feeling that the opposition to CQ and HCQ has in large measure been shaped not by scientific arguments, but by the fact that their use has been strongly endorsed by National leaders whose popularity among Western intellectuals is extremely low. The role of the two drugs in the COVID-19 infection thus deserves an objective analysis solely based on scientific facts. This contribution will attempt to produce it.

Publication Type

Journal article.

<661>

Accession Number

20210079967

Author

Li DaoQun; Luan JunWen; Zhang LeiLiang

Title

Molecular docking of potential SARS-CoV-2 papain-like protease inhibitors. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:72-79. 29 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

SARS-CoV-2 papain-like protease is considered as an important potential target for anti-SARS-CoV-2 drug discovery due to its crucial roles in viral spread and innate immunity. Here, we have utilized an in silico molecular docking approach to identify the possible inhibitors of the SARS-CoV-2 papain-like protease, by screening 21 antiviral, antifungal and anticancer compounds. Among them, Neobavaisoflavone has the highest binding energy for SARS-CoV-2 papain-like protease. These molecules could bind near the SARS-CoV-2 papain-like protease crucial catalytic triad, ubiquitination and ISGylation residues: Trp106, Asn109, Cys111, Met208, Lys232, Pro247, Tyr268, Gln269, His272, Asp286 and Thr301. Because blocking the papain-like protease is an important strategy in fighting against viruses, these compounds might be promising candidates for therapeutic intervention against COVID-19.

Publication Type

Journal article.

<662>

Accession Number

20210079946

Author

Shang Chao; Zhuang XinYu; Zhang He; Li YiQuan; Zhu YiLong; Lu Jing; Ge ChenChen; Cong JianAn; Li TingYu; Tian MingYao; Jin NingYi; Li Xiao

Title

Inhibitors of endosomal acidification suppress SARS-CoV-2 replication and relieve viral pneumonia in haCE2 transgenic mice.

Source

Virology Journal; 2021. 18(46):(27 February 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

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London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) is caused by SARS-CoV-2 and broke out as a global pandemic in late 2019. The acidic pH environment of endosomes is believed to be essential for SARS-CoV-2 to be able to enter cells and begin replication. However, the clinical use of endosomal acidification inhibitors, typically chloroquine, has been controversial with this respect. Methods: In this study, RT-qPCR method was used to detect the SARS-CoV-2N gene to evaluate viral replication. The CCK-8 assay was also used to evaluate the cytotoxic effect of SARS-CoV-2. In situ hybridization was used to examine the distribution of the SARS-CoV-2 gene in lung tissues. Hematoxylin and eosin staining was also used to evaluate virus-associated pathological changes in lung tissues. Results: In this study, analysis showed that endosomal acidification inhibitors, including chloroquine, bafilomycin A1 and NH₄CL, significantly reduced the viral yields of SARS-CoV-2 in Vero E6, Huh-7 and 293T-ACE2 cells. Chloroquine and bafilomycin A1 also improved the viability and proliferation of Vero E6 cells after SARS-CoV-2 infection. Moreover, in the hACE2 transgenic mice model of SARS-CoV-2 infection, chloroquine and bafilomycin A1 reduced viral replication in lung tissues and alleviated viral pneumonia with reduced inflammatory exudation and infiltration in peribronchiolar and perivascular tissues, as well as improved structures of alveolar septum and pulmonary alveoli. Conclusions: Our research investigated the antiviral effects of endosomal acidification inhibitors against SARS-CoV-2 in several infection models and provides an experimental basis for further mechanistic studies and drug development.

Publication Type

Journal article.

<663>

Accession Number

20210079170

Author

Plepys, C. M.; Krasna, H.; Leider, J. P.; Burke, E. M.; Blakely, C. H.; Magana, L.

Title

First-destination outcomes for 2015-2018 public health graduates: focus on employment.

Source

American Journal of Public Health; 2021. 111(3):475-484. 35 ref.

Publisher

American Public Health Association

Location of Publisher

Washington

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Country of Publication

USA

Abstract

Objectives: To improve understanding of the future public health workforce by analyzing first-destination employment outcomes of public health graduates. **Methods:** We assessed graduate outcomes for those graduating in 2015-2018 using descriptive statistics and the Pearson X2 test. **Results:** In our analysis of data on 53 463 graduates, we found that 73% were employed; 15% enrolled in further education; 5% entered a fellowship, internship, residency, volunteer, or service program; and 6% were not employed. Employed graduates went to work in health care (27%), corporations (24%), academia (19%), government (17%), nonprofit (12%), and other sectors (1%). In 2018, 9% of bachelor's, 4% of master's, and 2% of doctoral graduates were not employed but seeking employment. **Conclusions:** Today's public health graduates are successful in finding employment in various sectors. This new workforce may expand public health's reach and lead to healthier communities overall. **Public Health Implications:** With predicted shortages in the governmental public health workforce and expanding hiring because of COVID-19, policymakers need to work to ensure the supply of public health graduates meets the demands of the workforce.

Publication Type

Journal article.

<664>

Accession Number

20210079086

Author

Pahmeier, F.; Neufeldt, C. J.; Cerikan, B.; Prasad, V.; Pape, C.; Laketa, V.; Ruggieri, A.; Bartenschlager, R.; Cortese, M.

Title

A versatile reporter system to monitor virus-infected cells and its application to dengue virus and SARS-CoV-2.

Source

Journal of Virology; 2021. 95(4). 51 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

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Positive-strand RNA viruses have been the etiological agents in several major disease outbreaks over the last few decades. Examples of this include flaviviruses, such as dengue virus and Zika virus, which cause millions of yearly infections around the globe, and coronaviruses, such as SARS-CoV-2, the source of the current pandemic. The severity of outbreaks caused by these viruses stresses the importance of research aimed at determining methods to limit virus spread and to curb disease severity. Such studies require molecular tools to decipher virus-host interactions and to develop effective treatments. Here, we describe the generation and characterization of a reporter system that can be used to visualize and identify cells infected with dengue virus or SARS-CoV-2. This system is based on viral protease activity that mediates cleavage and nuclear translocation of an engineered fluorescent protein stably expressed in cells. We show the suitability of this system for live cell imaging, for visualization of single infected cells, and for screening and testing of antiviral compounds. With the integrated modular building blocks, this system is easy to manipulate and can be adapted to any virus encoding a protease, thus offering a high degree of flexibility.

Publication Type

Journal article.

<665>

Accession Number

20210078816

Author

Joag, V.; Wijeyesinghe, S.; Stolley, J. M.; Quarnstrom, C. F.; Dileepan, T.; Soerens, A. G.; Sangala, J. A.; O'Flanagan, S. D.; Gavil, N. V.; Hong SungWook; Bhela, S.; Gangadhara, S.; Weyu, E.; Matchett, W. E.; Thiede, J.; Venkatramana Krishna; Cheeran, M. C. J.; Bold, T. D.; Amara, R.; Southern, P.; Hart, G. T.; Schifanella, L.; Vezys, V.; Jenkins, M. K.; Langlois, R. A.; Masopust, D.

Title

Cutting edge: mouse SARS-CoV-2 epitope reveals infection and vaccine-elicited cd8 T cell responses.

Source

Journal of Immunology; 2021. 206(5):931-935.

Publisher

American Association of Immunologists

Location of Publisher

Bethesda

Country of Publication

USA

Abstract

The magnitude of SARS-CoV-2-specific T cell responses correlates inversely with human disease severity, suggesting T cell involvement in primary control. Whereas many COVID-19 vaccines focus on establishing humoral immunity to viral spike protein, vaccine-elicited T cell immunity may bolster durable protection or

cross-reactivity with viral variants. To better enable mechanistic and vaccination studies in mice, we identified a dominant CD8 T cell SARS-CoV-2 nucleoprotein epitope. Infection of human ACE2 transgenic mice with SARS-CoV-2 elicited robust responses to H2-Db/N219-227, and 40% of HLA-A*02+ COVID-19 PBMC samples isolated from hospitalized patients responded to this peptide in culture. In mice, i.m. prime-boost nucleoprotein vaccination with heterologous vectors favored systemic CD8 T cell responses, whereas intranasal boosting favored respiratory immunity. In contrast, a single i.v. immunization with recombinant adenovirus established robust CD8 T cell memory both systemically and in the respiratory mucosa.

Publication Type

Journal article.

<666>

Accession Number

20210078797

Author

Sabyasachi Senapati; Pratibha Banerjee; Sandilya Bhagavatula; Kushwaha, P. P.; Shashank Kumar

Title

Contributions of human ACE2 and TMPRSS2 in determining host-pathogen interaction of COVID-19.

Source

Journal of Genetics; 2021. 100(12):(25 February 2021). many ref.

Publisher

Indian Academy of Sciences

Location of Publisher

Bangalore

Country of Publication

India

Abstract

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection is at present an emerging global public health crisis. Angiotensin converting enzyme 2 (ACE2) and trans-membrane protease serine 2 (TMPRSS2) are the two major host factors that contribute to the virulence of SARS-CoV-2 and pathogenesis of coronavirus disease-19 (COVID-19). Transmission of SARS-CoV-2 from animal to human is considered a rare event that necessarily requires strong evolutionary adaptations. Till date no other human cellular receptors are identified beside ACE2 for SARS-CoV-2 entry inside the human cell. Proteolytic cleavage of viral spike (S)-protein and ACE2 by TMPRSS2 began the entire host-pathogen interaction initiated with the physical binding of ACE2 to S-protein. SARS-CoV-2 S-protein binds to ACE2 with much higher affinity and stability than that of SARS-CoVs. Molecular interactions between ACE2-S and TMPRSS2-S are crucial and preciously mediated by specific residues. Structural stability, binding affinity and level of expression of these three interacting proteins are key susceptibility factors for COVID-19. Specific protein-protein

interactions (PPI) are being identified that explains uniqueness of SARS-CoV-2 infection. Amino acid substitutions due to naturally occurring genetic polymorphisms potentially alter these PPIs and poses further clinical heterogeneity of COVID-19. Repurposing of several phytochemicals and approved drugs against ACE2, TMPRSS2 and S-protein have been proposed that could inhibit PPI between them. We have also identified some novel lead phytochemicals present in *Azadirachta indica* and *Aloe barbadensis* which could be utilized for further in vitro and in vivo anti-COVID-19 drug discovery. Uncovering details of ACE2-S and TMPRSS2-S interactions would further contribute to future research on COVID-19.

Publication Type

Journal article.

<667>

Accession Number

20210077463

Author

Braun, K. M.; Moreno, G. K.; Halfmann, P. J.; Hodcroft, E. B.; Baker, D. A.; Boehm, E. C.; Weiler, A. M.; Haj, A. K.; Hatta, M.; Chiba, S.; Maemura, T.; Kawaoka, Y.; Koelle, K.; Friedrich, T. C.

Title

Transmission of SARS-CoV-2 in domestic cats imposes a narrow bottleneck.

Source

PLoS Pathogens; 2021. 17(2). 68 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

The evolutionary mechanisms by which SARS-CoV-2 viruses adapt to mammalian hosts and, potentially, undergo antigenic evolution depend on the ways genetic variation is generated and selected within and between individual hosts. Using domestic cats as a model, we show that SARS-CoV-2 consensus sequences remain largely unchanged over time within hosts, while dynamic sub-consensus diversity reveals processes of genetic drift and weak purifying selection. We further identify a notable variant at amino acid position 655 in Spike (H655Y), which was previously shown to confer escape from human monoclonal antibodies. This variant arises rapidly and persists at intermediate frequencies in index cats. It also becomes fixed following transmission in two of three pairs. These dynamics suggest this site may be under positive selection in this system and illustrate how a variant can quickly arise and become fixed in parallel across multiple transmission pairs. Transmission of SARS-CoV-2 in cats involved a narrow bottleneck, with new

infections founded by fewer than ten viruses. In RNA virus evolution, stochastic processes like narrow transmission bottlenecks and genetic drift typically act to constrain the overall pace of adaptive evolution. Our data suggest that here, positive selection in index cats followed by a narrow transmission bottleneck may have instead accelerated the fixation of S H655Y, a potentially beneficial SARS-CoV-2 variant. Overall, our study suggests species- and context-specific adaptations are likely to continue to emerge. This underscores the importance of continued genomic surveillance for new SARS-CoV-2 variants as well as heightened scrutiny for signatures of SARS-CoV-2 positive selection in humans and mammalian model systems.

Publication Type

Journal article.

<668>

Accession Number

20210077339

Author

Gautham Kolluri; Tyagi, J. S.; Sasidhar, P. V. K.

Title

Indian poultry industry vis-a-vis coronavirus disease 2019: a situation analysis report.

Source

Poultry Science; 2021. 100(3). 15 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Originating in Wuhan city, Hubei province of China, and rapid spread to multiple countries, severe acute respiratory syndrome coronavirus 2 has emerged as a novel public health emergence. During early February, spread of misinformation and rumors driven by the fear of linking chicken meat and eggs in the transmission of coronavirus disease 2019 (COVID-19) among human population is witnessed in India. This resulted drastic reduction in consumption of poultry products with subsequent fall in demand thereby prices. The COVID-19-driven lockdown during March in the country has further accentuated the crippling poultry industry following the arrest of feed and healthcare essentials and destruction of eggs, chicks, and birds. Here, we have analyzed the impact of COVID-19 on the poultry industry and showed the realistic flow of events that resulted in its economic fallout by disruption of poultry protein chain during pandemic crisis. The projected loss caused because of these events for the Indian poultry industry is around USD 3053

million. The economic impact is not uniform across the country owing to regional differences in consumption pattern and percent non-vegetarians.

Publication Type

Journal article.

<669>

Accession Number

20210077050

Author

Woolsey, C.; Borisevich, V.; Prasad, A. N.; Agans, K. N.; Deer, D. J.; Dobias, N. S.; Heymann, J. C.; Foster, S. L.; Levine, C. B.; Medina, L.; Melody, K.; Geisbert, J. B.; Fenton, K. A.; Geisbert, T. W.; Cross, R. W.

Title

Establishment of an African green monkey model for COVID-19 and protection against re-infection.

Source

Nature Immunology; 2020. 22(1):86-98. 46 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is responsible for an unprecedented global pandemic of COVID-19. Animal models are urgently needed to study the pathogenesis of COVID-19 and to screen vaccines and treatments. We show that African green monkeys (AGMs) support robust SARS-CoV-2 replication and develop pronounced respiratory disease, which may more accurately reflect human COVID-19 cases than other nonhuman primate species. SARS-CoV-2 was detected in mucosal samples, including rectal swabs, as late as 15 days after exposure. Marked inflammation and coagulopathy in blood and tissues were prominent features. Transcriptome analysis demonstrated stimulation of interferon and interleukin-6 pathways in bronchoalveolar lavage samples and repression of natural killer cell- and T cell-associated transcripts in peripheral blood. Despite a slight waning in antibody titers after primary challenge, enhanced antibody and cellular responses contributed to rapid clearance after re-challenge with an identical strain. These data support the utility of AGM for studying COVID-19 pathogenesis and testing medical countermeasures.

Publication Type

Journal article.

<670>

Accession Number

20210076265

Author

Stafne, E. T.

Title

#YardFruits: Twitter as a tool to disseminate horticulture education during a pandemic.

Source

HortTechnology; 2020. 30(6):706-708. 14 ref.

Publisher

American Society for Horticultural Science

Location of Publisher

Alexandria

Country of Publication

USA

Abstract

Since late Mar. 2020, many universities halted normal operations due to the Coronavirus Disease 2019 (COVID-19) pandemic. Although extension uses many different techniques to educate consumers, it has been slow to grasp the power of social media. Faced with a dilemma of using digital methods instead of in-person field days, short courses, and workshops, Twitter was a viable alternative, especially for broad audience engagement. Tweet threads were posted on Twitter every Monday morning from 6 Apr. to 8 June 2020. Each thread consisted of 10 tweets. A hashtag #YardFruits was used to start the thread and for later reference. For the first nine threads only one fruit species was discussed per thread. The final thread consisted of single tweets of several species. Engagement percentage did not differ over time but did differ among the crop species. Tweets that did not include a photo received less engagement (2.7%) than those that did include a photo (4.7%). My Twitter account saw a 6.5% increase in followers during the series. Grape (*Vitis* sp.), passion fruit (*Passiflora* sp.), fig (*Ficus carica*), and pear (*Pyrus communis*) threads had the least engagement and were different from the Other Fruits thread. All other threads were similar. Extension educators can grow their influence by using well-targeted, focused tweets and tweet threads, especially those that use hashtags and photos.

Publication Type

Journal article.

<671>

Accession Number

20210076179

Author

Silva, W. C. da da; Silva, G. da da; Barbos, A. V. C.; Silva, J. A. R. da da

Title

Tutors' perception of the behavior of dogs and cats in the face of social isolation due to the COVID-19 pandemic. [Portuguese]

Source

Revista Academica: Ciencia Animal; 2021. 19(19002). many ref.

Publisher

Pontificia Universidade Catolica do Parana

Location of Publisher

Sao Jose dos Pinhais

Country of Publication

Brazil

Abstract

Research was developed through the application of a closed-ended questionnaire. One hundred sixty-eight (168) people from different districts of the municipality were consulted. Most of the interviewees stated that the animals had changes in their routine (67.29%). In addition, for most tutors (59.53%), the animals presented changes in behavior after the beginning of social isolation as a result of COVID-19, mainly related to the neediness of the animal with the tutor, this being the most observed behavior change (61.9%). This occurs, possibly, due to the greater contact between human-animal in the isolation period. After analyzing the results, we concluded that the routine of dogs and cats underwent changes, also affecting the animals' behavior after the beginning of the COVID-19 pandemic.

Publication Type

Journal article.

<672>

Accession Number

20210075601

Author

Russo, R.; Levine, C.; Grady, C.; Peixoto, B.; McCormick-Ell, J.; Block, T.; Gresko, A.; Delmas, G.; Chitale, P.; Frees, A.; Ruiz, A.; Alland, D.

Title

Decontaminating N95 respirators during the COVID-19 pandemic: simple and practical approaches to increase decontamination capacity, speed, safety and ease of use.

Source

Journal of Hospital Infection; 2021. 109:52-57. 15 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic has caused a severe shortage of personal protective equipment (PPE), especially N95 respirators. Efficient, effective and economically feasible methods for large-scale PPE decontamination are urgently needed. Aims: (1) to develop protocols for effectively decontaminating PPE using vaporized hydrogen peroxide (VHP); (2) to develop novel approaches that decrease set-up and take-down time while also increasing decontamination capacity; (3) to test decontamination efficiency for N95 respirators heavily contaminated by make-up or moisturizers. Methods: We converted a decommissioned Biosafety Level 3 laboratory into a facility that could be used to decontaminate N95 respirators. N95 respirators were hung on metal racks, stacked in piles, placed in paper bags or covered with make-up or moisturizer. A VHPR VICTORY™ unit from STERIS was used to inject VHP into the facility. Biological and chemical indicators were used to validate the decontamination process. Findings: N95 respirators individually hung on metal racks were successfully decontaminated using VHP. N95 respirators were also successfully decontaminated when placed in closed paper bags or if stacked in piles of up to six. Stacking reduced the time needed to arrange N95 respirators for decontamination by approximately two-thirds while almost tripling facility capacity. Make-up and moisturizer creams did not interfere with the decontamination process. Conclusions: Respirator stacking can reduce the hands-on time and increase decontamination capacity. When personalization is needed, respirators can be decontaminated in labelled paper bags. Make up or moisturizers do not appear to interfere with VHP decontamination.

Publication Type

Journal article.

<673>

Accession Number

20210075586

Author

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Title

Stable dechlorination of trichloroacetic acid (TCAA) to acetic acid catalyzed by palladium nanoparticles deposited on H₂-transfer membranes.

Source

Water Research (Oxford); 2021. 192.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Trichloroacetic acid (TCAA) is a common disinfection byproduct (DBP) produced during chlorine disinfection. With the outbreak of the Coronavirus Disease 2019 (COVID-19) pandemic, the use of chlorine disinfection has increased, raising the already substantial risks of DBP exposure. While a number of methods are able to remove TCAA, their application for continuous treatment is limited due to their complexity and expensive or hazardous inputs. We investigated a novel system that employs palladium (Pd⁰) nanoparticles (PdNPs) for catalytic reductive dechlorination of TCAA. H₂ was delivered directly to PdNPs in situ coated on the surface of bubble-free hollow-fiber gas-transfer membranes. The H₂-based membrane Pd film reactor (H₂-MPfR) achieved a high catalyst-specific TCAA reduction rate, 32 L/g-Pd/min, a value similar to the rate of using homogeneously suspended PdNP, but orders of magnitude higher than with other immobilized PdNP systems. In batch tests, over 99% removal of 1 mM TCAA was achieved in 180 min with strong product selectivity (93%) to acetic acid. During 50 days of continuous operation, over 99% of 1 mg/L influent TCAA was removed, again with acetic acid as the major product (94%). We identified the reaction pathways and their kinetics for TCAA reductive dechlorination with PdNPs using direct delivery of H₂. Sustained continuous TCAA removal, high selectivity to acetic acid, and minimal loss of PdNPs support that the H₂-MPfR is a promising catalytic reactor to remove chlorinated DBPs in practice.

Publication Type

Journal article.

<674>

Accession Number

20210074501

Author

Hashem, N. M.; Gonzalez-Bulnes, A.; Rodriguez-Morales, A. J.

Title

Animal welfare and livestock supply chain sustainability under the COVID-19 outbreak: an overview.

Source

Frontiers in Veterinary Science; 2020. 6(October). 68 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic, caused by the emergence of a new strain of coronavirus (SARS-CoV-2) around the end of December 2019, has caused a worldwide public health emergency and a socioeconomic crisis during 2020. The lockdown imposed to cope with the health issues caused by the outbreak of the disease has dramatically challenged and negatively affected all the economic sectors of the modern global economy. Specifically, the livestock sector and its related industries are among the most impacted sectors. This is mainly ascribed to the limitations of animal movement and the decrease of production inputs' availability. Other factors negatively affecting the sustainability of the livestock sector have been the shortage of workers due to the lockdown/curfew, the strong decrease in the purchasing power of the consumer, and the intensification of health care tasks. Such an impact is not only highly relevant because of their economic consequences, but also because of the effects of the lockdown and sanitary rules on animal care and welfare. The current review aims to offer: (a) a comprehensive overview of the impact of COVID-19 on the welfare of farm animals and on the performance of livestock farming systems, on food chain sustainability, and finally, on the global economy and food security; and (b) a prospective outline of alleviation actions.

Publication Type

Journal article.

<675>

Accession Number

20210074052

Author

Mobasheri, A.

Title

COVID-19, companion animals, comparative medicine, and one health.

Source

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Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic in 2020 has stimulated open collaboration between different scientific and clinical disciplines like never before. Public and private partnerships continue to form in order to tackle this unprecedented global challenge. This paper highlights the importance of open collaboration and cooperation between the disciplines of medicine, veterinary medicine, and animal health sciences in the fight against COVID-19. Since the pandemic took the whole world by surprise, many existing drugs were rapidly repurposed and tested in COVID-19 clinical trials and some of the trials are revealing promising results, it is clear that the long-term solution will come in the form of vaccines. While vaccines are being developed, the antiviral agent Remdesivir (RDV, GS-5734) is being repurposed for use in human clinical trials but this is being done without acknowledging the significant efforts that went into development for treating cats with feline infectious peritonitis (FIP), a highly fatal immune-mediated vasculitis in cats which is caused by a feline coronavirus. There are many other antiviral drugs and immune modulating treatments that are currently being trialed that have animal health origins in terms of discovery and clinical development. Closer collaboration between the animal health and human health sectors is likely to accelerate progress in the fight against COVID-19. There is much that we do not yet know about COVID-19 and its causative agent SARS-CoV-2 but we will learn and progress much faster if we increase interdisciplinary collaboration and communication between human and animal health researchers and taking a genuine "One Health" approach to this and other emerging viral pathogens. Enhanced knowledge of zoonotic coronaviruses can significantly enhance our ability to fight current and future emerging coronaviruses. This article highlights the acute need for One Health and comparative medicine and the crucial importance of building on and recognizing veterinary research for addressing future human pandemics.

Publication Type

Journal article.

<676>

Accession Number

20210074009

Author

Halasa, T.; Graesboll, K.; Denwood, M.; Christensen, L. E.; Kirkeby, C.

Title

Prediction models in veterinary and human epidemiology: our experience with modeling SARS-CoV-2 spread.

Source

Frontiers in Veterinary Science; 2020. 6(August). 55 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The worldwide outbreak of Sars-CoV-2 resulted in modelers from diverse fields being called upon to help predict the spread of the disease, resulting in many new collaborations between different institutions. We here present our experience with bringing our skills as veterinary disease modelers to bear on the field of human epidemiology, building models as tools for decision makers, and bridging the gap between the medical and veterinary fields. We describe and compare the key steps taken in modeling the Sars-CoV-2 outbreak: criteria for model choices, model structure, contact structure between individuals, transmission parameters, data availability, model validation, and disease management. Finally, we address how to improve on the contingency infrastructure available for Sars-CoV-2.

Publication Type

Journal article.

<677>

Accession Number

20210072999

Author

Walzer, C.

Title

COVID-19 and the curse of piecemeal perspectives.

Source

Frontiers in Veterinary Science; 2020. 6(September). 33 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The world is in turmoil. A novel coronavirus (SARS-CoV-2) has catapulted across the ever-evolving interface between humans and wild places relentlessly spreading coronavirus disease (COVID-19) amongst humans and bringing immense suffering and death to the farthest reaches of our planet. What was immediately apparent was that the virus responsible for this outbreak originated in wild animals. A wildlife source does not come as a surprise as the majority of emerging infectious diseases are zoonotic and two-thirds have their origin in wildlife. The commercial use of wildlife for consumption encompassing both legal and illegal trade is poorly regulated with porous boundaries between the two entities. This trade, particularly in live animals, creates super-interfaces along the food value chain co-mingling species from many different geographies and habitats while creating perfect conditions for the exchange and recombination of viruses. Since the SARS outbreak in 2002/2003, broad scientific consensus exists that long term, structural changes, and wildlife trade and market closures will be required to prevent future epidemics. The pragmatic, most cost-effective action governments can take with immediate effect is to ban the commercial trade of wild birds and mammals for consumption. Most importantly, this reduces the risk of future zoonotic transmission while also safeguarding resources for those Indigenous Peoples and local communities who rely on wild meat to meet their nutritional requirements.

Publication Type

Journal article.

<678>

Accession Number

20210072481

Author

Everard, M.; Johnston, P.; Santillo, D.; Staddon, C.

Title

The role of ecosystems in mitigation and management of COVID-19 and other zoonoses.

Source

Environmental Science & Policy; 2020. 111:7-17. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

Abstract

There is rising international concern about the zoonotic origins of many global pandemics. Increasing human-animal interactions are perceived as driving factors in pathogen transfer, emphasising the close relationships between human, animal and environmental health. Contemporary livelihood and market patterns tend to degrade ecosystems and their services, driving a cycle of degradation in increasingly tightly linked socio-ecological systems. This contributes to reductions in the natural regulating capacities of ecosystem services to limit disease transfer from animals to humans. It also undermines natural resource availability, compromising measures such as washing and sanitation that may be key to managing subsequent human-to-human disease transmission. Human activities driving this degrading cycle tend to convert beneficial ecosystem services into disservices, exacerbating risks related to zoonotic diseases. Conversely, measures to protect or restore ecosystems constitute investment in foundational capital, enhancing their capacities to provide for greater human security and opportunity. We use the DPSIR (Drivers-Pressures-State change-Impact-Response) framework to explore three aspects of zoonotic diseases: (1) the significance of disease regulation ecosystem services and their degradation in the emergence of Covid-19 and other zoonotic diseases; and of the protection of natural resources as mitigating contributions to both (2) regulating human-to-human disease transfer; and (3) treatment of disease outbreaks. From this analysis, we identify a set of appropriate response options, recognising the foundational roles of ecosystems and the services they provide in risk management. Zoonotic disease risks are ultimately interlinked with biodiversity crises and water insecurity. The need to respond to the Covid-19 pandemic ongoing at the time of writing creates an opportunity for systemic policy change, placing scientific knowledge of the value and services of ecosystems at the heart of societal concerns as a key foundation for a more secure future. Rapid political responses and unprecedented economic stimuli reacting to the pandemic demonstrate that systemic change is achievable at scale and pace, and is also therefore transferrable to other existential, global-scale threats including climate change and the 'biodiversity crisis'. This also highlights the need for concerted global action, and is also consistent with the duties, and ultimately the self-interests, of developed, donor nations.

Publication Type

Journal article.

<679>

Accession Number

20210071865

Author

Aruga, K.; Islam, M.; Jannat, A.

Title

Effects of COVID-19 on Indian energy consumption.

Source

Sustainability; 2020. 12(14). 52 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Just after the Indian government issued the first lockdown rule to cope with the increasing number of COVID-19 cases in March 2020, the energy consumption in India plummeted dramatically. However, as the lockdown relaxed, energy consumption started to recover. In this study, we investigated how COVID-19 cases affected Indian energy consumption during the COVID-19 crisis by testing if the lockdown release had a positive impact on energy consumption and if richer regions were quicker to recover their energy consumption to the level before the lockdown. Using the autoregressive distributed lag (ARDL) model, the study reveals that a long-run relationship holds between the COVID-19 cases and energy consumption and that the COVID-19 cases have a positive effect on Indian energy consumption. This result indicates that as lockdown relaxed, energy consumption started to recover. However, such a positive impact was not apparent in the Eastern and North-Eastern regions, which are the poorest regions among the five regions investigated in the study. This implies that poorer regions need special aid and policy to recover their economy from the damage suffered from the COVID-19 crisis.

Publication Type

Journal article.

<680>

Accession Number

20210071685

Author

Vivarelli, S.; Falzone, L.; Torino, F.; Scandurra, G.; Russo, G.; Bordonaro, R.; Pappalardo, F.; Spandidos, D. A.; Raciti, G.; Libra, M.

Title

Immune-checkpoint inhibitors from cancer to COVID-19: a promising avenue for the treatment of patients with COVID-19 (review).

Source

International Journal of Oncology; 2021. 58(2):145-157. many ref.

Publisher

Professor D. A. Spandidos

Location of Publisher

Athens

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Country of Publication

Greece

Abstract

The severe acute respiratory syndrome associated coronavirus-2 (SARS-CoV-2) poses a threat to human life worldwide. Since early March, 2020, coronavirus disease 2019 (COVID-19), characterized by an acute and often severe form of pneumonia, has been declared a pandemic. This has led to a boom in biomedical research studies at all stages of the pipeline, from the in vitro to the clinical phase. In line with this global effort, known drugs, currently used for the treatment of other pathologies, including antivirals, immunomodulating compounds and antibodies, are currently used off-label for the treatment of COVID-19, in association with the supportive standard care. Yet, no effective treatments have been identified. A new hope stems from medical oncology and relies on the use of immune-checkpoint inhibitors (ICIs). In particular, amongst the ICIs, antibodies able to block the programmed death-1 (PD-1)/PD ligand-1 (PD-L1) pathway have revealed a hidden potential. In fact, patients with severe and critical COVID-19, even prior to the appearance of acute respiratory distress syndrome, exhibit lymphocytopenia and suffer from T-cell exhaustion, which may lead to viral sepsis and an increased mortality rate. It has been observed that cancer patients, who usually are immunocompromised, may restore their anti-tumoral immune response when treated with ICIs. Moreover, viral-infected mice and humans, exhibit a T-cell exhaustion, which is also observed following SARS-CoV-2 infection. Importantly, when treated with anti-PD-1 and anti-PD-L1 antibodies, they restore their T-cell competence and efficiently counteract the viral infection. Based on these observations, four clinical trials are currently open, to examine the efficacy of anti-PD-1 antibody administration to both cancer and non-cancer individuals affected by COVID-19. The results may prove the hypothesis that restoring exhausted T-cells may be a winning strategy to beat SARS-CoV-2 infection.

Publication Type

Journal article.

<681>

Accession Number

20210068876

Author

Visvikis-Siest, S.; Theodoridou, D.; Kontoe, M. S.; Kumar, S.; Marschler, M.

Title

Milestones in personalized medicine: from the ancient time to nowadays-the provocation of COVID-19.

Source

Frontiers in Genetics; 2020. 11(November). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

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Country of Publication

Switzerland

Abstract

The first evidence of individual targeting medicine appeared in ancient times thousands of years ago. Various therapeutic approaches have been established since then. However, even nowadays, conventional therapies do not take into consideration individuals' idiosyncrasy and genetic make-up, failing thus to be effective in some cases. Over time, the necessity of a more precise and effective treatment resulted in the development of a scientific field currently known as "personalized medicine." The numerous technological breakthroughs in this field have acknowledged personalized medicine as the next generation of diagnosis and treatment. Although personalized medicine has attracted a lot of attention the last years, there are still several obstacles hindering its application in clinical practice. These limitations have come to light recently, due to the COVID-19 pandemic. This review describes the "journey" of personalized medicine over time, emphasizing on important milestones achieved through time. Starting from the treatment of malaria, as a first more personalized therapeutic approach, it highlights the need of new diagnostic tools and therapeutic regimens based on individuals' genetic background. Furthermore, it aims at raising global awareness regarding the current limitations and the necessity of a personalized strategy to overpass healthcare problems and hence, the current crisis.

Publication Type

Journal article.

<682>

Accession Number

20210066297

Author

Nousheen Akber Pradhan; Anam Shahil Feroz; Syed Mairajuddin Shah

Title

Health systems approach to ensure quality and safety amid COVID-19 pandemic in Pakistan.

Source

JCPSP, Journal of the College of Physicians and Surgeons Pakistan; 2021. 31(Special Supplement):S38-S41. 15 ref.

Publisher

College of Physicians and Surgeons Pakistan

Location of Publisher

Karachi

Country of Publication

Pakistan

Abstract

Ensuring quality and safe care during the coronavirus disease 2019 (COVID-19) pandemic offers a challenge to already strained health systems in low and middle-income countries (LMICs), such as Pakistan with less shock-absorbing capacities. There is a dearth of evidence on mechanisms to provide optimum quality care to COVID-19 patients in the resource-constrained healthcare environment. The lessons learned from the Ebola virus outbreak for the deficient health systems and quality improvement are considered to propose strengthening the health systems response to deliver quality-assured care to patients during the current pandemic. In this regard, the World Health Organization (WHO) health systems framework can serve as a guiding principle towards providing quality-assured and safe healthcare services during the ongoing pandemic in Pakistan by ensuring the availability of an adequate workforce, medical supplies and equipment, strong governance, active information system, and adequate health financing to effectively manage COVID-19. Research evidence is needed to be better prepared for an effective and coordinated health systems response to offer quality and safe care to patients.

Publication Type

Journal article.

<683>

Accession Number

20210065652

Author

Ell, L. D.; Pavelka, J. P.

Title

A code of conduct to guide Indigenous-inspired spas.

Source

International Journal of Spa and Wellness; 2020. 3(1):1-23. 75 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

While best practices are provided for green spas, Indigenous tourism, and ecotourism, there has been an absence of a code of conduct for spas that aim to sustainably integrate culture. The need for guidelines unique to this niche spa sector is critical and timely given the post-COVID-19 demand by travellers seeking out more health-related benefits via wellness holidays. This paper reports on a study of international spa

experts and Indigenous healers who incorporate ancient practices into spa experiences to provide benefits to clients through non-exploitative means. The result is a suggested code of conduct as well as a definition for spas offering services or rituals based on or inspired by Indigenous traditions. The code features several themes including risks; honouring culture; product development and training; client experience; as well as local empowerment. The benefits to Indigenous communities include meaningful employment and preserving ancient practices that are at risk of erosion. Benefits to clients include cross-cultural learning through oral history (storytelling) of traditions, and spa options that remedy stress or other health imbalances. The spa sector in turn benefits from guidance as to how to determine if and how cultural elements are suitable to incorporate into their spa menus of offerings.

Publication Type

Journal article.

<684>

Accession Number

20210064696

Author

Owen, A. J.; Tran, T.; Hammarberg, K.; Kirkman, M.; Fisher, J. R. W.

Title

Poor appetite and overeating reported by adults in Australia during the coronavirus-19 disease pandemic: a population-based study.

Source

Public Health Nutrition; 2020. 24(2):275-281. 36 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Objective: As a result of the coronavirus-19 disease (COVID-19) pandemic, Australia adopted emergency measures on 22 March 2020. This study reports the effect of the COVID-19 lockdown on appetite and overeating in Australian adults during the first month of emergency measures. **Design:** This study reports analysis of data from the population-based, self-completed survey. The main outcome measure was an item from the Patient Health Questionnaire 9 asking: 'Over the past 2 weeks, how often have you been bothered by poor appetite or overeating?'. Data on sociodemographic factors, symptoms of anxiety and depression, and the impact of COVID-19 and lockdown were also collected. Multivariable logistic regression was used to examine associations with poor appetite or overeating. **Setting:** An anonymous online survey

available from 3 April to 2 May 2020. Participants: A total of 13 829 Australian residents aged 18 years or over. Results: The weighted prevalence of being bothered by poor appetite or overeating in the past 2 weeks was 53.6%, with 11.6% (95% CI 10.6, 12.6) of the cohort reporting poor appetite or overeating nearly every day. High levels of anxiety, concern about contracting COVID-19, being in lockdown with children and reporting a severe impact of the lockdown were associated with increased odds of poor appetite or overeating. Conclusions: Given the widespread prevalence of being bothered by poor appetite or overeating, universal public health interventions to address emotion-focused or situational eating during periods of lockdown may be appropriate.

Publication Type

Journal article.

<685>

Accession Number

20210058114

Author

Chong WoeiQuan [Chong, W. Q. D.]; Jayaraj, V. J.; Rampal, S.; Mas Ayu Said; Nik Daliana, N. F.; Rafdzah Ahmad Zaki; Noran Naqiah Hairi; Hoe CheeWai [Hoe, C. W. V.]; Isahak, M.; Ponnampalavanar, S.; Sharifah Faridah, S. O.; Sam IChing; Nazirah Hasnan; Ong HangCheng; Adeeba Kamarulzaman; Ng ChiuWan

Title

Establishment of a hospital-based health care workers surveillance programme to keep them safe during the COVID-19 pandemic.

Source

Journal of Global Health; 2020. 10(2). 9 ref.

Publisher

Edinburgh University Global Health Society

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

This paper discusses the health care workers surveillance programme implemented at the University of Malaya Medical Centre (UMMC) in Kuala Lumpur, Malaysia. The HCW surveillance programme, led by a public health physician, is an integral component of this plan. It consists of five main sections: case notification, contact tracing, risk assessment, daily symptom surveillance, and outbreak management.

Publication Type

Journal article.

<686>

Accession Number

20210057919

Author

Hurtado, A.

Title

Animal feeding: commitment and sustainability, beyond COVID-19. [Spanish]

Source

Albeitar; 2021. (242):32-35.

Publisher

Grupo Asis Biomedica, S.L.

Location of Publisher

Saragossa

Country of Publication

Spain

Publication Type

Journal article.

<687>

Accession Number

20210056849

Author

Rohan Khera; Dhingra, L. S.; Snigdha Jain; Krumholz, H. M.

Title

An evaluation of the vulnerable physician workforce in the USA during the coronavirus disease-19 pandemic.

Source

Journal of General Internal Medicine; 2020. 35(10):3114-3116. 5 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

This study evaluated the current patterns of age of licensed physicians across USA. Publicly available summary data for the physician age in 5-year age bins, nationally and across each of the states were extracted from the 2018 database of physicians from the Federation of State Medical Boards (FSMB) that includes all actively licensed physicians across the USA. Of the 985,026 licensed physicians in the USA, 235,857 or 23.9% were aged 25-40 years, 447,052 or 45.4% are 40-60 years, 191,794 or 19.5% were 60-70 years, and 106,121 or 10.8% were 70 years or older. Age was not reported in 4202 or 0.4% of physicians. Overall, 297,915 or 30.2% of physicians were 60 years of age or older, 246,167 (25.0%) 65 years and older, and 106,121 (10.8%) 70 years or older. States in the USA reported that a median of 5470 licensed physicians were 60 years of age or older. Notably, states of North Dakota (n=1180) and Vermont (n=1215) had the lowest and California (n=50,786) and New York (n=31,582) the highest number of physicians over the age of 60 years. Across states, the median proportion of physicians aged 60 years and older was 28.9% (IQR, 27.2%, 31.4%) and ranged between 25.9% for Nebraska and 32.6% for New Mexico. Nearly 1 in 3 licensed physicians in the USA and each of the states are over the age of 60 years, representing nearly 300,000 currently licensed physicians in the USA. The states of California and New York, the two states with the largest outbreaks of COVID-19 which also have the highest number of physicians 60 years or older.

Publication Type

Journal article.

<688>

Accession Number

20210056701

Author

Waltenburg, M. A.; Rose, C. E.; Victoroff, T.; Butterfield, M.; Dillaha, J. A.; Heinzerling, A.; Chuey, M.; Fierro, M.; Jervis, R. H.; Fedak, K. M.; Leapley, A.; Gabel, J. A.; Feldpausch, A.; Dunne, E. M.; Austin, C.; Pedati, C. S.; Ahmed, F. S.; Tubach, S.; Rhea, C.; Tonzel, J.; Krueger, A.; Crum, D. A.; Vostok, J.; Moore, M. J.; Kempfer, H.; Scheftel, J.; Turabelidze, G.; Stover, D.; Donahue, M.; Thomas, D.; Edge, K.; Gutierrez, B.; Berl, E.; McLafferty, M.; Kline, K. E.; Martz, N.; Rajotte, J. C.; Julian, E.; Diedhiou, A.; Radcliffe, R.; Clayton, J. L.; Ortbahn, D.; Cummins, J.; Barbeau, B.; Carpenter, S.; Pringle, J. C.; Murphy, J.; Darby, B.; Graff, N. R.; Dostal, T. K. H.; Pray, I. W.; Tillman, C.; Rose, D. A.; Honein, M. A.

Title

Coronavirus disease among workers in food processing, food manufacturing, and agriculture workplaces.

Source

Emerging Infectious Diseases; 2021. 27(1):243-249. 14 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

We describe coronavirus disease (COVID-19) among US food manufacturing and agriculture workers and provide updated information on meat and poultry processing workers. Among 742 food and agriculture workplaces in 30 states, 8,978 workers had confirmed COVID-19; 55 workers died. Racial and ethnic minority workers could be disproportionately affected by COVID-19.

Publication Type

Journal article.

<689>

Accession Number

20210054707

Author

Beula Christy; Jill Keefe

Title

Telerehabilitation during COVID-19: experiences in service delivery from South India.

Source

Indian Journal of Ophthalmology; 2020. 68(7):1489-1490. 4 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The WHO International Classification of Functioning, Disability, and Health (ICF) framework describes the effect of health problems relating to (a) body functions and body structures, (b) activities, (c) participation, and (d) contextual: both environmental and personal factors. Addressing all of these components are important as anyone can interact with another. The ICF framework is used by a team of professionals including optometrists, counselors, special educators, therapists, computer instructors, digital librarians, and community workers to deliver services. The initiatives were as follows: (1) counseling for mental well-being: The mental health effects of COVID-19 are important to address as are the physical health effects, hence stabilizing the mental well-being of people is given a high priority, (2) information and resources: The WHO protocol on every aspect of COVID-19 preventive measures are addressed. They are also updated with information on special announcements on relaxations as applicable to their respective districts and states, (3) financial support: The ex-gratia amount of INR. 1,000/- by the central government for PWDs is meager and grossly inadequate for their needs. Upon understanding the situation, financial support is extended through a coordinated effort from generous volunteers, (4) therapeutic intervention for children with multiple disabilities: Continuity of intervention is important to minimize potential developmental delays in visual, cognitive, social/emotional, communication, adaptive, and physical areas. To ensure the continuity of training, the parents are encouraged to handle their children under the close guidance and supervision of therapists through a video call, (5) training program for young adults: Using social platforms such as Skype, Zoom, and WhatsApp, several online classes are conducted for young adults who are students and at working age. The session includes training on mobile and computer-assistive technologies, web accessibility guidelines, access to books through Bookshare and Sugamayapusthakalu, personality development, improving writing skills, public speaking, etc., (6) Helpline: From day one of the lockdown, the Helpline is active in attending and resolving the concerns raised by PWDs and their families. An average of 25 calls are attended each day and the counselors are available to support any in need, and (7) digital library: From the vast collection of library books from art, drama, history, economics, geography, literature, and academics, the books are issued as per individual choice. Competitive materials, children's stories, knowledge banks, vocabulary building, and English grammar are the commonly requested books by most students.

Publication Type

Correspondence.

<690>

Accession Number

20210054695

Author

Vivek Gupta; Praveen Vashist; Senjam, S. S.

Title

Commentary: COVID-19-how it has impacted ophthalmic care and where do we go from here?

Source

Indian Journal of Ophthalmology; 2020. 68(7):1399-1400. 8 ref.

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Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

This article is one of the initial studies quantifying the impact of the pandemic on ophthalmic services in India. The COVID-19 associated lockdown's impact on the patients with ocular diseases was quantified through analysis of data from a multi-tier ophthalmology network. The results suggest that the requirement of ophthalmic sub-specialties also is altered during lockdown. Lockdown was also associated with in-equity. Nearly 2/3 of patients were emergency and 1/4 were routine, when classified as per the AIOS-IJO guidelines. It was observed that among patients who were triaged as routine, nearly 1/4 had conjunctivitis and another 6% had allergic conjunctivitis. The main question is how to mitigate the setbacks in health services posed by COVID-19 making it a must for ophthalmic health systems to rapidly evolve.

Publication Type

Journal article.

<691>

Accession Number

20210050990

Author

Gruyter, de

Title

COVID-19: natural or anthropic origin?

Source

Mammalia; 2021. 85(1):1-7. 31 ref.

Publisher

Walter de Gruyter

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Viruses similar to the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) have been discovered in bats of the genus *Rhinolophus* and in the Sunda pangolin, *Manis javanica* Desmarest, 1822, suggesting that these animals have played a key role in the emergence of the Covid-19 outbreak in the city of Wuhan, China. In this paper, we review the available data for sarbecoviruses (viruses related to SARS-CoV [2002-2003 outbreak] and SARS-CoV-2) to propose all possible hypotheses on the origin of Covid-19, i. e., involving direct transmission from horseshoe bats to humans, indirect transmission via the pangolin or another animal, with interspecies contamination between either wild animals or animals kept in cage. Present evidence indicates that *Rhinolophus* bats are the natural reservoir of all sarbecoviruses, and that two divergent SARS-CoV-2-like viruses have circulated in southern China (at least in Guangxi and Guangdong provinces) between August 2017 and March 2019 in captive pangolins destined for sale in wildlife markets. We performed a genetic analysis of seven seized pangolins found to be positive for SARS-CoV-2-like virus using mitochondrial DNA sequences extracted from Sequence Reads Archive data. The results reveal that the same SARS-CoV-2-like virus can be found in animals with distinct haplotypes, which means that they were probably captured in different Southeast Asian regions. Our interpretation is that some pangolins were contaminated in captivity (by other pangolins or by another species to be determined), suggesting that illegal trade of living wild mammals is at the origin of the Covid-19 outbreak. To definitely validate this hypothesis, it is however necessary to discover a virus almost identical to SARS CoV-2 (at least 99% of identity) in animals sold in wet markets. Although pangolins are good candidates, other mammals, such as small carnivores, should not be overlooked.

Publication Type

Journal article.

<692>

Accession Number

20210049129

Author

Looi, J. C. L.; Allison, S.; Bastiampillai, T.; Maguire, P.

Title

Fire, disease and fear: effects of the media coverage of 2019-2020 Australian bushfires and novel coronavirus 2019 on population mental health.

Source

Australian and New Zealand Journal of Psychiatry; 2020. 54(9):938-939. 5 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

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UK

Abstract

This paper discusses the intense and often very graphic media coverage of emergency service warnings and updates for both 2019-20 Australian bushfire and COVID-19 pandemic which has caused a cascade of apocalyptic negativity that lours over the populace, possibly affecting population mental health in Australia. It also discusses the phenomena of availability cascades in relation to public risk perception and regulation are relevant in relation to media portrayals. Availability cascades of negativity and emotional contagion may be attenuated if individuals restrict their exposure to televised media coverage of disasters to the level required for their personal safety. Based on research on media coverage of disasters, it is advocated that emergency management personnel and relevant government officials provide accurate appraisals of risk, and corresponding appropriate recommendations of what action is required by members of the community affected.

Publication Type

Correspondence.

<693>

Accession Number

20210047819

Author

Xia Zhi; Yang Lin; Li Na; Nie Bo; Wang Hong; Xu Hui; He DaiHai

Title

Seasonal influenza activity in young children before the COVID-19 outbreak in Wuhan, China.

Source

Transboundary and Emerging Diseases; 2020. 67(6):2277-2279. 5 ref.

Publisher

Wiley

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

The activity of influenza A at the end of 2019 was higher than previous two years in children younger than 6 years old in Wuhan, China. The 2019-2020 winter peak of seasonal influenza preceded the COVID-19 outbreak, with a higher and earlier peak than those of the 2017-2018 and 2018-2019 seasons. We speculate this could be due to the earlier CNY holiday season in 2019-2020 than in previous two years. We

compared these results with those of two previous studies to further discuss the possible interference between influenza and COVID-19 in young children.

Publication Type

Journal article.

<694>

Accession Number

20210036381

Author

Hatab, A. A.; Lagerkvist, C. J.; Esmat, A.

Title

Risk perception and determinants in small- and medium-sized agri-food enterprises amidst the COVID-19 pandemic: evidence from Egypt. (Special Issue: The COVID-19 pandemic and the agricultural supply chain.)

Source

Agribusiness (New York); 2021. 37(1):187-212. many ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

The coronavirus disease-2019 (COVID-19) pandemic has disrupted many activities along agri-food supply chains in developing countries and posed unprecedented challenges in particular to small and medium agri-food enterprises (SMEs). Drawing on a survey of 166 Egyptian agri-food SMEs, this study investigates differences in- and determinants of COVID-19 business risk perception among these enterprises. The empirical results showed that risk perception was highly asymmetric across geographical regions. Enterprises with longer cash flow coverage periods and higher values of total assets perceived significantly lower risk levels, as cash and assets functioned as a buffer against the impact of COVID-19. The findings of the study imply that the "just-in-time" approach and the absence of a proactive and preventative stance to risk management reduced the resilience of agri-food SMEs to the risks presented by the pandemic. Generally, enterprises that operate both in domestic and export markets perceived lower COVID-19 risks. Finally, the main export destination to which the surveyed enterprises export was a significant determinant of their risk perception. These findings could be useful to managers of agri-food businesses in terms of better understanding of risks and promotion of risk management practices. More so, they can help design effective policy interventions to mitigate the impacts of the pandemic on Egyptian agri-food SMEs and build up their resilience to future pandemics and shocks.

Publication Type

Journal article.

<695>

Accession Number

20210036101

Title

Health at a Glance: Latin America and the Caribbean 2020.

Source

Health at a Glance: Latin America and the Caribbean 2020; 2020. 151 pp. 14 ref.

Publisher

OECD Publishing

Location of Publisher

Paris

Country of Publication

France

Abstract

This book contains 7 chapters that reports top indicators, collected before the onset of COVID-19 crisis, on health and health systems across 33 Latin America and the Caribbean (LAC) countries, focusing on equity, health status, determinants of health, health care resources and utilisation, health expenditure and financing, and quality of care. Highlights include: the Universal Health Coverage as a basis and shows a set of key indicators to compare performance across countries in each of the following dimensions: population health (health status and determinants of health); coverage and services; financial protection; and quality of care, the importance of waste identification and reduction, particularly in the areas of clinical care, operational and governance waste, the variations across countries in life expectancy, infant and childhood mortality and major causes of mortality and morbidity, including both communicable and non-communicable diseases, non-medical determinants of health, the inputs, outputs and outcomes of health care systems, the trends in health spending across LAC countries, and lastly the indicators used in the OECD's Health Care Quality Indicator programme to examine trends in health care quality improvement across LAC countries.

Publication Type

Book.

<696>

Accession Number

20210024731

Author

Milenkova, D.

Title

COVID-19 impact on wheat market in Bulgaria and Black Sea region.

Source

Ikonomika i upravljenje na selskoto stopanstvo / Bulgarian Journal of Agricultural Economics and Management; 2020. 65(4):58-65. 10 ref.

Publisher

Agricultural Academy of Bulgaria

Location of Publisher

Sofia

Country of Publication

Bulgaria

Abstract

The effects of 2020 COVID-19 pandemic over the social and economic life throughout the globe have no comparison with any other phenomenon of our modern history. Economic activity has been substantially suppressed and even halted across geographical regions and various sectors like transport, tourism, HoReCa, automotive and others. These effects were additionally influenced by authorities' measures for closure of borders and imposing export restrictions. The pandemic disrupted the food supply chains and affected the food prices. Market analysts reported that the prices of wheat and rice went up, but corn lost market due to less demand for biofuels. There was an urge for stockpiling grains, trade flows reshuffles, and over-purchasing of flour and pasta products. Undoubtedly, the COVID-19 pandemic changed the market dynamics. The goal of this research is to assess the impact of COVID-19 on grain markets as the most sensitive and dynamic food markets. This paper will focus on the impact of COVID-19 on the wheat prices in Bulgaria and the Black Sea Region markets, making use of using Dickey Fuller Test for price stationary and comparing the period of the first outbreak (March-May 2020) with the same period of the previous year. In addition, the standard deviation in price is calculated to compare the price volatility in the period of the pandemic with the same period in 2019. The main hypothesis is that COVID-19 had significant impact on wheat prices in the reviewed markets with different magnitude in terms of price volatility. In addition, the exceptional circumstances have affected the volumes and regularity of exports of wheat from the explored regions.

Publication Type

Journal article.

<697>

Accession Number

20210002903

Author

Wang HaiFeng; Zhang YaQing; Li Bin; Zhu MingJun; Lisu Yun; Ren WeiHong; Wang DaoQing

Title

Effect of integrated traditional Chinese and western medicine on immune function of two patients with severe novel coronavirus pneumonia. [Chinese]

Source

Chinese Journal of Integrated Traditional and Western Medicine; 2020. 40(9):1138-1141. 20 ref.

Publisher

Chinese Journal of Integrated Traditional and Western Medicine Press

Location of Publisher

Beijing

Country of Publication

China

Publication Type

Journal article.

<698>

Accession Number

20203570423

Author

Wang ChiaoLing; Hung ChungYu; Lin FangJiun; Hsiao ShihHuai

Title

Secure the availability of labor: extension of annual paid leave settlement between healthcare workers and employers is good for post COVID-19 recovery.

Source

Journal of the Formosan Medical Association; 2020. 119(12):1881-1883. 5 ref.

Publisher

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Elsevier (Singapore) Pte Ltd.

Location of Publisher

Singapore

Country of Publication

Singapore

Abstract

This study used real-named system to survey non-fixed term contract health care workers (HCWs) whether to agree to postpone annual paid leave (APL) settlement instead of being compensated in wages from 7th to 28th of February 2020. HCWs who had their settlement date of APL between 1st February 2020 and 30th June 2020 at three medical university affiliated hospitals in Taiwan were enrolled into the survey. Results showed that 48.8[%] of HCWs whom have their settlement date of APL between February and June and 22.7[%] of whom agree to postpone unused APL settlement instead of being compensated in wages as stipulated by Paragraph 3, Article 38 of the Labour Standards Act (LSA). Although the two sides can carry over the APL for one year according to Paragraph 3, the employers have the responsibility to still compensate the workers for unused APL in wages. When employees are able to use APL for vacation or learning, self-actualization can be achieved and are closely relevant to happiness and stress. Therefore, the extension of any unused APL should, by agreement between workers and employers, not be subject to the one-year limit, and it is good for post COVID-19 recovery.

Publication Type

Correspondence.

<699>

Accession Number

20203533908

Author

Wang, H. H.; Hao Na

Title

Panic buying? Food hoarding during the pandemic period with city lockdown. (Special Focus: Impacts of COVID-19 on agriculture and rural poverty in China.)

Source

Journal of Integrative Agriculture; 2020. 19(12):2916-2925. 26 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Food hoarding is prevalent during the COVID-19 pandemic. To investigate the mechanism of urban consumers' food hoarding behaviors, we categorize hoarding motives into rational and irrational ones. Using random online survey samples from three cities in China, we employ the multivariate probit model to investigate the rational and irrational motives on food hoarding behavior. Our results confirmed the existence of both rational and irrational food hoarding, and also found factors attributing to the different buying behaviors. The amount of food at hand and the expectation on the infection possibility of COVID-19 are two major factors affecting rational hoarding. Bad mood and herd psychology are factors contributing to panic buying. This study provides an empirical evidence to support intervention policies aiming at mitigating panic buying behavior.

Publication Type

Journal article.

<700>

Accession Number

20203533902

Title

Special Focus: Impacts of COVID-19 on agriculture and rural poverty in China. (Special Focus: Impacts of COVID-19 on agriculture and rural poverty in China.)

Source

Journal of Integrative Agriculture; 2020. 19(12):2849-2964.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The overall goal of this special focus is to provide empirical evidence of the impacts of the COVID-19 pandemic on agriculture and the effectiveness of the coping strategies - both the mitigating measures adopted by farmers and the policy responses developed by governments - in China. Nine papers are included, which cover a broad spectrum of research topics: agricultural production, consumer food purchasing behaviors, agricultural and food marketing and international trade, rural poverty, and policy responses.

Publication Type

Journal issue.

<701>

Accession Number

20203473925

Author

Liu SuYu

Title

Food supply pressure in France and Germany during COVID-19: causes from manufacturing.

Source

Journal of Agriculture, Food Systems and Community Development; 2020. 9(4):139-142. 14 ref.

Publisher

New Leaf Associates

Location of Publisher

Ithaca

Country of Publication

USA

Abstract

This brief commentary demonstrates that the reduction in manufacturing production, especially that of food, beverages, and motor vehicles, trailers, and semi-trailers (MTS), is an important reason for the pressure on the food supply chain in France and Germany during the COVID-19 pandemic. This implies that the examination of food supply should not be restricted to agriculture and service sectors; and it should also be extended to manufacturing, which plays a critical role in the food supply chain.

Publication Type

Journal article.

<702>

Accession Number

20203471347

Author

Reis, S. N.; Reis, M. V. dos; Nascimento, A. M. P. do

Title

Pandemic, social isolation and the importance of people-plant interaction.

Source

Ornamental Horticulture; 2020. 26(3):399-412. many ref.

Publisher

Sociedade Brasileira de Floricultura e Plantas Ornamentais

Location of Publisher

Campinas

Country of Publication

Brazil

Abstract

The COVID-19 pandemic has brought drastic routine changes to the world's population. Social isolation, one of the recommended practices to curb the spread of the disease, can lead to the development of several problems, such as depression, stress, apathy and loneliness. However, practices associated with the cultivation and contemplation of flowers and ornamental plants can be an option to aid in the care for the mental health of the population. It has been proven that hortitherapy helps in the treatment of mental illness, in the recovery of patients. Biophilia incorporated into architectural design and gardening, as a hobby and occupational therapy, can also be used to improve physical and mental health. Activities can be done indoors, outdoors or even virtual, with flowers and plants used as supporting instruments to make the population feel better, including the situation experienced by the period of seclusion.

Publication Type

Journal article.

<703>

Accession Number

20203467847

Author

Sun YuanPeng; Liu YuSi; Cheng Zheng; Wu Zhe; Sun YanLing

Title

Study on the inheritance, innovation and development of *Scutellaria baicalensis* Georgi in the treatment of COVID-19.

Source

Medicinal Plant; 2020. 11(4):3-9. 16 ref.

Publisher

The Journal Board of Medicinal Plant

Location of Publisher

Cranston

Country of Publication

USA

Abstract

The discovery of highly effective medicine " Qingfei Paidu Decoction" for COVID-19 is a new era gift of traditional Chinese medicine to the world. The traditional Chinese medicine *Scutellaria baicalensis* Georgi, as a medicinal plant in the family of Labiatae, is the dominant variety of genuine medicinal material in North China. It is the leading traditional Chinese medicine in the advantageous area of agricultural products with Chinese characteristics in Shangdang of Changzhi City, and it is one of the 21 herbal medicines in the new national prescription " Qingfei Paidu Decoction" for the rapid and effective treatment of COVID-19. This paper introduces *S. baicalensis* Georgi and its traditional Chinese medicine GAP base, ecologically suitable planting county and medicinal value in poor areas, and studies the intellectual property resources related to *S. baicalensis* Georgi, such as traditional knowledge, biological genetic resources, patents, new plant varieties, geographical indications, and trademarks. This paper mainly discusses the inheritance essence, innovation and high-quality development strategy of *S. baicalensis* Georgi under the rural revitalization strategy and traditional Chinese medicine development strategy from the aspects of intellectual property rights, important agricultural cultural heritage, advantageous areas of characteristic agricultural products and so on.

Publication Type

Journal article.

<704>

Accession Number

20210080459

Author

Moyer, C. A.; Sakyi, K. S.; Sacks, E.; Compton, S. D.; Lori, J. R.; Williams, J. E. O.

Title

COVID-19 is increasing Ghanaian pregnant women's anxiety and reducing healthcare seeking.

Source

International Journal of Gynecology & Obstetrics; 2020. 152(3):444-445.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Synopsis: Pregnant women in Ghana report skipping antenatal care and reconsidering facility delivery due to concerns about COVID-19.

Publication Type

Journal article.

<705>

Accession Number

20210080450

Author

Sahin, D.; Tanacan, A.; Erol, S. A.; Anuk, A. T.; Yetiskin, F. D. Y.; Keskin, H. L.; Ozcan, N.; Ozgu-Erdinc, A. S.; Eyi, E. G. Y.; Yucel, A.; Tayman, C.; Unlu, S.; Dinc, B.; Sari, E.; Surel, A. A.; Moraloglu, O. T.

Title

Updated experience of a tertiary pandemic center on 533 pregnant women with COVID-19 infection: a prospective cohort study from Turkey.

Source

International Journal of Gynecology & Obstetrics; 2021. 152(3):328-334.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To investigate the clinical course and impact of coronavirus disease 2019 (COVID-19) infection on pregnant women. **Methods:** A prospective cohort study was conducted on pregnant women with confirmed COVID-19 infection. Demographic features, clinical characteristics, and perinatal outcomes were prospectively evaluated. **Results:** Of the 533 cases, 161 (30.2%) had co-morbidities and 165 (30.9%) were asymptomatic. Cough (n = 178, 33.4%) and myalgia (n = 168, 31.5%) were the leading symptoms. In total, 261 patients (48.9%) received COVID-19 therapy, 509 (95.5%) had mild disease, 7 (1.3%) were admitted to the intensive care unit (ICU), and invasive mechanical ventilation was necessary in 2 (0.4%) patients. Maternal mortality was observed in 2 (0.4%) cases. Of the patients, 297 (55.7%) were hospitalized, 39 (7.3%) had suspicious radiologic imaging findings, 66 (12.4) had pregnancy complications (preterm delivery [n =22, 4.1%] and miscarriage [n =12, 2.2%] were the most common pregnancy complications), 131 births occurred, and the cesarean section rate was 66.4%. All neonates were negative for COVID-19. The rate of admission to the neonatal ICU was 9.9%. One specimen of breast milk was positive for the infection. **Conclusion:** The course of COVID-19 was mild in the majority of cases. However, increased rates of pregnancy complications and cesarean delivery were observed.

Publication Type

Journal article.

<706>

Accession Number

20210080440

Author

Banke-Thomas, A.; Makwe, C. C.; Balogun, M.; Afolabi, B. B.; Alex-Nwangwu, T. A.; Ameh, C. A.

Title

Utilization cost of maternity services for childbirth among pregnant women with coronavirus disease 2019 in Nigeria's epicenter. (Special section: From the FIGO Safe Motherhood & Newborn Health Committee.)

Source

International Journal of Gynecology & Obstetrics; 2020. 152(2):242-248. 25 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To estimate utilization costs of spontaneous vaginal delivery (SVD) and cesarean delivery (CD) for pregnant women with coronavirus disease 2019 (COVID-19) at the largest teaching hospital in Lagos, the pandemic's epicenter in Nigeria. **Methods:** We collected facility-based and household costs of all nine

pregnant women with COVID-19 managed at the hospital. We compared their mean facility-based costs with those paid by pregnant women pre-COVID-19, identifying cost-drivers. We also estimated what would have been paid without subsidies, testing assumptions with a sensitivity analysis. Results: Total utilization costs ranged from US \$494 for SVD with mild COVID-19 to US \$4553 for emergency CD with severe COVID-19. Though 32%-66% of facility-based cost were subsidized, costs of SVD and CD during the pandemic have doubled and tripled, respectively, compared with those paid pre-COVID-19. Of the facility-based costs, cost of personal protective equipment was the major cost-driver (50%). Oxygen was the major driver for women with severe COVID-19 (48%). Excluding treatment costs for COVID-19, mean facility-based costs were US \$228 (SVD) and US \$948 (CD). Conclusion: Despite cost exemptions and donations, utilization costs remain prohibitive. Regulation of personal protective equipment and medical oxygen supply chains and expansion of advocacy for health insurance enrollments are needed in order to minimize catastrophic health expenditure.

Publication Type

Journal article.

<707>

Accession Number

20210080438

Author

Manu Goyal; Pratibha Singh; Kuldeep Singh; Shashank Shekhar; Neha Agrawal; Sanjeev Misra

Title

The effect of the COVID-19 pandemic on maternal health due to delay in seeking health care: experience from a tertiary center. (Special section: From the FIGO Safe Motherhood & Newborn Health Committee.)

Source

International Journal of Gynecology & Obstetrics; 2020. 152(2):231-235. 17 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: To assess the effects of the COVID-19 pandemic on obstetric care and outcomes. **Methods:** A prospective observational single-center study was performed, including all antenatal and parturient women admitted from April to August, 2020. Data were collected regarding number of admissions, deliveries, antenatal visits, reason for inaccessibility of health care, and complications during pregnancy, and compared with data from the pre-COVID period of October 2019 to February 2020. **Results:** There was a

reduction of 45.1% in institutional deliveries ($P < 0.001$), a percentage point increase of 7.2 in high-risk pregnancy, and 2.5-fold rise in admission to the intensive care unit of pregnant women during the pandemic. One-third of women had inadequate antenatal visits. The main reason for delayed health-seeking was lockdown and fear of contracting infection, resulting in 44.7% of pregnancies with complications. Thirty-two symptomatic women who tested positive for COVID-19 were managed at the center with good maternal and fetal outcomes. Conclusion: Although COVID-19 does not directly affect pregnancy outcomes, it has indirect adverse effects on maternal and child health. Emergency obstetric and antenatal care are essential services to be continued with awareness of people while maintaining social distancing and personal hygiene.

Publication Type

Journal article.

<708>

Accession Number

20210080085

Author

Sakurai, Y.; Ngwe Tun, M. M.; Kurosaki, Y.; Sakura, T.; Inaoka, D. K.; Fujine, K.; Kita, K.; Morita, K.; Yasuda, J.

Title

5-amino levulinic acid inhibits SARS-CoV-2 infection in vitro.

Source

Biochemical and Biophysical Research Communications; 2021. 545:203-207. 30 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The current COVID-19 pandemic requires urgent development of effective therapeutics. 5-amino levulinic acid (5-ALA) is a naturally synthesized amino acid and has been used for multiple purposes including as an anticancer therapy and as a dietary supplement due to its high bioavailability. In this study, we demonstrated that 5-ALA treatment potently inhibited infection of SARS-CoV-2, a causative agent of COVID-19, in cell culture. The antiviral effects could be detected in both human and non-human cells, without significant cytotoxicity. Therefore, 5-ALA is worth to be further investigated as an antiviral drug candidate for COVID-19.

Publication Type

Journal article.

<709>

Accession Number

20210080068

Author

Bracciano, D.

Title

Water conservation during COVID-19: view from the front lines.

Source

Journal AWWA; 2021. 113(2):44-52.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Early in 2020, when the severity of COVID-19 became evident, US water utilities implementing conservation programs had to act quickly to determine how to mitigate changes in their conservation programs and staffing. Prioritization and collaboration helped utility staff settle into their new way of working, which included adapting to online connection with customers and each other. These adaptations might lead to permanent changes. Thanks in large part to the power of technology, many water conservation and customer education programs have continued, with interest and participation even increasing in some cases.

Publication Type

Journal article.

<710>

Accession Number

20210079989

Author

Baxter, C.; Karim, Q. A.; Karim, S. S. A.

Title

Identifying SARS-CoV-2 infections in South Africa: balancing public health imperatives with saving lives. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:221-225.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Publication Type

Journal article.

<711>

Accession Number

20210079982

Author

Reznikov, L. R.; Norris, M. H.; Rohit Vashisht; Bluhm, A. P.; Li DanMeng; Liao, Y. S. J.; Brown, A.; Butte, A. J.; Ostrov, D. A.

Title

Identification of antiviral antihistamines for COVID-19 repurposing. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:173-179. 32 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

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Country of Publication

Netherlands

Abstract

There is an urgent need to identify therapies that prevent SARS-CoV-2 infection and improve the outcome of COVID-19 patients. Although repurposed drugs with favorable safety profiles could have significant benefit, widely available prevention or treatment options for COVID-19 have yet to be identified. Efforts to identify approved drugs with in vitro activity against SARS-CoV-2 resulted in identification of antiviral sigma-1 receptor ligands, including antihistamines in the histamine-1 receptor binding class. We identified antihistamine candidates for repurposing by mining electronic health records of usage in population of more than 219,000 subjects tested for SARS-CoV-2. Usage of diphenhydramine, hydroxyzine and azelastine was associated with reduced incidence of SARS-CoV-2 positivity in subjects greater than age 61. We found diphenhydramine, hydroxyzine and azelastine to exhibit direct antiviral activity against SARS-CoV-2 in vitro. Although mechanisms by which specific antihistamines exert antiviral effects is not clear, hydroxyzine, and possibly azelastine, bind Angiotensin Converting Enzyme-2 (ACE2) and the sigma-1 receptor as off-targets. Clinical studies are needed to measure the effectiveness of diphenhydramine, hydroxyzine and azelastine for disease prevention, for early intervention, or as adjuvant therapy for severe COVID-19.

Publication Type

Journal article.

<712>

Accession Number

20210079981

Author

Jans, D. A.; Wagstaff, K. M.

Title

The broad spectrum host-directed agent ivermectin as an antiviral for SARS-CoV-2 ? (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:163-172.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

FDA approved for parasitic indications, the small molecule ivermectin has been the focus of growing attention in the last 8 years due to its potential as an antiviral. We first identified ivermectin in a high throughput compound library screen as an agent potentially able to inhibit recognition of the nuclear localizing Human Immunodeficiency Virus-1 (HIV-1) integrase protein by the host importin (IMP) α /beta1 heterodimer, and recently demonstrated its ability to bind directly to IMP α to cause conformational changes that prevent its function in nuclear import of key viral as well as host proteins. Cell culture experiments have shown robust antiviral action towards a whole range of viruses, including HIV-1, dengue, Zika and West Nile Virus, Venezuelan equine encephalitis virus, Chikungunya, pseudorabies virus, adenovirus, and SARS-CoV-2 (COVID-19). Close to 70 clinical trials are currently in progress worldwide for SARS-CoV-2. Although few of these studies have been completed, the results that are available, as well as those from observational/retrospective studies, indicate clinical benefit. Here we discuss the case for ivermectin as a host-directed broad-spectrum antiviral agent, including for SARS-CoV-2.

Publication Type

Journal article.

<713>

Accession Number

20210079970

Author

Sarver, D. C.; Wong, G. W.

Title

Obesity alters Ace2 and Tmprss2 expression in lung, trachea, and esophagus in a sex-dependent manner: implications for COVID-19. (Special Issue: COVID-19.)

Source

Biochemical and Biophysical Research Communications; 2021. 538:92-96. 39 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Obesity is a major risk factor for SARS-CoV-2 infection and COVID-19 severity. The underlying basis of this association is likely complex in nature. The host-cell receptor angiotensin converting enzyme 2 (ACE2) and the type II transmembrane serine protease (TMPRSS2) are important for viral cell entry. It is unclear whether obesity alters expression of Ace2 and Tmprss2 in the lower respiratory tract. Here, we show that: (1) Ace2 expression is elevated in the lung and trachea of diet-induced obese male mice and reduced in the

esophagus of obese female mice relative to lean controls; (2) Tmprss2 expression is increased in the trachea of obese male mice but reduced in the lung and elevated in the trachea of obese female mice relative to lean controls; (3) in chow-fed lean mice, females have higher expression of Ace2 in the lung and esophagus as well as higher Tmprss2 expression in the lung but lower expression in the trachea compared to males; and (4) in diet-induced obese mice, males have higher expression of Ace2 in the trachea and higher expression of Tmprss2 in the lung compared to females, whereas females have higher expression of Tmprss2 in the trachea relative to males. Our data indicate diet- and sex-dependent modulation of Ace2 and Tmprss2 expression in the lower respiratory tract and esophagus. Given the high prevalence of obesity worldwide and a sex-biased mortality rate, we discuss the implications and relevance of our results for COVID-19.

Publication Type

Journal article.

<714>

Accession Number

20210079840

Author

Kang Hyunjoo; Yun Sowon; Lee HongMie

Title

Dietary life and mukbang- and cookbang-watching status of university students majoring in food and nutrition before and after COVID-19 outbreak.

Source

Journal of Nutrition and Health; 2021. 54(1):104-115. 24 ref.

Publisher

The Korean Nutrition Society

Location of Publisher

Seoul

Country of Publication

Korea Republic

Abstract

Purpose: With increased time spent at home due to prolonged online classes, this study sought to determine how the coronavirus disease 2019 (COVID-19) pandemic has impacted the mukbang- and cookbang-watching patterns and dietary life of college students. **Methods:** All students majoring in food and nutrition (FN) at a college in Gyeonggi, Korea, participated in the survey in April 2019 (M/F=36/106) and June 2020 (M/F -37/130) and data were analyzed using SPSS 26.0. **Results:** Compared to students responding in 2019, those in 2020 reported more frequently eating alone ($p < 0.01$) and cooking ($p < 0.01$), and evaluated their diets better regarding pleasant mealtimes atmosphere ($p < 0.05$), moderation in

drinking ($p < 0.05$), and not consuming excessively delivery foods ($p < 0.001$), processed foods ($p < 0.01$), foods with animal fat ($p < 0.01$), salty foods ($p < 0.01$), and sweets ($p < 0.01$). Although the proportion of respondents who answered that they watched mukbang and cookbang at least occasionally did not change, greater proportions of respondents reported watching both genres frequently ($p < 0.001$, respectively) and spending less time/day in watching mukbang ($p < 0.05$) in 2020 vs. 2019. While they evaluated the effect of mukbang- and cookbang-watching on overall diet similarly, the proportion of respondents that reported feeling as though mukbang-watching prompted them to eat more of less-desirable foods decreased from 54.3% to 41.5% ($p < 0.05$). Diet improvement of participants due to COVID-19 resulted in that the association between frequent mukbang-watching and unhealthier dietary habits in 2019 was not shown in 2020. Conclusion: Our results suggest that the prolonged at-home stays due to COVID-19 might have improved many aspects of diet and decreased undesirable effect of frequent mukbangwatching in case of college students majoring in FN.

Publication Type

Journal article.

<715>

Accession Number

20210079832

Author

Lee Myoungsook

Title

Nutrition agenda during the era of the COVID-19 pandemic. [Korean]

Source

Journal of Nutrition and Health; 2021. 54(1):1-9. 45 ref.

Publisher

The Korean Nutrition Society

Location of Publisher

Seoul

Country of Publication

Korea Republic

Abstract

This review describes the risk factors of the nutrition crisis in coronavirus disease 2019 (COVID-19) infections and suggests precision nutrition against long-term psychological and physiological stress. The mandatory quarantine and the social distancing are associated with an interruption of the lifestyle routine, resulting in psychological (i.e., boredom) and physiological stress. The stress with multiple causes and forms induces over-compensation of energy-dense food, such as sugary comfort food, and is defined as "food craving" because carbohydrates positively affect the psychological stability with serotonin secretion. The

consumption of foods that promote an immune response against viral infections (vitamins & minerals; Cu, folate, Fe, Se, Zn, and Vit A, B6, B12, C, and D), reduce inflammatory cytokines (w-3 fatty acids, Vit D, fibers, and Mg), contain antioxidants (beta-carotene, Vit E, C, Se, and phenolics), and sleep-inducing proteins (serotonin, melatonin, and milk products) is essential. In addition, a reduced Vit D deficiency in winter due to less time spent outdoors under quarantine has been reported to be associated with viral infections. The case fatality rate of COVID-19 was significantly dependent on age, sex, race, and underlying health condition. To prevent malnutrition and cachexia in elderly people, weight loss and muscle wasting should be monitored and controlled. Inadequate protein intake, sedentary lifestyle, and inflammation are significant risk factors for sarcopenia. Moreover, relatively high intakes of fat or carbohydrate compared to low protein intake result in abdominal obesity, which is defined as "sarcopenic obesity." Keeping the food-safety guidelines of COVID-19, this study recommends the consumption of fresh and healthy foods and avoiding sugar, fat, salt, alcohol, and commercially frozen foods.

Publication Type

Journal article.

<716>

Accession Number

20210079616

Author

De-La-Torre, G. E.; Tadele Assefa Aragaw

Title

What we need to know about PPE associated with the COVID-19 pandemic in the marine environment.

Source

Marine Pollution Bulletin; 2021. 163. 43 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Since the COVID-19 outbreak was declared as a global health emergency, the use of multiple types of plastic-based PPEs as a measure to reduce the infection increased tremendously. Recent evidence suggests that the overuse of PPEs during the COVID-19 pandemic is worsening plastic pollution in the marine environment. In this short focus, we discussed the potential sources, fate, and effects of PPE plastic to the marine environment and proposed five key research needs, involving (1) the occurrence and abundance of PPEs, (2) the sources, fate, and drivers of PPEs, (3) PPEs as a source of microplastics, (4) PPEs as a vector of

invasive species and pathogens, and (5) PPEs as a source and vector of chemical pollutants in the marine environment. We suggest that addressing these knowledge gaps will lay the groundwork for improved COVID-19-associated waste management and legislation to prevent marine plastic pollution to continue exacerbating.

Publication Type

Journal article.

<717>

Accession Number

20210079389

Author

Batchu, S. N.; Kaur, H.; Yerra, V. G.; Advani, S. L.; Kabir, M. G.; Liu YouAn; Klein, T.; Advani, A.

Title

Lung and kidney ACE2 and TMPRSS2 in renin-angiotensin system blocker-treated comorbid diabetic mice mimicking host factors that have been linked to severe COVID-19.

Source

Diabetes (New York); 2021. 70(3):759-771. 51 ref.

Publisher

American Diabetes Association, Inc.

Location of Publisher

Alexandria

Country of Publication

USA

Abstract

The causes of the increased risk of severe coronavirus disease 2019 (COVID-19) in people with diabetes are unclear. It has been speculated that renin-angiotensin system (RAS) blockers may promote COVID-19 by increasing ACE2, which severe acute respiratory syndrome coronavirus 2 uses to enter host cells, along with the host protease TMPRSS2. Taking a reverse translational approach and by combining in situ hybridization, primary cell isolation, immunoblotting, quantitative RT-PCR, and liquid chromatography-tandem mass spectrometry, we studied lung and kidney ACE2 and TMPRSS2 in diabetic mice mimicking host factors linked to severe COVID-19. In healthy young mice, neither the ACE inhibitor ramipril nor the AT1 receptor blocker telmisartan affected lung or kidney ACE2 or TMPRSS2, except for a small increase in kidney ACE2 protein with ramipril. In contrast, mice with comorbid diabetes (aging, high-fat diet, and streptozotocin-induced diabetes) had heightened lung ACE2 and TMPRSS2 protein levels and increased lung ACE2 activity. None of these parameters were affected by RAS blockade. ACE2 was similarly upregulated in the kidneys of mice with comorbid diabetes compared with aged controls, whereas TMPRSS2 (primarily distal nephron) was highest in telmisartan-treated animals. Upregulation of lung ACE2 activity in comorbid diabetes may

contribute to an increased risk of severe COVID-19. This upregulation is driven by comorbidity and not by RAS blockade.

Publication Type

Journal article.

<718>

Accession Number

20210079269

Author

Liu JianLi; Vethaak, A. D.; An LiHui; Liu, Q.; Yang YunFei; Ding JianNan

Title

An environmental dilemma for China during the COVID-19 pandemic: the explosion of disposable plastic wastes.

Source

Bulletin of Environmental Contamination and Toxicology; 2021. 106(2):237-240. 14 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

Plastic pollution control has been on top of the political agenda in China. In January 2020, China announced a phased ban on the production and usage of various types of single-use plastics as a solution to environmental pollution problems. However, the outbreak of COVID-19 seems to be a new obstacle to the ban on single-use plastic products. To basically satisfied the daily necessities and contain the spread of SARS-CoV-2 under the background of the regular epidemic prevention and control in China, online ordering, contactless delivery and wearing mask have become an important and feasible way of daily life. However, the unrestrained use of disposable plastic bags, lunch boxes and masks within the nationwide quarantine leads to hundreds of millions of plastics wastes every day. The potential environmental pollution caused by the use of disposable plastic products during the pandemic should arouse social concern. The Chinese government should manage environmental protection in parallel with anti-pandemic endeavors as the situation of the pandemic evolves.

Publication Type

Journal article.

<719>

Accession Number

20210079231

Author

Kuljit Singh; Alka Rao

Title

Probiotics: a potential immunomodulator in COVID-19 infection management.

Source

Nutrition Research; 2021. 87:1-12. 84 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

COVID-19 caused by SARS-CoV-2 is an ongoing global pandemic. SARS-CoV-2 affects the human respiratory tract's epithelial cells, leading to a proinflammatory cytokine storm and chronic lung inflammation. With numerous patients dying daily, a vaccine and specific antiviral drug regimens are being explored. Probiotics are live microorganisms with proven beneficial effects on human health. While probiotics as nutritional supplements are long practiced in different cuisines across various countries, the emerging scientific evidence supports the antiviral and general immune-strengthening health effects of the probiotics. Here, we present an overview of the experimental studies published in the last 10 years that provide a scientific basis for unexplored probiotics as a preventive approach to respiratory viral infections. Based on collated insights from these experimental data, we identify promising microbial strains that may serve as lead prophylactic and immune-boosting probiotics in COVID-19 management.

Publication Type

Journal article.

<720>

Accession Number

20210079228

Author

Moyano, D.

Title

Recommendations for the teams that manage school canteens in the public health emergency of COVID-19 in Argentina. [Spanish]

Source

Archivos Latinoamericanos de Nutricion; 2020. 70(3):215-234. 70 ref.

Publisher

Sociedad Latinoamericana de Nutricion

Location of Publisher

Caracas

Country of Publication

Venezuela

Abstract

The impact of the pandemic caused by COVID-19 may deepen the situations of malnutrition, where it will be necessary to adapt food programs to this new context. The objective of this work was to present the methodology and the main results of the process of formulating a federal guide based on scientific evidence and adapted to the reality of the child and adolescent population that attend school canteens in the 24 jurisdictions of Argentina. It was observed that the modalities for the implementation of SC during the pandemic were: food modules (the most frequent); food modules delivered at school with regular SC support and, food and/or snacks delivered daily. There was little evidence at the global and regional level on specific recommendations applied to the implementation of SC, although recommendations on hygiene and food handling were found. Based on a participatory process among key actors, specific recommendations were obtained according to the dimensions of food and nutrition security (FNS). It is concluded that it is necessary to increase participatory experiences in the design of recommendations based on evidence, adapted to the territory and that assume a comprehensive approach from the dimensions of FNS.

Publication Type

Journal article.

<721>

Accession Number

20210079172

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Author

Dubowitz, T.; Dastidar, M. G.; Troxel, W. M.; Beckman, R.; Nugroho, A.; Siddiqi, S.; Cantor, J.; Baird, M.; Richardson, A. S.; Hunter, G. P.; Mendoza-Graf, A.; Collins, R. L.

Title

Food insecurity in a low-income, predominantly African American cohort following the COVID-19 pandemic.

Source

American Journal of Public Health; 2021. 111(3):494-497. 12 ref.

Publisher

American Public Health Association

Location of Publisher

Washington

Country of Publication

USA

Abstract

Objectives. To examine the impact of COVID-19 shutdowns on food insecurity among a predominantly African American cohort residing in low-income racially isolated neighborhoods. **Methods.** Residents of 2 low-income African American food desert neighborhoods in Pittsburgh, Pennsylvania, were surveyed from March 23 to May 22, 2020, drawing on a longitudinal cohort (n = 605) previously followed from 2011 to 2018. We examined longitudinal trends in food insecurity from 2011 to 2020 and compared them with national trends. We also assessed use of food assistance in our sample in 2018 versus 2020. **Results.** From 2018 to 2020, food insecurity increased from 20.7% to 36.9% (t = 7.63; P < .001) after steady declines since 2011. As a result of COVID-19, the United States has experienced a 60% increase in food insecurity, whereas this sample showed a nearly 80% increase, widening a preexisting disparity. Participation in the Supplemental Nutrition Assistance Program (52.2%) and food bank use (35.9%) did not change significantly during the early weeks of the pandemic. **Conclusions.** Longitudinal data highlight profound inequities that have been exacerbated by COVID-19. Existing policies appear inadequate to address the widening gap.

Publication Type

Journal article.

<722>

Accession Number

20210079163

Author

Rogaski, R.

Title

The Manchurian plague and COVID-19: China, the United States, and the "Sick Man", then and now.
(Special Issue: COVID-19 & history.)

Source

American Journal of Public Health; 2021. 111(3):423-429. 42 ref.

Publisher

American Public Health Association

Location of Publisher

Washington

Country of Publication

USA

Abstract

In this article, I explore the historical resonances between China's 1911 pneumonic plague and our current situation with COVID-19. At the turn of the 20th century, China was labeled "the Sick Man of the Far East": a once-powerful country that had become burdened by opium addiction, infectious disease, and an ineffective government. In 1911, this weakened China faced an outbreak of pneumonic plague in Manchuria that killed more than 60 000 people. After the 1911 plague, a revolutionized China radically restructured its approach to public health to eliminate the stigma of being "the Sick Man." Ironically, given the US mishandling of the COVID pandemic, observers in today's China are now calling the United States "the Sick Man of the West": a country burdened by opioid addiction, infectious disease, and an ineffective government. The historical significance of the phrase "Sick Man"-and its potential to now be associated with the United States-highlights the continued links between epidemic control and international status in a changing world. This historical comparison also reveals that plagues bring not only tragedy but also the opportunity for change.

Publication Type

Journal article.

<723>

Accession Number

20210079090

Author

Milewska, A.; Chi Ying; Szczepanski, A.; Barreto-Duran, E.; Dabrowska, A.; Botwina, P.; Obloza, M.; Liu, K.; Liu Dan; Guo Xiling; Ge YiYue; Li JingXin; Cui LunBiao; Ochman, M.; Urlik, M.; Rodziewicz-Motowidlo, S.; Zhu FengCai; Szczubialka, K.; Nowakowska, M.; Pyrc, K.

Title

HTCC as a polymeric inhibitor of SARS-CoV-2 and MERS-CoV.

Source

Journal of Virology; 2021. 95(4). 31 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

Among seven coronaviruses that infect humans, three (severe acute respiratory syndrome coronavirus [SARS-CoV], Middle East respiratory syndrome coronavirus [MERS-CoV], and the newly identified severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) are associated with a severe, life-threatening respiratory infection and multiorgan failure. We previously proposed that the cationically modified chitosan N-(2-hydroxypropyl)-3-trimethylammonium chitosan chloride (HTCC) is a potent inhibitor of human coronavirus NL63 (HCoV-NL63). Next, we demonstrated the broad-spectrum antiviral activity of the compound, as it inhibited all low-pathogenicity human coronaviruses (HCoV-NL63, HCoV-229E, HCoV-OC43, and HCoV-HKU1). Here, using in vitro and ex vivo models of human airway epithelia, we show that HTCC effectively blocks MERS-CoV and SARS-CoV-2 infection. We also confirmed the mechanism of action for these two viruses, showing that the polymer blocks the virus entry into the host cell by interaction with the S protein.

Publication Type

Journal article.

<724>

Accession Number

20210079056

Author

Veer Karuna; Vir Vivek; Nidhi Verma; Ravinder Singh

Title

Affiliation and essence of SARS CoV2 (COVID-19) on blood parameters of infected patients: a retrospective study.

Source

Indian Journal of Pathology & Microbiology; 2021. 64(1):111-116.

Publisher

Indian Association of Pathologists & Microbiologists

Location of Publisher

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Chandigarh

Country of Publication

India

Abstract

Background: Till date, SARS CoV2 (COVID-19) is a pandemic viral infection in the world with the main and strong impact on respiratory airway, but this virus can affect any system of the human body. Aims: This research is aimed to dictating the effect of SARS CoV2 infections on hematological, biochemical, and arterial blood gas parameters by using their mean values. Settings and Design: This retrospective study was included a total no. of 97 SARS CoV2 positive patients from 27 March to 15 May 2020. All positive patients were consented and took all the significant details. Materials and Methods: We review the total 97 COVID-19 positive patients after obtaining all the hematological and other relevant clinical data from laboratory and medical records. The subjects were tabulated into three categories named; admitted (Gp A), discharged (Gp B), and expired (Gp C) patients and compared their hematological, biochemical parameters, and arterial blood gas analysis by using blood or serum and processed by proper methods. Statistical Analysis: The data was cleaned, edited, checked for completeness, and processed then entered in SPSS version 20 statistical software. Results: Blood samples were collected of all positive patients. Most of the patients had X-ray changes. Blood parameters showed that patients who were expired (Gp-C) suffered from anemia, lymphopenia, leucocytosis, neutrophilia, and thrombocytopenia with high ALT, pCO₂ and low pO₂ than admitted and expelled patients. Conclusions: Result from this study provides that WBC count, absolute lymphocyte count, neutrophil count, and pO₂ were independently associated and an important forecaster of mortality from SARS CoV2. All healthcare provides to regularly monitor above parameters indicators of COVID-19 infected patients to improve their quality of life and to reduce the risk of mortality rate.

Publication Type

Journal article.

<725>

Accession Number

20210079047

Author

Takagi, A.; Matsui, M.

Title

Identification of HLA-A*02:01-restricted candidate epitopes derived from the nonstructural polyprotein 1a of SARS-CoV-2 that may be natural targets of CD8+ T cell recognition in vivo.

Source

Journal of Virology; 2021. 95(5).

Publisher

American Society for Microbiology (ASM)

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Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

COVID-19 vaccines are being rapidly developed and human trials are under way. Almost all of these vaccines have been designed to induce antibodies targeting the spike protein of SARS-CoV-2 in expectation of neutralizing activities. However, nonneutralizing antibodies are at risk of causing antibody-dependent enhancement. Further, the longevity of SARS-CoV-2-specific antibodies is very short. Therefore, in addition to antibody-inducing vaccines, novel vaccines developed on the basis of SARS-CoV-2-specific cytotoxic T lymphocytes (CTLs) should be considered. Here, we attempted to identify HLA-A*02:01-restricted CTL epitopes derived from the nonstructural polyprotein 1a of SARS-CoV-2. Eighty-two peptides were first predicted as epitope candidates based on bioinformatics. Fifty-four of the 82 peptides showed high or medium binding affinities to HLA-A*02:01. HLA-A*02:01 transgenic mice were then immunized with each of the 54 peptides encapsulated into liposomes. The intracellular cytokine staining assay revealed that 18 out of 54 peptides were active as CTL epitopes because of the induction of gamma interferon (IFN- γ)-producing CD8⁺ T cells. Of the 18 peptides, 10 peptides were chosen for the following analyses because of their high responses. To identify dominant CTL epitopes, mice were immunized with liposomes containing the mixture of the 10 peptides. Some peptides were shown to be statistically predominant over the other peptides. Surprisingly, all mice immunized with the liposomal 10-peptide mixture did not show the same reaction pattern to the 10 peptides. There were three response patterns, suggesting the existence of an immunodominance hierarchy following peptide vaccination, which may provide more variations in the epitope selection for designing CTL-based COVID-19 vaccines.

Publication Type

Journal article.

<726>

Accession Number

20210078926

Author

Pironi, L.; Sasdelli, A. S.; Ravaioli, F.; Baracco, B.; Battaiola, C.; Bocedi, G.; Brodosi, L.; Leoni, L.; Mari, G. A.; Musio, A.

Title

Malnutrition and nutritional therapy in patients with SARS-CoV-2 disease.

Source

Clinical Nutrition; 2021. 40(3):1330-1337.

Publisher

Elsevier Ltd

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Location of Publisher

Oxford

Country of Publication

UK

Abstract

Rationale: The prevalence of malnutrition and the provided nutritional therapy were evaluated in all the patients with SARS-CoV-2 infection (COVID-19) hospitalized in a 3rd level hospital in Italy. Methods: A one-day audit was carried out recording: age, measured or estimated body weight (BW) and height, body mass index (BMI, kg/m²), 30-day weight loss (WL), comorbidities, serum albumin and C-reactive protein (CRP: nv < 0.5 mg/dL), hospital diet (HD) intake, oral nutritional supplements (ONS), enteral (EN) and parenteral nutrition (PN). Modified NRS-2002 tool and GLIM criteria were used for nutritional risk screening and for the diagnosis of malnutrition, respectively. Results: A total of 268 patients was evaluated; intermediate care units (IMCUs, 61%), sub-intensive care units (SICUs, 8%), intensive care units (ICUs, 17%) and rehabilitation units (RUs, 14%): BMI: <18.5, 9% (higher in RUs, p = 0.008) and 30, 13% (higher in ICUs, p = 0.012); WL 5%, 52% (higher in ICUs and RUs, p = 0.001); CRP >0.5: 78% (higher in ICUs and lower in RUs, p < 0.001); Nutritional risk and malnutrition were present in 77% (higher in ICUs and RUs, p < 0.001) and 50% (higher in ICUs, p = 0.0792) of the patients, respectively. HD intake 50%, 39% (higher in IMCUs and ICUs, p < 0.001); ONS, EN and PN were prescribed to 6%, 13% and 5%, respectively. Median energy and protein intake/kg BW were 25 kcal and 1.1 g (both lower in ICUs, p < 0.05) respectively. Conclusions: Most of the patients were at nutritional risk, and one-half of them was malnourished. The frequency of nutritional risk, malnutrition, disease/inflammation burden and decrease intake of HD differed among the intensity of care settings, where the patients were managed according to the severity of the disease. The patient energy and protein intake were at the lowest limit or below the recommended amounts, indicating the need for actions to improve the nutritional care practice.

Publication Type

Journal article.

<727>

Accession Number

20210078872

Author

Marino, L. V.; Valla, F. V.; Tume, L. N.; Jotterand-Chaparro, C.; Moullet, C.; Latten, L.; Joosten, K.; Verbruggen, S. C. A. T.

Title

Considerations for nutrition support in critically ill children with COVID-19 and paediatric inflammatory multisystem syndrome temporally associated with COVID-19.

Source

Clinical Nutrition; 2021. 40(3):895-900. 34 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

There are reports of children COVID-19 or COVID-19 like symptoms with hyperinflammatory multisystem syndrome, ARDS, gastrointestinal and atypical Kawasaki disease presenting to PICU worldwide temporally associated with COVID-19, for which there are important nutrition support considerations. As a result, the European Society of Pediatric and Neonatal Intensive Care - Metabolism, Endocrine and Nutrition group (ESPNIC-MEN) and paediatric nutritionists working in PICUs are being consulted regarding nutrition management of critically ill children with COVID-19 or COVID-19 like symptoms. Therefore, the aim of this short report is to provide a summary of nutrition support recommendations for critically ill children with COVID-19. They are based on the ESPNIC-MEN section recommendations published in January 2020 and surviving sepsis recommendations from February 2020.

Publication Type

Journal article.

<728>

Accession Number

20210078777

Author

Takeda, T.; Kitajima, M.; Huong, N. T. T.; Setiyawan, A. S.; Setiadi, T.; Hung, D. T.; Haramoto, E.

Title

Institutionalising wastewater surveillance systems to minimise the impact of COVID-19: cases of Indonesia, Japan and Viet Nam.

Source

Water Science and Technology; 2021. 83(2):251-256. 21 ref.

Publisher

IWA Publishing

Location of Publisher

London

Country of Publication

UK

Abstract

This mini review describes the current status and challenges regarding institutionalisation of wastewater surveillance systems against COVID-19. Monitoring SARS-CoV-2 in wastewater has been proposed to be a potential tool to understand the actual prevalence of COVID-19 in the community, and it could be an effective approach to monitor the trend during the COVID-19 pandemic. However, challenges to institutionalise wastewater surveillance systems are still abundant and unfolding at a rapid rate given that the international understanding regarding the scientific knowledge and socio-political impacts of COVID-19 are in the developing stages. To better understand the existing challenges and bottlenecks, a comparative study between Japan, Viet Nam, and Indonesia was carried out in the present study. Through gaining a better understanding of common issues as well as issues specific to each country, we hope to contribute to building a robust multistakeholder system to monitor SARS-CoV-2 in wastewater as an effective disease surveillance system for COVID-19.

Publication Type

Journal article.

<729>

Accession Number

20210078574

Author

Solis-Garcia, G.; Gutierrez-Velez, A.; Pescador Chamorro, I.; Zamora-Flores, E.; Vigil-Vazquez, S.; Rodriguez-Corrales, E.; Sanchez-Luna, M.

Title

Epidemiology, management and risk of SARS-CoV-2 transmission in a cohort of newborns born to mothers diagnosed with COVID-19 infection. [Spanish]

Source

Anales de Pediatría; 2021. 94(3):173-178. 26 ref.

Publisher

Elsevier Doyma

Location of Publisher

Barcelona

Country of Publication

Spain

Abstract

Introduction: The impact of maternal SARS-CoV-2 infection and its risk of vertical transmission is still not well known. Recommendations from scientific societies seek to provide safety for newborns without

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compromising the benefits of early contact. The aim of the study is to describe characteristics and evolution of newborns born to mothers with SARS-CoV-2 infection, as well as the implemented measures following recommendations from the Sociedad Espanola de Neonatologia. Methods: Observational, prospective and single-center cohort study. A specific circuit was designed for mothers with SARS-CoV-2 infection and their newborns. Epidemiological and clinical data were collected. PCR were performed in newborns at delivery and at 14 days of age. Results: 73 mothers and 75 newborns were included in the study. 95.9% of maternal infections were diagnosed during the third trimester of pregnancy, 43.8% were asymptomatic. Median gestational age was 38 weeks (IQR: 37-40), 25.9% of newborns required admission to Neonatology. Skin-to-skin mother care was performed in 68% of newborns, 80% received exclusive maternal or donated breast milk during hospital stay. No positive PCR results were observed in newborns at delivery, one case of positive PCR was observed in an asymptomatic neonate at 14 days of age. Conclusions: Risk of SARS-CoV-2 transmission is low when complying to the recommendations issued by Sociedad Espanola de Neonatologia, allowing rooming-in and promoting breastfeeding.

Publication Type

Journal article.

<730>

Accession Number

20210078489

Author

Xing YaRu; Zhao Bing; Yin Lin; Guo MingQuan; Shi HuiChun; Zhu ZhaoQin; Zhang Lin; He JuAn; Ling Yun; Gao MengLu; Lu HongZhou; Mao EnQiang; Zhang LiJun

Title

Vitamin C supplementation is necessary for patients with coronavirus disease: an ultra-high-performance liquid chromatography-tandem mass spectrometry finding.

Source

Journal of Pharmaceutical and Biomedical Analysis; 2021. 196. 35 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

To administer vitamin C (VC) with precision to patients with the coronavirus disease (COVID-19), we developed an ultra-high-performance liquid chromatography-tandem mass spectrometry (UPLC-MS/MS) method to assess plasma VC concentrations. 31 patients with COVID-19 and 51 healthy volunteers were

enrolled. VC stability was evaluated in blood, plasma, and precipitant-containing stabilizers. A proportion of 7.7% of VC was degraded in blood at room temperature (RT) (approximately 20-25 degrees C) at 1.5 h post administration with respect to the proportion degraded at 0.5 h, but without statistical difference. VC was stable in plasma for 0.75 h at RT, 2 h at 4 degrees C, 5 days at -40 degrees C, and 4 h in precipitant-containing stabilizer (2% oxalic acid) at RT. The mean plasma concentration of VC in patients with COVID-19 was 2.00 mg/L (0.5-4.90) (n = 8), which was almost 5-fold lower than that in healthy volunteers (9.23 mg/L (3.09.35.30)) (n = 51). After high-dose VC treatment, the mean VC concentration increased to 13.46 mg/L (3.93.34.70) (n = 36), higher than that in healthy volunteers, and was within the normal range (6-20 mg/L). In summary, we developed a simple UPLC-MS/MS method to quantify VC in plasma, and determined the duration for which the sample remained stable. VC levels in patients with COVID-19 were considerably low, and supplementation at 100 mg/kg/day is considered highly essential.

Publication Type

Journal article.

<731>

Accession Number

20210078488

Author

Habler, K.; Brugel, M.; Teupser, D.; Liebchen, U.; Scharf, C.; Schonermarck, U.; Vogeser, M.; Paal, M.

Title

Simultaneous quantification of seven repurposed COVID-19 drugs remdesivir (plus metabolite GS-441524), chloroquine, hydroxychloroquine, lopinavir, ritonavir, favipiravir and azithromycin by a two-dimensional isotope dilution LC-MS/MS method in human serum.

Source

Journal of Pharmaceutical and Biomedical Analysis; 2021. 196. 30 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: The present COVID-19 pandemic has prompted worldwide repurposing of drugs. The aim of the present work was to develop and validate a two-dimensional isotope-dilution liquid chromatography tandem mass spectrometry (ID-LC-MS/MS) method for accurate quantification of remdesivir and its active metabolite GS-441524, chloroquine, hydroxychloroquine, lopinavir, ritonavir, favipiravir and azithromycin in serum; drugs that have gained attention for repurposing in the treatment of COVID-19. **Methods:**

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Following protein precipitation, samples were separated with a two-dimensional ultra-high performance liquid chromatography (2D-UHPLC) setup, consisting of an online solid phase extraction (SPE) coupled to an analytical column. For quantification, stable isotope-labelled analogues were used as internal standards for all analytes. The method was validated on the basis of the European Medicines Agency bioanalytical method validation protocol. Results: Detuning of lopinavir and ritonavir allowed simultaneous quantification of all analytes with different concentration ranges and sensitivity with a uniform injection volume of 5 L. The method provided robust validation results with inaccuracy and imprecision values of 9.59% and 11.1% for all quality controls. Conclusion: The presented method is suitable for accurate and simultaneous quantification of remdesivir, its metabolite GS-441525, chloroquine, hydroxychloroquine, lopinavir, ritonavir, favipiravir and azithromycin in human serum. The quantitative assay may be an efficient tool for the therapeutic drug monitoring of these potential drug candidates in COVID-19 patients in order to increase treatment efficacy and safety.

Publication Type

Journal article.

<732>

Accession Number

20210078376

Author

Sami, R.; Alshehry, G.; Elgarni, E.; Helal, M.

Title

Saudi community care awareness food facts, nutrients, immune system and COVID-19 prevention in Taif city among different age categories.

Source

African Journal of Food, Agriculture, Nutrition and Development; 2021. 21(1):17213-17233. 38 ref.

Publisher

Rural Outreach Programme

Location of Publisher

Nairobi

Country of Publication

Kenya

Abstract

In December 2019, a new coronavirus was discovered in China, sparking a serious pandemic of human acute respiratory syndrome which spread worldwide at a fast rate. Public health knowledge and awareness is required on food facts, nutrients and immune system for coronavirus prevention. The study designed to investigate COVID-19 impact on dietary intake, knowledge, habits, activities and lifestyle among the people in Taif City. Data collection was conducted from the 4th to the 29th of June 2020. A total of 312

respondents, aged from 12 to 65 years were involved in the survey. About 81% of the respondents were with high education level (bachelor's degree or higher). Results show that the most frequent diseases in descending order of magnitude were obesity, dental problems, high blood pressure, diabetes, low immunity and colon problems. Data collected showed an increase in food intake frequency during the epidemic except for (4.44, 41.82, 12.86, and 30.51%), like fish, bread, pasta and fast food, respectively. Two hundred and eight (208) of the respondents preferred to use olive oil in their diet due to its several benefits. The majority of the respondents preferred star anise (124) followed by sagebrush (44) as herbal drinks in descending order, respectively. During the COVID-19 pandemic, the study population reported to eat more herbs such as garlic (169), ginger (152) and curcuma (103) to enhance the immune system. Multivitamin (66) and vitamin D intake were reported as the highest, while vitamin B Group and ascorbic acid recorded similar intakes values. Mineral supplement intake in descending order were reported as calcium (57), iron (37) zinc (29) and selenium (5). Around 119 of the respondents had no knowledge on the exact source of COVID-19, while 113 reported as an infection from a bat to humans. The respondents recognized the symptoms as fever (270) and shortness of breath (249). Observing social distance and hand washing were chosen by most respondents (301) as a way of preventing the infection. Two cases of smokers quit the smoking habit; a minor increase rate of training activity was reported; almost all of the respondents embraced the consumption of functional foods, oils, herbs, roots, colored fruits and vegetables and special supplements during COVID-19. Knowledge on covid-19 had significant positive impact on the respondents' healthy eating habits, physical exercise, water intake and reduced smoking. Findings recommended intensifying efforts in sensitizing the public to a better understanding of the COVID-19 pandemic and strengthening the immune system.

Publication Type

Journal article.

<733>

Accession Number

20210078098

Author

Loui K. Alsulimani; Abdulrahman M. Farhat; Renad A. Borah; Jumanah A. Alkhalifah; Salman M. Alyaseen; Sumaeah M. Alghamdi; Malak J. Bajnaid

Title

Health care worker burnout during the COVID-19 pandemic : a across-sectional survey study in Saudi Arabia.

Source

Saudi Medical Journal; 2021. 42(3):306-314. 30 ref.

Publisher

Prince Sultan Military Medical City

Location of Publisher

Riyadh

Country of Publication

Saudi Arabia

Abstract

Objectives: To estimate the prevalence of burnout among health care workers (HCWs) who are working in Saudi Arabia during the Coronavirus disease 2019 (COVID-19) pandemic, and explore individual and work-related factors associated with burnout in this population. **Methods:** In this cross-sectional study conducted between June to August of 2020, we invited HCWs through social channels to complete a questionnaire. The questionnaire inquired about demographics, factors related to burnout, and used the Copenhagen Burnout Inventory scale to indicate burnout. A total of 646 HCWs participated. **Results:** The mean (SD) age of participants was 34.1 (9.5) years. Sixty-one percent were female. The prevalence of burnout among HCWs was 75%. Significant factors associated with burnout were age, job title, years of experience, increased working hours during the pandemic, average hours of sleep per day, exposure to patients with COVID-19, number of times tested for COVID-19, and perception of being pushed to deal with COVID-19 patients. **Conclusion:** Health care workers as frontline workers, face great challenges during this pandemic, because of the nature of their work. Efforts should be made to promote psychological resilience for HCWs during pandemics. This study points out the factors that should be invested in and the factors that may not be influential.

Publication Type

Journal article.

<734>

Accession Number

20210078097

Author

Shahin, W.; Rabie, W.; Osama Alyosof; Mohammed Alasiri; Mohamed Alfaki; Elamin Mahmoud; Muwaffak Hijazi; Huda El-Faraidi; Hassan Alahmari

Title

COVID-19 in children ranging from asymptomatic to a multi-system inflammatory disease: a single-center study.

Source

Saudi Medical Journal; 2021. 42(3):299-305. 22 ref.

Publisher

Prince Sultan Military Medical City

Location of Publisher

Riyadh

Country of Publication

Saudi Arabia

Abstract

Objectives: To identify clinical and laboratory characteristics of the Saudi children with confirmed COVID-19. **Methods:** Eighty-eight children (0-14 years) with COVID-19 who were admitted to Prince Sultan Military Medical City (PSMMC), Riyadh, Saudi Arabia from April to June 2020 were recruited. **Results:** Mean age was 5.74 +or- 4.7 years with 41 (49.4%) males and 42 (50.6%) females. The length of hospital stay (LOS) ranged from 1 to 17 days. The main source of infection was infected family members. Mean values of C-reactive protein (CRP), serum ferritin, and lactate dehydrogenase (LDH) were noticeably above normal. Degree of severity and length of stay was significantly correlated with lymphopenia ($r = -0.36$; $p = 0.001$), Original Article whereas it was positively correlated with absolute neutrophil count and with high inflammatory markers, such as CRP, LDH, and others. **Conclusions:** Identifying the clinical and laboratory characteristics of the Saudi children with confirmed COVID-19 will improve understanding of this disease's presentation and will help put rapid and proper management strategies into place to face this pandemic. A high index of suspicion is needed for cases presenting with multi-system inflammatory disease, which represented 5.7% of the included study population.

Publication Type

Journal article.

<735>

Accession Number

20210077799

Author

Hakim, M. P.; Zanetta, L. D.; Cunha, D. T. da

Title

Should I stay, or should I go? Consumers' perceived risk and intention to visit restaurants during the COVID-19 pandemic in Brazil.

Source

Food Research International; 2021. 141. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

This study aimed to verify how consumers' intention to visit restaurants during the pandemic is affected by consumers' risk perception and different types of trust. The sample was composed of 546 consumers from 89 different cities in Brazil. An adapted 43 items questionnaire with 5-point scales was administered, and analyzed using structural equation modeling. The results indicate that consumers' trust in a restaurant and brand, fair price, solidarity with the restaurant sector, disease denial, and health surveillance trust predict intention to visit a restaurant during the COVID-19 pandemic. Age has significant moderated effects, reducing disease denial effects. The trust in restaurants and brands was the factor with the largest effect size. In a multigroup analysis, it was found that solidarity with the sector does not affect the intention to visit restaurants for consumers without formal work. It is discussed the implications of an increased consumers' risk perception, directly affecting their intentions. Special attention to consumers' trust and fair price perception is fundamental, given consumers' solidary inclination toward helping the restaurant sector. These aspects must be recognized by restaurant owners and managers to be improved and be used to attract consumers.

Publication Type

Journal article.

<736>

Accession Number

20210077687

Author

Schulien, I.; Kemming, J.; Oberhardt, V.; Wild, K.; Seidel, L. M.; Killmer, S.; Sagar, Daul, F.; Lago, M. S.; Decker, A.; Luxenburger, H.; Binder, B.; Bettinger, D.; Sogukpinar, O.; Rieg, S.; Panning, M.; Huzly, D.; Schwemmler, M.; Kochs, G.; Waller, C. F.; Nieters, A.; Duerschmied, D.; Emmerich, F.; Mei, H. E.; Schulz, A. R.; Llewellyn-Lacey, S.; Price, D. A.; Boettler, T.; Bengsch, B.; Thimme, R.; Hofmann, M.; Neumann-Haefelin, C.

Title

Characterization of pre-existing and induced SARS-CoV-2-specific CD8+ T cells.

Source

Nature Medicine; 2020. 27(1):78-85. 25 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Emerging data indicate that SARS-CoV-2-specific CD8+ T cells targeting different viral proteins are detectable in up to 70% of convalescent individuals^{1,2,3,4,5}. However, very little information is currently available about the abundance, phenotype, functional capacity and fate of pre-existing and induced SARS-CoV-2-specific CD8+ T cell responses during the natural course of SARS-CoV-2 infection. Here, we define a set of optimal and dominant SARS-CoV-2-specific CD8+ T cell epitopes. We also perform a high-resolution ex vivo analysis of pre-existing and induced SARS-CoV-2-specific CD8+ T cells, applying peptide-loaded major histocompatibility complex class I (pMHCI) tetramer technology. We observe rapid induction, prolonged contraction and emergence of heterogeneous and functionally competent cross-reactive and induced memory CD8+ T cell responses in cross-sectionally analyzed individuals with mild disease following SARS-CoV-2 infection and three individuals longitudinally assessed for their T cells pre- and post-SARS-CoV-2 infection. SARS-CoV-2-specific memory CD8+ T cells exhibited functional characteristics comparable to influenza-specific CD8+ T cells and were detectable in SARS-CoV-2 convalescent individuals who were seronegative for anti-SARS-CoV-2 antibodies targeting spike (S) and nucleoprotein (N). These results define cross-reactive and induced SARS-CoV-2-specific CD8+ T cell responses as potentially important determinants of immune protection in mild SARS-CoV-2 infection.

Publication Type

Journal article.

<737>

Accession Number

20210077686

Author

Quer, G.; Radin, J. M.; Gadaleta, M.; Baca-Motes, K.; Ariniello, L.; Ramos, E.; Kheterpal, V.; Topol, E. J.; Steinhubl, S. R.

Title

Wearable sensor data and self-reported symptoms for COVID-19 detection.

Source

Nature Medicine; 2021. 27(1):73-77. 35 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Traditional screening for COVID-19 typically includes survey questions about symptoms and travel history, as well as temperature measurements. Here, we explore whether personal sensor data collected over time

may help identify subtle changes indicating an infection, such as in patients with COVID-19. We have developed a smartphone app that collects smartwatch and activity tracker data, as well as self-reported symptoms and diagnostic testing results, from individuals in the United States, and have assessed whether symptom and sensor data can differentiate COVID-19 positive versus negative cases in symptomatic individuals. We enrolled 30,529 participants between 25 March and 7 June 2020, of whom 3,811 reported symptoms. Of these symptomatic individuals, 54 reported testing positive and 279 negative for COVID-19. We found that a combination of symptom and sensor data resulted in an area under the curve (AUC) of 0.80 (interquartile range (IQR): 0.73-0.86) for discriminating between symptomatic individuals who were positive or negative for COVID-19, a performance that is significantly better ($P < 0.01$) than a model that considers symptoms alone (AUC = 0.71; IQR: 0.63-0.79). Such continuous, passively captured data may be complementary to virus testing, which is generally a one-off or infrequent sampling assay.

Publication Type

Journal article.

<738>

Accession Number

20210076740

Author

Ciorba, A.; Corazzi, V.; Skarzynski, P. H.; Skarzynska, M. B.; Bianchini, C.; Pelucchi, S.; Hatzopoulos, S.

Title

Don't forget ototoxicity during the SARS-CoV-2 (COVID-19) pandemic!

Source

International Journal of Immunopathology and Pharmacology; 2020. 34. 15 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Aim of this communication is to remind clinical professionals to be aware of ototoxic side effects of several specific drugs proposed for the treatment of the new virus SARS-CoV-2 (Covid-19). In particular, chloroquine and hydroxychloroquine, azithromycin, as well as antiviral drugs such as remdesivir, favipiravir and lopinavir can all present potential ototoxic side effects. The data in the literature do not offer specific information on their potential synergetic effects nor on their interactions.

Publication Type

<739>

Accession Number

20210076686

Author

Dumitriu, D.; Emeruwa, U. N.; Hanft, E.; Liao, G. V.; Ludwig, E.; Lauren Walzer, do; Arditì, B.; Saslaw, M.; Andrikopoulou, M.; Scripps, T.; Baptiste, C.; Khan, A.; Breslin, N.; Rubenstein, D.; Simpson, L. L.; Margaret H. Kyle, B.; Friedman, A. M.; Hirsch, D. S.; Miller, R. S.; Fernandez, C. R.; Fuchs, K. M.; Keown, M. K.; Glassman, M. E.; Stephens, A.; Gupta, A.; Sultan, S.; Sibblies, C.; Whittier, S.; Abreu, W.; Akita, F.; Penn, A.; Mary E. D'Alton; Orange, J. S.; Goffman, D.; Saiman LiSa; Stockwell, M. S.; Gyamfi-Bannerman, C.

Title

Outcomes of neonates born to mothers with severe acute respiratory syndrome coronavirus 2 infection at a large medical center in New York city.

Source

JAMA Pediatrics; 2021. 175(2):157-167. 47 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

Country of Publication

USA

Abstract

Importance: Limited data on vertical and perinatal transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and health outcomes of neonates born to mothers with symptomatic or asymptomatic coronavirus disease 2019 (COVID-19) are available. Studies are needed to inform evidence-based infection prevention and control (IP&C) policies. **Background:** To describe the outcomes of neonates born to mothers with perinatal SARS-CoV-2 infection and the IP&C practices associated with these outcomes. **Design, Setting, and Participants:** This retrospective cohort analysis reviewed the medical records for maternal and newborn data for all 101 neonates born to 100 mothers positive for or with suspected SARS-CoV-2 infection from March 13 to April 24, 2020. Testing for SARS-CoV-2 was performed using Cobas (Roche Diagnostics) or Xpert Xpress (Cepheid) assays. Newborns were admitted to well-baby nurseries (WBNs) (82 infants) and neonatal intensive care units (NICUs) (19 infants) in 2 affiliate hospitals at a large academic medical center in New York, New York. Newborns from the WBNs roomed-in with their mothers, who were required to wear masks. Direct breastfeeding after appropriate hygiene was encouraged. **Exposures:** Perinatal exposure to maternal asymptomatic/mild vs severe/critical COVID-19. **Main Outcomes and Measures:** The primary outcome was newborn SARS-CoV-2 testing results. Maternal COVID-19 status was classified as asymptomatic/mildly symptomatic vs severe/critical. Newborn

characteristics and clinical courses were compared across maternal COVID-19 severity. Results: In total, 141 tests were obtained from 101 newborns (54 girls [53.5%]) on 0 to 25 days of life (DOL-0 to DOL-25) (median, DOL-1; interquartile range [IQR], DOL-1 to DOL-3). Two newborns had indeterminate test results, indicative of low viral load (2.0%; 95% CI, 0.2%-7.0%); 1 newborn never underwent retesting but remained well on follow-up, and the other had negative results on retesting. Maternal severe/critical COVID-19 was associated with newborns born approximately 1 week earlier (median gestational age, 37.9 [IQR, 37.1-38.4] vs 39.1 [IQR, 38.3-40.2] weeks; P = .02) and at increased risk of requiring phototherapy (3 of 10 [30.0%] vs 6 of 91 [7.0%]; P = .04) compared with newborns of mothers with asymptomatic/mild COVID-19. Fifty-five newborns were followed up in a new COVID-19 Newborn Follow-up Clinic at DOL-3 to DOL-10 and remained well. Twenty of these newborns plus 3 newborns followed up elsewhere had 32 nonroutine encounters documented at DOL-3 to DOL-25, and none had evidence of SARS-CoV-2 infection, including 6 with negative retesting results. Conclusions and Relevance: No clinical evidence of vertical transmission was identified in 101 newborns of mothers positive for or with suspected SARS-CoV-2 infection, despite most newborns rooming-in and direct breastfeeding practices.

Publication Type

Journal article.

<740>

Accession Number

20210076652

Author

Sayali Savant; Shraddha Srinivasan; Kruthiventi, A. K.

Title

Potential nutraceuticals for COVID-19.

Source

Nutrition and Dietary Supplements; 2021. 13(25-51):25-51. 146 ref.

Publisher

Dove Medical Press Ltd

Location of Publisher

Macclesfield

Country of Publication

UK

Abstract

SARS-CoV-2 infection has caused, and is continuing to cause, considerable human suffering. Studies on the viral pathogenesis has resulted in convergent findings from several lines of evidence on the entry and spread of the virus in the host. These studies have also revealed a strong association between innocuous inflammation, ageing and metabolic disorders, with SARS-CoV-2 infection and its prognosis. Diet helps

modulate inflammation, and nutraceuticals can inhibit viral entry. Hence, we have collated literature on antiviral nutraceuticals effective against other similar coronaviruses. The objective of this study is to comprehensively review available information on the antiviral activity of nutraceuticals and to discuss the implications of these findings in designing a diet that would boost the innate immunity and act as preventive care against COVID-19. This review highlights the fundamental impact of nutraceuticals and diet on inhibition of viral entry and provides a new perspective on the prevention and treatment of COVID-19.

Publication Type

Journal article.

<741>

Accession Number

20210076627

Author

Yadav, S. K.; Kumar Gaurav; Goonj Johri; Jaiswal, S. K.; Jha, C. K.; Nishtha Yadav

Title

A systematic review of the role of hypovitaminosis D in coronavirus disease-19 (COVID-19) infection and mortality: is there a role of recommending high dose vitamin D supplementation?

Source

Human Nutrition & Metabolism; 2021. 23. 28 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

There are several studies correlating Vitamin D deficiency and risk of poorer outcomes in coronavirus disease-19 (COVID-19) patients. Our aim was to perform systematic review of the existing literature on the role of vitamin D deficiency in COVID-19 infection and mortality and whether high dose vitamin D supplementation might be helpful in reducing risk and improving outcomes. A systematic search was conducted in PubMed, EMBASE and Cochrane Library up to 5th June 2020. The quality of included studies was evaluated using the Downs and Black risk of bias scale. The available literature was critically appraised. 61 reports were shortlisted. After removing duplicates and reassessing eligibility, three articles were included in final review. The three included studies in this review scored from 10 to 17 (out of 31) on the risk of bias assessment tool; all of them scored low on the power criterion based on the low number of subjects included in these studies. On reporting and selection of bias, all the studies scored an average or above average. All studies failed to reach an average score on confounding. Two studies which showed

positive correlation between Vitamin D levels and COVID-19 infection rates scored low on risk of bias assessment. Study showing no impact of Vitamin D scored average. There is only circumstantial evidence that links outcomes of COVID-19 and vitamin D status. Role of high dose Vitamin D against COVID-19 needs to be thoroughly evaluated in observational studies or high-quality randomized controlled studies before recommending it.

Publication Type

Journal article.

<742>

Accession Number

20210076605

Author

Seyedin, H.; Moslehi, S.; Sakhaei, F.; Dowlati, M.

Title

Developing a hospital preparedness checklist to assess the ability to respond to the COVID-19 pandemic.

Source

Eastern Mediterranean Health Journal; 2021. 27(2):131-141. 19 ref.

Publisher

World Health Organization, Regional Office for the Eastern Mediterranean

Location of Publisher

Cairo

Country of Publication

Egypt

Abstract

Background: During epidemics and pandemics, health systems, and especially hospitals, face many challenges in the management of patients and staff. Hospital preparedness measures are critical for hospitals to respond effectively to the admission and management of COVID-19 patients. Ministry of health policy for pandemics must cover the ability of hospitals to respond to COVID-19. **Aims:** The aim of this study was to develop a checklist for evaluating the preparedness of hospitals to respond to the COVID-19 pandemic. **Methods:** We searched for and reviewed available evidence, including the literature and guidelines presented by related organizations. Due to the COVID-19 outbreak, face-to-face interview was not possible so we used telephone and video connections, mobile applications and email for unstructured interviews. Checklist development was carried out by a multidisciplinary panel of experts. **Results:** After applying the opinions of the experts, the final checklist had 2 main domains: measures at national and measures at hospital level. Preparedness at national level was categorized into 3 aspects that are implemented by the health ministry. Preparedness at hospital level was categorized in 24 subgroups. **Conclusion:** Hospital preparedness for admission and management of COVID-19 patients is essential. A

checklist for the assessment of hospital preparedness for COVID-19 patient management and hospital management was designed and developed. Our preparedness assessment checklist is an expanded tool that provides clear and practical guidance that can be adapted for any hospital admitting COVID-19 patients.

Publication Type

Journal article.

<743>

Accession Number

20210076290

Author

Villanueva-Carrasco, R.; Dominguez Samames, R.; Salazar de la Cruz, M.; Cuba-Fuentes, M. S.

Title

Peruvian primary care response to the COVID-19 pandemic. [Spanish]

Source

Anales de la Facultad de Medicina; 2020. 81(3):337-341. 37 ref.

Publisher

Universidad Nacional Mayor de San Marcos

Location of Publisher

Lima

Country of Publication

Peru

Abstract

Since the first case reported by the new coronavirus in Peru, different strategies have been implemented to improve health services, with great emphasis on the hospital response. In this article, we review the actions that Peruvian government tried to implement in Primary Care. We propose key measures such as the implementation of fever clinics in primary care, home health care, insertion of family doctors and intensive use of telephone consultations and other ICTs, their adoption and implementation in the Peruvian reality, would achieve a more effective response towards the COVID-19 pandemic.

Publication Type

Journal article.

<744>

Accession Number

20210076203

Author

Gregorio, P. C.; Cunha, R. S. da; Biagini, G.; Bosquetti, B.; Budag, J.; Ortiz, A.; Sanchez-Nino, M. D.; Barreto, F. C.; Stingham, A. E. M.

Title

Chloroquine may induce endothelial injury through lysosomal dysfunction and oxidative stress.

Source

Toxicology and Applied Pharmacology; 2021. 414.

Publisher

Elsevier Inc

Location of Publisher

Orlando

Country of Publication

USA

Abstract

COVID-19 is a pandemic with no end in sight. There is only one approved antiviral agent but global stocks are deemed insufficient. Despite in vitro antiviral activity, clinical trials of chloroquine and hydroxychloroquine were disappointing, and they may even impair outcomes. Chloroquine causes zebroid deposits reminiscent of Fabry disease (alpha-galactosidase A deficiency) and endothelial cells are key targets of COVID-19. We have explored the effect of chloroquine on cultured endothelial cells and its modulation by recombinant alpha-galactosidase A (agalactosidase). Following dose-response studies, 0.5 g/mL chloroquine was added to cultured human endothelial cells. Neutral red and LysoTracker were used to assess lysosomes. Cytotoxicity was evaluated by the 3-(4, 5-dimethylthiazol-2-yl)-(2, 5-diphenyltetrazolium bromide) - MTT assay and cell stress by assessing reactive oxygen species (ROS) and nitric oxide (NO). In endothelial cells, chloroquine induced dose-dependent cytotoxicity at in vitro test concentrations for COVID-19 therapy. At a sublethal concentration, chloroquine significantly induced the accumulation of acid organelles ($P < 0.05$), increased ROS levels, and decreased NO production ($P < 0.05$). These adverse effects of chloroquine on endothelial cell biology were decreased by agalactosidase-beta ($P < 0.05$). Chloroquine-induced endothelial cell cytotoxicity and stress is attenuated by agalactosidase-beta treatment. This suggests that endothelial cell injury may contribute to the failure of chloroquine as therapy for COVID-19 and may be at least in part related to causing dysfunction of the lysosomal enzyme alpha-galactosidase A.

Publication Type

Journal article.

<745>

Accession Number

20210076020

Author

Voo TeckChuan; Reis, A. A.; Thome, B.; Ho, C. W. L.; Tam, C. C.; Kelly-Cirino, C.; Emanuel, E.; Beca, J. P.; Littler, K.; Smith, M. J.; Parker, M.; Kass, N.; Gobat, N.; Lei RuiPeng; Upshur, R.; Hurst, S.; Munsaka, S.

Title

Immunity certification for COVID-19: ethical considerations.

Source

Bulletin of the World Health Organization; 2021. 99(2):155-161. 34 ref.

Publisher

World Health Organization

Location of Publisher

Geneva

Country of Publication

Switzerland

Abstract

Restrictive measures imposed because of the coronavirus disease 2019 (COVID-19) pandemic have resulted in severe social, economic and health effects. Some countries have considered the use of immunity certification as a strategy to relax these measures for people who have recovered from the infection by issuing these individuals a document, commonly called an immunity passport. This document certifies them as having protective immunity against severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the virus that causes COVID-19. The World Health Organization has advised against the implementation of immunity certification at present because of uncertainty about whether long-term immunity truly exists for those who have recovered from COVID-19 and concerns over the reliability of the proposed serological test method for determining immunity. Immunity certification can only be considered if scientific thresholds for assuring immunity are met, whether based on antibodies or other criteria. However, even if immunity certification became well supported by science, it has many ethical issues in terms of different restrictions on individual liberties and its implementation process. We examine the main considerations for the ethical acceptability of immunity certification to exempt individuals from restrictive measures during the COVID-19 pandemic. As well as needing to meet robust scientific criteria, the ethical acceptability of immunity certification depends on its uses and policy objectives and the measures in place to reduce potential harms, and prevent disproportionate burdens on non-certified individuals and violation of individual liberties and rights.

Publication Type

Journal article.

<746>

Accession Number

20210076019

Author

Cole, J.; Dodds, K.

Title

Unhealthy geopolitics: can the response to COVID-19 reform climate change policy?

Source

Bulletin of the World Health Organization; 2021. 99(2):148-154. 54 ref.

Publisher

World Health Organization

Location of Publisher

Geneva

Country of Publication

Switzerland

Abstract

The geopolitics of pandemics and climate change intersect. Both are complex and urgent problems that demand collective action in the light of their global and trans-boundary scope. In this article we use a geopolitical framework to examine some of the tensions and contradictions in global governance and cooperation that are revealed by the pandemic of coronavirus disease 2019 (COVID-19). We argue that the pandemic provides an early warning of the dangers inherent in weakened international cooperation. The world's states, with their distinct national territories, are reacting individually rather than collectively to the COVID-19 pandemic. Many countries have introduced extraordinary measures that have closed, rather than opened up, international partnership and cooperation. Border closures, restrictions on social mixing, domestic purchase of public health supplies and subsidies for local industry and commerce may offer solutions at the national level but they do not address the global strategic issues. For the poorest countries of the world, pandemics join a list of other challenges that are exacerbated by pressures of scarce resources, population density and climate disruption. COVID-19's disproportionate impact on those living with environmental stresses, such as poor air quality, should guide more holistic approaches to the geopolitical intersection of public health and climate change. By discussing unhealthy geopolitics, we highlight the urgent need for a coordinated global response to addressing challenges that cannot be approached unilaterally.

Publication Type

Journal article.

<747>

Accession Number

20210076016

Author

Jin HuaJie; Wang HaiYin; Li Xiao; Zheng WeiWei; Ye ShanKe; Zhang Sheng; Zhou JiaHui; Pennington, M.

Title

Economic burden of COVID-19, China, January-March, 2020: a cost-of-illness study.

Source

Bulletin of the World Health Organization; 2021. 99(2):112-124. 34 ref.

Publisher

World Health Organization

Location of Publisher

Geneva

Country of Publication

Switzerland

Abstract

Objective: To estimate the economic cost of coronavirus disease 19 (COVID-19) in 31 provincial-level administrative regions and in total, in China. **Methods:** We used data from government reports, clinical guidelines and other publications to estimate the main cost components of COVID-19 during 1 January-31 March 2020. These components were: identification and diagnosis of close contacts; suspected cases and confirmed cases of COVID-19; treatment of COVID-19 cases; compulsory quarantine of close contacts and suspected cases; and productivity losses for all affected residents. Primary outcomes were total health-care and societal costs. **Findings:** The total estimated health-care and societal costs associated with COVID-19 were 4.26 billion Chinese yuan (Yen; 0.62 billion United States dollars, US\$) and Yen 2646.70 billion (US\$ 383.02 billion), respectively. Inpatient care accounted for 44.2% (Yen 0.95 billion/Yen 2.15 billion) of routine health-care costs followed by medicines, accounting for 32.5% (Yen 0.70 billion/Yen 2.15 billion). Productivity losses accounted for 99.8% (Yen 2641.61 billion/Yen 2646.70 billion) of societal costs, which were mostly attributable to the effect of movement-restriction policies on people who did not have COVID-19. Societal costs were most sensitive to salary costs and number of working days lost due to movement-restriction policies. Hubei province had the highest health-care cost while Guangdong province had the highest societal cost. **Conclusion:** Our results highlight the high economic burden of the COVID-19 outbreak in China. The control measures to prevent the spread of disease resulted in substantial costs from productivity losses amounting to 2.7% (US\$ 382.29 billion/US\$ 14.14 trillion) of China's annual gross domestic product.

Publication Type

Journal article.

<748>

Accession Number

20210076013

Author

Mackworth-Young, C. R. S.; Chingono, R.; Mavodza, C.; McHugh, G.; Tembo, M.; Chikwari, C. D.; Weiss, H. A.; Rusakaniko, S.; Ruzario, S.; Bernays, S.; Ferrand, R. A.

Title

Community perspectives on the COVID-19 response, Zimbabwe.

Source

Bulletin of the World Health Organization; 2021. 99(2):85-91. 32 ref.

Publisher

World Health Organization

Location of Publisher

Geneva

Country of Publication

Switzerland

Abstract

Objective: To investigate community and health-care workers' perspectives on the coronavirus disease 2019 (COVID-19) pandemic and on early pandemic responses during the first 2 weeks of national lockdown in Zimbabwe. **Methods:** Rapid qualitative research was carried out between March and April 2020 via phone interviews with one representative from each of four community-based organizations and 16 health-care workers involved in a trial of community-based services for young people. In addition, information on COVID-19 was collected from social media platforms, news outlets and government announcements. Data were analysed thematically. **Findings:** Four themes emerged: (i) individuals were overloaded with information but lacked trusted sources, which resulted in widespread fear and unanswered questions; (ii) communities had limited ability to comply with prevention measures, such as social distancing, because access to long-term food supplies and water at home was limited and because income had to be earned daily; (iii) health-care workers perceived themselves to be vulnerable and undervalued because of a shortage of personal protective equipment and inadequate pay; and (iv) other health conditions were sidelined because resources were redirected, with potentially wide-reaching implications. **Conclusion:** It is important that prevention measures against COVID-19 are appropriate for the local context. In Zimbabwe, communities require support with basic needs and access to reliable information to enable them to follow prevention measures. In addition, health-care workers urgently need personal protective equipment and adequate salaries. Essential health-care services and medications for conditions other than COVID-19 must also continue to be provided to help reduce excess mortality and morbidity.

Publication Type

Journal article.

<749>

Accession Number

20210075992

Author

Behera, D.

Title

TB control in India in the COVID era.

Source

Indian Journal of Tuberculosis; 2021. 68(1):128-133.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

COVID-19 pandemic has disturbed the delivery of health care in almost all countries of the world. This has affected mostly the public health control programs. Because of lock downs, restrictions in movement, psychological fear of contacting the disease in health care facilities, diversion of health care workers for containment and management of COVID-19, utilization of diagnostic facilities like CBNAAT machines for COVID work, conversion of hospitals for care of these patients, financial diversion etc has created issues in the NTEP to focus on TB control in India. Case notification and other areas of the program to achieve End TB by 2025 have suffered. Various ways of overcoming these difficulties have been discussed.

Publication Type

Journal article.

<750>

Accession Number

20210075818

Author

Park, S. S.; Oh, H. Y.; Hong, D. J.

Title

Mass screening of healthcare personnel for SARS-CoV-2 in the Northern Emirates.

Source

Journal of Hospital Infection; 2021. 108:52-54.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Journal article.

<751>

Accession Number

20210075716

Author

Zhang JianShu; Deng XueXue; Liu Hong; Xu XiaoRu; Fang RongHua

Title

Evaluation of the mental health status of community healthcare workers during the COVID-19 outbreak.

Source

Medicine (Baltimore); 2021. 100(6). 38 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Coronavirus disease 2019 (COVID-19) has rapidly spread across China and many countries worldwide, and community healthcare workers at the front lines of disease control are under high physical and mental pressure. This study investigated the mental health status of community healthcare workers during the COVID-19 outbreak in Sichuan Province, China. This cross-sectional study, which was conducted from February 8 to 18, 2020, involved 450 healthcare workers in 18 community hospitals who had worked for more than 1 year. A self-designed demographic data questionnaire and Symptom Checklist 90 (SCL-90)

were provided to the participants through links and quick response codes. The respondents completed and submitted the questionnaires online. Binary logistic regression was used to analyze multiple factors related to the SCL-90 scores of these community healthcare workers in China. For the 450 community healthcare workers who completed the study, the median scores in each SCL-90 factor were lower than the Chinese norms, and 119 (26.4%) participants were SCL-90 positive. Among them, 178 participants were doctors and had the highest scores on most SCL-90 factors except for obsessive compulsiveness, hostility, phobic anxiety, and psychoticism ($P < 0.05$). The top 3 positive items for doctors working in the community were obsessive compulsiveness, others, and somatization, and those among nurses were obsessive compulsiveness, others, and hostility. Sex, type of workers, and occupational exposure risk to COVID-19 were independent risk factors for the mental health status of the community healthcare workers. Overall, the community healthcare workers experienced psychological problems during the COVID-19 outbreak in Sichuan Province, China. More attention should be paid to the mental health of these workers, and their mental status should be regularly assessed. Psychological interventions should be provided to those with serious mental problems through networks or telephone visits.

Publication Type

Journal article.

<752>

Accession Number

20210075615

Author

Erinle, K. O.; Ogwu, M. C.; Evivie SmithE.; Zaheer, M. S.; Ogunyemi SolabomiO.; Adeniran SamsonO.

Title

Impacts of COVID-19 on agriculture and food security in developing countries: potential mitigation strategies.

Source

CAB Reviews; 2021. 16(016):1-16. 187 ref.

Publisher

CABI

Location of Publisher

Wallingford

Country of Publication

UK

Abstract

Despite efforts to reduce global food insecurity, success has been limited in many developing countries due to numerous inherent problems. The challenges and vulnerabilities associated with food security in these countries have been exacerbated by the current coronavirus (COVID-19) pandemic. As a rapid

response strategy to minimize the coronavirus' spread, countries have put in place different forms of movement restrictions, locally and globally, which have therefore affected agricultural production, food availability, and accessibility. Focusing on the four pillars of food security, this paper provides an overview of the pandemic's impacts on food availability, accessibility, utilization, and stability drawing examples from different developing countries. The report also suggests some response strategies that could be adopted or (where already in existence) strengthened to promote food security in developing countries, during and after a pandemic/crisis. The strategies of major concern to ensure continued availability and accessibility of food during and after a pandemic/crisis include (i) establishment of community-based food networks, (ii) food and agriculture data collection and maintenance, (iii) stabilizing food prices, (iv) infrastructural development for food security, (v) increasing investment in agricultural research and policies, (vi) adopting modern farming practices, and (vii) reduction and management of agricultural and food waste.

Publication Type

Journal article.

<753>

Accession Number

20210075327

Author

Chee ChziChing [Chee, C. C. J.]; Kong WeiWei [Kong, W. W. S.]; Tan ZhiJing; Lim YiKhai; Pearce, M. S.; Ong, E. L. C.

Title

Perceptions, attitude, responses, knowledge and emotional well-being (PARKE) of COVID-19 among students at Newcastle University Medicine Malaysia (NUMed).

Source

Journal of Global Health Reports; 2021. 5(e2021002). 24 ref.

Publisher

International Society of Global Health

Location of Publisher

Edinburgh

Country of Publication

UK

Abstract

Background: Adherence to preventative measures designed to mitigate transmission of COVID-19 depends on individual's understanding and perception of COVID-19. The objective of this study was to assess the knowledge, perceptions, behavioural adaptation and psychological well-being related to COVID-19 among students attending Newcastle University Medicine Malaysia. Methods: A cross-sectional study was conducted using convenience sampling of students. The self-administered online questionnaire was sent

via email in Google forms format between 18 April and 30 April 2020. The questionnaire focused on sociodemographic, perception, attitude and behavioural responses, knowledge and sources of information and anxiety level. Results: 326 university students with mean age of 21.8 (S.D 2.3) participated in this study. More females (n=236) took part in the study than males (n=90). Most students (80%) believed that they knew how to protect themselves. More than two-thirds (68%) of students strongly agreed that COVID-19 was a serious public health issue. Most students (>90%) practised the recommended measures, except for avoid touching of eyes, nose and mouth with unwashed hands (82%). Wearing a facemask was positively associated with behavioural uptake in university students. Conclusions: This study showed a good attitude, behavioural responses, knowledge level and emotional responses among NUMed students towards COVID-19.

Publication Type

Journal article.

<754>

Accession Number

20210075203

Author

Firoz Ahmed

Title

A network-based analysis reveals the mechanism underlying vitamin D in suppressing cytokine storm and virus in SARS-CoV-2 infection.

Source

Frontiers in Immunology; 2020. 11(December). 67 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Background: SARS-CoV-2 causes ongoing pandemic coronavirus disease of 2019 (COVID-19), infects the cells of the lower respiratory tract that leads to a cytokine storm in a significant number of patients resulting in severe pneumonia, shortness of breathing, respiratory and organ failure. Extensive studies suggested the role of Vitamin D in suppressing cytokine storm in COVID-19 and reducing viral infection; however, the precise molecular mechanism is not clearly known. In this work, bioinformatics and systems biology approaches were used to understand SARS-CoV-2 induced cytokine pathways and the potential mechanism of Vitamin D in suppressing cytokine storm and enhancing antiviral response. Results: This

study used transcriptome data and identified 108 differentially expressed host genes (DEHGs) in SARS-CoV-2 infected normal human bronchial epithelial (NHBE) cells compared to control. Then, the DEHGs was integrated with the human protein-protein interaction data to generate a SARS-CoV-2 induced host gene regulatory network (SiHgrn). Analysis of SiHgrn identified a sub-network "Cluster 1" with the highest MCODE score, 31 up-regulated genes, and predominantly associated immune and inflammatory response. Interestingly, the iRegulone tool identified that "Cluster 1" is under the regulation of transcription factors STAT1, STAT2, STAT3, POU2F2, and NFkB1, collectively referred to as "host response signature network". Functional enrichment analysis with NDEx revealed that the "host response signature network" is predominantly associated with critical pathways, including "cytokines and inflammatory response", "non-genomic action of Vitamin D", "the human immune response to tuberculosis", and "lung fibrosis". Finally, in-depth analysis and literature mining revealed that Vitamin D binds with its receptor and could work through two different pathways: (i) it inhibits the expression of pro-inflammatory cytokines through blocking the TNF induced NFkB1 signaling pathway; and (ii) it initiates the expression of interferon-stimulating genes (ISGs) for antiviral defense program through activating the IFN-a induced Jak-STAT signaling pathway. Conclusion: This comprehensive study identified the pathways associated with cytokine storm in SARS-CoV-2 infection. The proposed underlying mechanism of Vitamin D could be promising in suppressing the cytokine storm and inducing a robust antiviral response in severe COVID-19 patients. The finding in this study urgently needs further experimental validations for the suitability of Vitamin D in combination with IFN-a to control severe COVID-19.

Publication Type

Journal article.

<755>

Accession Number

20210075181

Author

Fagre, A. C.; Manhard, J.; Adams, R.; Eckley, M.; Zhan, S.; Lewis, J.; Rocha, S. M.; Woods, C.; Kuo, K.; Liao WuxiAng; Li Lin; Corper, A.; Challa, D.; Mount, E.; Tumanut, C.; Tjalkens, R. B.; Aboellail, T.; Fan XiaoMin; Schountz, T.

Title

A potent SARS-CoV-2 neutralizing human monoclonal antibody that reduces viral burden and disease severity in Syrian hamsters.

Source

Frontiers in Immunology; 2020. 11(December). 64 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The emergence of COVID-19 has led to a pandemic that has caused millions of cases of disease, variable morbidity and hundreds of thousands of deaths. Currently, only remdesivir and dexamethasone have demonstrated limited efficacy, only slightly reducing disease burden, thus novel approaches for clinical management of COVID-19 are needed. We identified a panel of human monoclonal antibody clones from a yeast display library with specificity to the SARS-CoV-2 spike protein receptor binding domain that neutralized the virus in vitro. Administration of the lead antibody clone to Syrian hamsters challenged with SARS-CoV-2 significantly reduced viral load and histopathology score in the lungs. Moreover, the antibody interrupted monocyte infiltration into the lungs, which may have contributed to the reduction of disease severity by limiting immunopathological exacerbation. The use of this antibody could provide an important therapy for treatment of COVID-19 patients.

Publication Type

Journal article.

<756>

Accession Number

20210075066

Author

Hinton, R.; Armstrong Corinne; Eriana Asri; Baesel, K.; Barnett, S.; Blauvelt, C.; Buang SaidatulNorbayaBt; Bury, L.; Das, J. K.; Franz-Vasdeki, J.; Milman, H. M.; Murray, J.; Palma, S.; Renner, I.; Roche, M.; Saint, V.; Simpson, S.; Lucy Singh; McGhie, D. V.; Ukhova, D.; Dijk, J. van; Xinico, S.; Fogstad, H.; Graham, W.; Kuruvilla, S.

Title

Specific considerations for research on the effectiveness of multisectoral collaboration: methods and lessons from 12 country case studies.

Source

Globalization and Health; 2021. 17(18):(01 February 2021). 45 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The success of the Sustainable Development Goals (SDGs) is predicated on multisectoral collaboration (MSC), and the COVID-19 pandemic makes it more urgent to learn how this can be done better. Complex challenges facing countries, such as COVID-19, cut across health, education, environment, financial and other sectors. Addressing these challenges requires the range of responsible sectors and intersecting services - across health, education, social and financial protection, economic development, law enforcement, among others - transform the way they work together towards shared goals. While the necessity of MSC is recognized, research is needed to understand how sectors collaborate, inform how to do so more efficiently, effectively and equitably, and ascertain similarities and differences across contexts. To answer these questions and inform practice, research to strengthen the evidence-base on MSC is critical. Methods: This paper draws on a 12-country study series on MSC for health and sustainable development, in the context of the health and rights of women, children and adolescents. It is written by core members of the research coordination and country teams. Issues were analyzed during the study period through 'real-time' discussions and structured reporting, as well as through literature reviews and retrospective feedback and analysis at the end of the study. Results: We identify four considerations that are unique to MSC research which will be of interest to other researchers, in the context of COVID-19 and beyond: (1) use theoretical frameworks to frame research questions as relevant to all sectors and to facilitate theoretical generalizability and evolution; (2) specifically incorporate sectoral analysis into MSC research methods; (3) develop a core set of research questions, using mixed methods and contextual adaptations as needed, with agreement on criteria for research rigor; and (4) identify shared indicators of success and failure across sectors to assess MSCs. Conclusion: In responding to COVID-19 it is evident that effective MSC is an urgent priority. It enables partners from diverse sectors to effectively convene to do more together than alone. Our findings have practical relevance for achieving this objective and contribute to the growing literature on partnerships and collaboration. We must seize the opportunity here to identify remaining knowledge gaps on how diverse sectors can work together efficiently and effectively in different settings to accelerate progress towards achieving shared goals.

Publication Type

Journal article.

<757>

Accession Number

20210075023

Author

Zhang Ying; Tian LingYun; Li Wan; Wen XiMao; Wu HongMan; Gong Rule; Zeng LanMan; Zhou Feng; Liu ZhenRu; Tang ZiYuan; Wu AnHua; Huang Xun

Title

Mental health status among Chinese healthcare-associated infection control professionals during the outbreak of coronavirus disease 2019: a national cross-sectional survey.

Source

Medicine (Baltimore); 2021. 100(5). 40 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

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Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Recently, the coronavirus disease 2019 (COVID-19) epidemic has greatly threatened global public health. The responsibility of healthcare-associated infection control professionals (ICPs) is to prevent and control the nosocomial infections. The mental health status of ICPs deserves more attention, however, the correlational research is still lacking. This study aims to investigate the incidence and risk factors of mental health status among ICPs in China during the outbreak of COVID-19. A national cross-sectional survey was performed. The online questionnaire was completed by 9228 ICPs from 3776 hospitals throughout China. Data collection tools were used, including demographics data questionnaire, the Chinese version of the 12-item general health questionnaire (GHQ-12) and the Chinese version of the psychological capital questionnaire (PCQ) for medical staff. Univariate and multivariable analyses were conducted. The total score of mental health of Chinese ICPs was 3.45 +or- 2.57.5608 (60.77%) ICPs might have mental health problems. The psychological capital was in the upper-middle level with an average score of 3.72 +or- 0.38. An increased mental health problem risk was associated with the greater self-efficacy and working in the public hospital; a significantly lower risk was obtained by working in the second-class hospital rather than in the third-class hospitals. Besides, mental health problem risk of ICPs working in hospitals of the western economic region or northeast economic region was more significant than that in hospitals of the central economic region. However, a lower risk was caused by the unmarried than married, and working years in department 1 year contributed to the lower risk than that >20 years. Moreover, fewer working hours per week, higher values of hope, and optimism each were contributed to a lower risk. Chinese healthcare-associated ICPs were under different levels of mental health problems in fighting against COVID-19. More importantly, we should actively deal with the mental health problem of ICPs and help them get rid of psychological disorders.

Publication Type

Journal article.

<758>

Accession Number

20210074997

Author

Debes, J. D.; Quadri, N. S.; Amir Sultan; Yousif, M.; Ali, S. I.; Kayandabila, J.; Ijeoma, I.; Sebambulidde, K. S.; Ochola, L.; Moussa, A.

Title

Risk of healthcare worker burnout in Africa during the COVID-19 pandemic.

Source

Annals of Global Health; 2021. 87(1). 4 ref.

Publisher

Levy Library Press

Location of Publisher

New York

Country of Publication

USA

Abstract

COVID-19 is now impacting every country in Africa and healthcare workers (HCWs) across the continent remain susceptible to professional burnout. We designed a 43-question survey addressing multiple aspects of the COVID-19 pandemic. The survey was anonymous, distributed via email and phone messaging to 13 countries in Africa. We obtained 489 analyzable responses. 49% of HCWs reported a decrease in income, with the majority experiencing between 1-25% salary reduction. Sixty-six percent reported some access to personal protective equipment (PPE), 20% had no access to PPE and only 14% reported proper access. Strikingly, the percentage reporting never feeling depressed changed from 61% before the pandemic to 31% during the pandemic, with an increase in daily depression from 2% to 20%. We found no association between depression and change in income, household size, availability of PPE or lockdown. Safety concerns related to stigma from being HCWs affected 56% of respondents.

Publication Type

Correspondence.

<759>

Accession Number

20210074969

Author

Liu Lei; Shi Feng; Tu Pei; Chen Chen; Zhang Ming; Li XiaoGuang; Li Chang

Title

Arbidol combined with the Chinese medicine Lianhuaqingwen capsule versus arbidol alone in the treatment of COVID-19.

Source

Medicine (Baltimore); 2021. 100(4). 26 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

To evaluate the antiviral effect and safety of arbidol and Lianhuaqingwen Capsule (LH) in treating patients with Coronavirus disease 2019 (COVID-19). 108 patients with COVID-19 were divided into 2 groups, including 40 patients in the arbidol group and 68 patients in the arbidol + LH group. Patients in the arbidol + LH group received 200 mg of arbidol and 1400 mg of LH per 8 hour, and the arbidol group was given 200 mg arbidol per 8 hour. Blood routine examination, blood biochemistry detection, SARS-CoV-2 nucleic acid detection, and chest CT scans were performed to evaluate the clinical effects between the 2 groups. No statistically significant differences were observed between the 2 groups in terms of preoperative characteristics including the baseline characteristics, laboratory indicators, and chest CT. On day 7 after admission, patients in the arbidol + LH group showed a higher level of Lymphocytes count, and a lower level of serum amyloid A and C-reactive protein levels ($P < .05$). Moreover, the median time from admission to the first negative result of the SARS-CoV-2 nucleic acid detection was shorter in the arbidol + LH group ($P < .05$). Analysis based on CT scan results showed a better extinction of lung inflammation in the arbidol + LH group. No apparent side effects were found in both groups. No patients were transferred to the intensive care unit (ICU) treatment. Arbidol combined with LH treatment may be more effective in improving the prognosis and accelerating the SARS-CoV-2 clearance in patients with COVID-19.

Publication Type

Journal article.

<760>

Accession Number

20210074957

Author

Wang Luxi; Li DeXin; Pan ShiXu; Zhai JinHe; Xia Wei; Sun CaiHong; Zou MingYang

Title

The relationship between 2019-nCoV and psychological distress among parents of children with autism spectrum disorder.

Source

Globalization and Health; 2021. 17(23):(25 February 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: The psychological distress caused by COVID-19 may be pronounced among the parents of children with autism spectrum disorder (ASD). This study aimed to investigate psychological distress among parents of children with ASD during the COVID-19 pandemic. **Methods:** A total of 1764 parents of children with ASD and 4962 parents of typically developing (TD) children were recruited. The participants completed an online survey which contained demographic information, the impact due to COVID-19 crisis, resilience, coping styles, anxiety and depression. Hierarchical linear regression was used to assess the contributions of these variables to anxiety and depression. **Results:** After adjusting for demographic variables, the following factors were associated with parents' anxiety and depression symptoms: (i) Whether or not the participants had a child with ASD; (ii) resilience; (iii) coping strategies, and; (iv) the impact due to COVID-19. Among these, the psychological stress caused by COVID-19 played the most important role in parental anxiety (beta = 0.353) and depression (beta = 0.242) symptoms. Parents of children with ASD had lower levels of resilience and positive coping, and used more negative coping strategies than parents of TD children. Among all participants, 8.0 and 24.2% of parents had symptoms of anxiety and depression, respectively. Compared to parents of TD children, more parents of children with ASD exhibited symptoms of anxiety and depression (12.2% vs. 6.6%; 31.0% vs. 21.7%, respectively). **Conclusions:** During the COVID-19 pandemic, parents experienced varying levels of anxiety and depression, particularly, parents of children with ASD. More specific attention should be paid to parental mental health and long-term effective intervention programs, that are targeted towards parents of children with ASD, and such programs should be promoted around China in the wake of the COVID-19 crisis.

Publication Type

Journal article.

<761>

Accession Number

20210074943

Author

Tang SuQin; Xiang ZhenDong

Title

Who suffered most after deaths due to COVID-19? Prevalence and correlates of prolonged grief disorder in COVID-19 related bereaved adults.

Source

Globalization and Health; 2021. 17(19):(11 February 2021). 61 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

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Abstract

Background: Deaths by COVID-19 have left behind nearly 12 million recent bereaved individuals worldwide and researchers have raised concerns that the circumstances of COVID-19 related deaths will lead to a rise prevalence of prolonged grief disorder (PGD) cases. However, to date, no studies have examined the prevalence of PGD among people bereaved due to COVID-19. This study aimed to estimate the prevalence of PGD and investigated demographic and loss-related factors associated with prolonged grief symptoms among Chinese individuals bereaved due to COVID-19. **Methods:** This was a cross-sectional online survey conducted between September 1 and October 3, 2020. A total of 422 Chinese participants (55.5% males; 32.73 [9.31] years old) who lost a close person due to COVID-19 participated in the study. Demographic and loss-related information was collected, and self-reported prolonged grief symptoms were measured by a 13-item International Prolonged Grief Disorder Scale (IPGDS: 1-65) and a 17-item Traumatic Grief Inventory Self Report (TGI-SR: 1-85). Multiple linear regression analysis was used to determine the associated factors of levels of grief symptoms. **Results:** Prevalence of PGD was 37.8% screened by IPGDS and 29.3% by TGI-SR. No difference was found in levels of grief symptoms between participants whose close one died more than 6 months ago and those who experienced the loss less than 6 months ago. More severe prolonged grief symptoms assessed by IPGDS was associated with losing a close person by COVID-19 rather than complications (B: 5.35; 95% CI: 0.54-10.05), losing a partner (B: 7.80; 95% CI: 3.24-12.37), child (B: 8.15; 95% CI: 1.03-15.26), and parent (B: 5.49; 95% CI: 1.49-9.48) rather than losing a relative or a person with other relationship, feeling more traumatic about the loss (B: 1.71; 95% CI: 0.52-2.90), being closer with the deceased (B: 1.60; 95% CI: 0.34-2.86). Moreover, Losing a grandparent (B: 6.62; 95% CI: 0.53-12.71) and having more conflicts with the deceased (B: 1.05; 95% CI: - 0.008-2.11) were related to higher levels of grief symptoms assessed by TGI-SR. **Conclusions:** Echoing researchers' concerns, the prevalence of PGD is high among people bereaved due to COVID-19. Individuals with a higher risk of developing PGD should be identified and bereavement support should be offered as early as possible.

Publication Type

Journal article.

<762>

Accession Number

20210074939

Author

Madkhali, A. M.; Al-Ghamdi, S. O.; Hythem Al-Sum; Al-Kadri, H. M.; Suwarnnah Sinnappan; Al-Ghilan, N. A.; Heba Hamam; Hayat Al-Rabiea'a; Al-Shamrani, S. M.; Saif Al Saif; Tashkandi, N. A.; Al-Moamary, M. S.

Title

Framework for obstetrics and gynecology department change management in response to COVID-19 pandemic: a tertiary center experience.

Source

Annals of Thoracic Medicine; 2021. 16(1):57-63.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Coronavirus (cov) disease 2019 pandemic caused by severe acute respiratory syndrome cov 2 has imposed significant demands on healthcare systems across the world. These demands were more significant on obstetrics and gynecology (obgyn) patients, who required services that had to continue despite the closure of other services. This paper describes the change management of an obgyn department at a tertiary health-care center. That experience resulted in a complete management shift in the institution and the formation of an infectious disease epidemic plan for respiratory infections. Description of the change management performed, difficulties encountered, and achievements obtained can assist other departments change management when they face similar situations.

Publication Type

Journal article.

<763>

Accession Number

20210074911

Author

Allen, J. E.; Clunie, G. M.; Slinger, C.; Haines, J.; Mossey-Gaston, C.; Zaga, C. J.; Scott, B.; Wallace, S.; Govender, R.

Title

Utility of ultrasound in the assessment of swallowing and laryngeal function: a rapid review and critical appraisal of the literature.

Source

International Journal of Language & Communication Disorders; 2020. 56(1):174-204. many ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Ultrasound (US) is not widely used as part of the speech and language therapy (SLT) clinical toolkit. The COVID-19 pandemic has intensified interest in US as an alternative to SLT instrumental tools such as the videofluoroscopic swallowing study (VFSS), fiberoptic endoscopic evaluation of swallowing (FEES) and endoscopic evaluation of the larynx (EEL) as a non-invasive, non-aerosol-generating procedure that can be delivered at the bedside to assess swallowing and/or laryngeal function. To establish the appropriacy of routine US use, and in response to a national professional body request for a position statement, a group of expert SLTs conducted a rapid review of the literature. **Aim:** To explore critically the clinical utility of US as an assessment tool for swallowing and laryngeal function in adults. **Methods & Procedures:** A rapid review of four databases was completed to identify articles using US to assess swallowing and/or laryngeal function in adults compared with reference tests (VFSS/FEES/EEL/validated outcome measure). Screening was completed according to predefined inclusion/exclusion criteria and 10% of abstracts were rescreened to assess reliability. Data were extracted from full texts using a predeveloped form. The QUADAS-2 tool was used for quality ratings. Information from included studies was summarized using narrative synthesis and visual illustration. **Outcomes & Results:** Ten papers used US to assess swallowing, and 13 to assess laryngeal function. All were peer-reviewed primary studies across a range of clinical populations and with a wide geographical spread. Four papers had an overall low risk of bias, but the remaining 19 had at least one domain where risk of bias was judged as high or unclear. Applicability concerns were identified in all papers. The papers that used US to assess swallowing varied widely in terms of the anatomical structures assessed and methodology employed. The papers assessing laryngeal function were more homogenous in their methodology. Sensitivity and specificity data were provided for 12 of the laryngeal function papers with ranges of 64.3-100% and 48.5-100%, respectively. **Conclusions & Implications:** There is burgeoning evidence to support the use of US as an adjunct to SLT clinical assessment of swallowing and laryngeal function. However, the current literature does not support its use as a tool in isolation. Further research is required to establish reliability in US assessment as well as clear SLT-driven protocols and training.

Publication Type

Journal article.

<764>

Accession Number

20210074867

Author

Brandao, T. B.; Gueiros, L. A.; Melo, T. S.; Prado-Ribeiro, A. C.; Nesrallah, A. C. F. A.; Prado, G. V. B.; Santos-Silva, A. R.; Migliorati, C. A.

Title

Oral lesions in patients with SARS-CoV-2 infection: could the oral cavity be a target organ?

Source

Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology; 2021. 131(2):e45-e51.

Publisher

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Elsevier Inc.

Location of Publisher

St. Louis

Country of Publication

USA

Abstract

Several viruses transmitted through saliva, such as herpes simplex virus, cytomegalovirus, and Zika virus, are capable of infecting and replicating in the oral mucosa, leading to painful oral ulcers. Few studies have described the oral manifestations of coronavirus disease 2019 (COVID-19). There is growing evidence that angiotensin-converting enzyme 2 (ACE2), the main host cell receptor of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is highly expressed on the epithelial cells of the tongue and of the salivary glands, which may explain the development of dysgeusia in patients with COVID-19. Hence, it is important to understand if SARS-CoV-2 can infect and replicate in oral keratinocytes and fibroblasts, causing oral ulcerations and superficial necrosis. Here, we report a series of 8 cases of COVID-19 infection, with oral necrotic ulcers and aphthous-like ulcerations which developed early in the course of disease after the development of dysgeusia and affected the tongue, lips, palate, and oropharynx. A short review of the literature regarding the important role of ACE2 in SARS-CoV-2 cellular entry is also provided, bringing new insights into oral keratinocytes and minor salivary glands as potential targets.

Publication Type

Journal article.

<765>

Accession Number

20210074801

Author

Ong, M. M.; Ong, R. M.; Reyes, G. K.; Sumpaico-Tanchanco, L. B.

Title

Addressing the COVID-19 nutrition crisis in vulnerable communities: applying a primary care perspective.

Source

Journal of Primary Care & Community Health; 2020. 11. 19 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

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UK

Abstract

The coronavirus disease (COVID-19) pandemic and subsequent public health interventions have disrupted food systems all over the world. In the Philippines, where stringent lockdown rules have been implemented, households living in poverty have had to rely largely on food aid in the form of food packs distributed by local governments and private donors. An evaluation of the commonly distributed food items reveals a diet that addresses acute hunger but does not contain sufficient nutrients to promote and maintain health. Such a diet puts low-income households at a greater risk of acute and chronic disease. The negative health impact of commonly distributed food packs on food aid-dependent households shine a light on how the COVID-19 pandemic and public health policies exacerbate health inequities. A primary care perspective is essential in creating food security policies that can effectively address acute hunger and malnutrition without contributing to the long-term deleterious effects of inadequate nutrition on the health of indigent communities.

Publication Type

Journal article.

<766>

Accession Number

20210074798

Author

Kraef, C.; Juma, P.; Kallestrup, P.; Mucumbitsi, J.; Kaushik Ramaiya; Yonga, G.

Title

The COVID-19 pandemic and non-communicable diseases - a wake-up call for primary health care system strengthening in sub-Saharan Africa.

Source

Journal of Primary Care & Community Health; 2020. 11. 23 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Strengthening Primary Health Care Systems is the most effective policy response in low-and middle-income countries to protect against health emergencies, achieve universal health coverage, and promote health and wellbeing. Despite the Astana declaration on primary health care, respective investment is still

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insufficient in Sub-Saharan Africa. The SARS-CoV-2019 pandemic is a reminder that non-communicable diseases (NCDs), which are increasingly prevalent in Sub-Saharan Africa, are closely interlinked to the burden of communicable diseases, exacerbating morbidity and mortality. Governments and donors should use the momentum created by the pandemic in a sustainable and effective way by pivoting health spending towards primary health care.

Publication Type

Journal article.

<767>

Accession Number

20210074794

Author

Zhou FengLi; Wang ZhouHan; Mai XiaoJun; Liu XiaoYun; Reid, C.; Sandover, S.; Zhang KouXing; Xu Dan

Title

Online clinical consultation as a utility tool for managing medical crisis during a pandemic: retrospective analysis on the characteristics of online clinical consultations during the COVID-19 pandemic.

Source

Journal of Primary Care & Community Health; 2020. 11. 15 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Coronavirus disease 2019 (COVID-19) is a newly-identified infectious diseases that has rapidly spread throughout the world with rising fatalities with declaration by World Health Organization as the pandemic. Online consultations have been shown to alleviate the pandemic with our study aims to demonstrate whether online consultation can be a solution for acute health crisis. Retrospective analysis of the characteristics of online consultations through two primary care online-consultation platforms during COVID-19 pandemic was performed at the Third Affiliated Hospital of Sun Yat-Sen University, which led the assessment of COVID-19-symptoms patients in Guangzhou. The 3473 online consultations were divided into pre-pandemic and pandemic period groups with Chi-square test as statistical analysis method. The number of online consultations has increased with diagnosis of upper respiratory tract infection, psychological conditions, COVID-19-related investigations and interventions. The increased online consultations met the increased demand of the relevant clinical services and reduced the overwhelming hospital presentations, thus decreasing the potential COVID-19 spread inside the major tertiary hospital

and sparing the resources for acute crisis management. The epidemiology and disease characteristics of online consultations during the pandemic have been demonstrated with identification of the enabling factors and potential barriers in improving online healthcare in China with online consultation model being a durable solution for pandemic in future.

Publication Type

Journal article.

<768>

Accession Number

20210074792

Author

Al-Hasani, S.; Al-Ghafri, T.; Al-Lawati, H.; Mohammed, J.; Al-Mukhainai, A.; Al-Ajmi, F.; Anwar, H.

Title

The use of telephone consultation in primary health care during COVID-19 pandemic, Oman: perceptions from physicians.

Source

Journal of Primary Care & Community Health; 2020. 11. 24 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: To enforce physical distancing measures during COVID-19, Telephone Consultation (TC), a form of telemedicine, was initiated as an alternative technology to face to face consultation in primary health care (PHC) in Muscat, Oman. This study aims to explore the perceptions of physicians about the use of TC with respect to process of implementation; challenges and limitations; lessons learned and the way forward. **Method:** This was a qualitative study using interpretive phenomenological analysis. Physicians who were actively conducting TC in PHC were purposively selected and individually interviewed until no new responses were obtained. All interviews were audio-recorded, transcribed verbatim, and analysed using thematic analysis. **Results:** Twenty-two participants were interviewed. Participants were predominantly females (98%) and qualified family physicians (77.3%). Overall, all participants accepted this initiative as a possible method to continue health services during COVID-19. Perceptions about the process of implementing TC in PHC were themed to; inconsistent implementation of the guideline, variability in roles and responsibilities, and Semi-supportive infrastructure. Five themes were identified as challenges and limitations: limited staff training on TC, suboptimal patient-physician interaction, insufficient technical

support, ensuring privacy, and confidentiality of the communication, and different ways to document the TC. Physicians expressed that TC worked better in following COVID-19 cases, chronic conditions, and, in general, simple cases. They also expressed a reduction in the crowdedness in PHC facilities and the risk of acquiring COVID-19 and other types of infections. Tailoring the existing structural clinical setting, capacity building activities on the use of TC, and improving the quality of the TC are viewed as essential steps for the future sustainability of TC in PHC. Conclusion: Given the exceptional situation of COVID-19, the current evidence suggests that the use of TC in PHC, especially in chronic cases, is promising. However, measures including training of staff, improving the structural setting, and selecting suitable cases for TC are the main elements for high quality and sustainable TC services in PHC from physician's perspective.

Publication Type

Journal article.

<769>

Accession Number

20210074790

Author

Hincapie, M. A.; Gallego, J. C.; Gempeler, A.; Pineros, J. A.; Nasner, D.; Escobar, M. F.

Title

Implementation and usefulness of telemedicine during the COVID-19 pandemic: a scoping review.

Source

Journal of Primary Care & Community Health; 2020. 11. 57 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Identify and summarize the available literature on the acceleration in the use of telemedicine in the midst of the COVID-19 pandemic, with an aim to provide justification and guidance for its implementation to overcome the limitations associated with the pandemic worldwide. **Methods:** We conducted a scoping review through different search strategies in MEDLINE and Google Scholar to identify the available literature reporting data on implementation and usefulness of various modalities of telemedicine during the current pandemic. We summarized the included studies according to field and mode of implementation in a narrative way. **Results:** We included 45 studies that fulfilled selection criteria. About 38% of the studies were conducted in the United States of America (USA), followed by 15.5% in India and 15.5% in China. Most studies (73%) were cross-sectional studies based on historical records. All

publications were written in English with the exception of 1 studied published in Spanish. The majority of reports focused on use of telemedicine for outpatient care, followed by in-hospital care. Conclusion: The COVID-19 pandemic has promoted the use of telemedicine, a tool that has transformed the provision of medical services. Several modes of implementation are useful to overcome difficulties for patient care during the pandemic. Its benefits are specific to different fields of medical practice. Such benefits, along with the guidance and reported experiences should invite health systems to work for an effective and comprehensive implementation of telemedicine in various fields.

Publication Type

Journal article.

<770>

Accession Number

20210074768

Author

Techasatian, L.; Lebsing, S.; Thaowandee, W.; Chaiyarit, J.; Supakunpinyo, C.; Panombualert, S.; Mairiang, D.; Saengnipanthkul, S.; Wichajarn, K.; Kiatchoosakun, P.; Kosalaraksa, P.

Title

The effects of the face mask on the skin underneath: a prospective survey during the COVID-19 pandemic.

Source

Journal of Primary Care & Community Health; 2020. 11. 19 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Purpose: The study aimed to explore the prevalence and possible risk factors to prevent the face mask related adverse skin reactions during the ongoing COVID-19 after a recommendation of face mask wearing for public use in Thailand. **Results:** The prevalence of face mask related adverse skin reactions was 454 cases (54.5%), of which acne was the most frequent (399; 39.9%), followed by rashes on the face (154; 18.4%), and itch symptoms (130; 15.6%). Wearing a surgical mask showed a higher risk of adverse skin reaction compared to a cloth mask, OR (95% CI) = 1.54 (1.16-2.06). A duration of face mask wearing of more than 4 hours/day and the reuse of face masks increased the risk of adverse skin reactions compared to changing the mask every day, adjusted OR(95% CI) = 1.96 (1.29-2.98), and 1.5 (1.11-2.02). **Conclusion:** Suggestions were made for wearing a cloth mask in non-health care workers (HCW) to decrease the risk of face mask related adverse skin reactions. This suggestion could potentially help in decreasing the demand

of surgical masks which should be reserved for the HCW population during the ongoing COVID-19 pandemic.

Publication Type

Journal article.

<771>

Accession Number

20210074764

Author

Al-Ghafri, T.; Al-Ajmi, F.; Anwar, H.; Al-Balushi, L.; Al-Balushi, Z.; Al-Fahdi, F.; Al-Lawati, A.; Al-Hashmi, S.; Al-Ghamari, A.; Al-Harhi, M.; Kurup, P.; Al-Lamki, M.; Al-Manji, A.; Al-Sharji, A.; Al-Harhi, S.; Gibson, E.

Title

The experiences and perceptions of health-care workers during the COVID-19 pandemic in Muscat, Oman: a qualitative study.

Source

Journal of Primary Care & Community Health; 2020. 11. 27 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Predominantly, studies on COVID-19 report quantitative data that often miss the social implications and other determinants of health. The objective of this study was to explore the experiences and perceptions of health care workers (HCWs) in primary health care in the management of COVID-19 with respect to medical response experiences, socio-cultural and religious reforms, psychological impressions, and lessons learned. **Methods:** This was a qualitative study using an empirical phenomenological approach. Six focus group discussions were conducted across various stakeholders working frontline in the management of COVID-19 (managerial, public health/field/community and primary care health centers). They participated in semi-structured, in-depth group discussions from 11th to 20th May 2020. All discussions were audio-recorded, transcribed verbatim and analyzed using thematic analysis. **Results:** Forty participants were involved in this study. Three themes emerged related to the medical response experiences, including the rapid re-structuring of the PHC services, use of technology and challenges of working on COVID-19. Perceptions on the socio-cultural and religious reforms included changes in social and religious norms, and anticipated gaps in accessing health care among the vulnerable groups (elderly, expatriates, and individuals with low economic status). Perceptions on psychological

disturbances were themed as consequences of social distancing, management of dead bodies, exhaustion among the health care workers, and risk of exposure. Finally, lessons learned were centered around building on the existing epidemiological and public health capacities, improving access to health care and overcoming resistance to change. Most participants labelled their experience in COVID-19 as an "experience of wisdom" in which learning was a continuous process. Conclusion: This qualitative study amongst primary HCWs revealed certain aspects of response to COVID-19 in Muscat, Oman. Results has unfolded various aspects of COVID-19. The situation was perceived by primary HCWs as a new experience that challenged the primary health care; enforced the utilization of public health/epidemiological skills, and linked to unfavorable socio-religious and psychological events.

Publication Type

Journal article.

<772>

Accession Number

20210074762

Author

Ashinyo, M. E.; Dubik, S. D.; Duti, V.; Amegah, K. E.; Ashinyo, A.; Larsen-Reindorf, R.; Akoriyea, S. K.; Kuma-Aboagye, P.

Title

Healthcare workers exposure risk assessment: a survey among frontline workers in designated COVID-19 treatment centers in Ghana.

Source

Journal of Primary Care & Community Health; 2020. 11. 34 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Healthcare workers (HCWs) are faced with an elevated risk of exposure to SARS-COV-2 due to the clinical procedures they perform on COVID-19 patients. However, data for frontline HCWs level of exposure and risk of COVID-19 virus infection are limited. Background: We investigated the level of exposure and risk of COVID-19 virus infection among HCWs in COVID-19 treatment centers in Ghana. Methods: A cross-sectional study was utilized in this study and HCWs were invited by convenience to participate in the study, 408 HCWs in 4 COVID-19 treatment centers participated in the study. Adherence to infection prevention and control (IPC) measures were used to categorized HCWs as low or high risk of

COVID-19 virus infection. The WHO COVID-19 risk assessment tool was used to collect quantitative data from the study participants. Results: There was a high (N = 328, 80.4%) level of occupational exposure to the COVID-19 virus. However, only 14.0% of the exposed HCWs were at high risk of COVID-19 virus infection. Healthcare workers who performed or were present during any aerosol-generating procedures (AGP) were 23.8 times more likely to be exposed compared to HCWs who did not perform or were absent during any AGP (AOR 23.83; 95% CI: 18.45, 39.20). High risk of COVID-19 virus infection was less likely among registered nurses (AOR = 0.09; 95% CI: 0.02, 0.60), HCWs who performed or were present during any AGP (AOR = 0.05; 95% CI: 0.01, 0.50) and HCWs with a master's degree qualification (AOR 0.06; 95% CI: 0.01, 0.63). Conclusion: Despite the high level of exposure to the COVID-19 virus among HCWs in the treatment centers, only 14.0% were at high risk of COVID-19 virus infection. To protect this group of HCWs, treatment centers and HCWs should continue to adhere to WHO and national IPC protocols in managing of COVID-19 cases.

Publication Type

Journal article.

<773>

Accession Number

20210074713

Author

Rozina Roshan; Feroz, A. S.; Zohra Rafique; Nazleen Virani

Title

Rigorous hand hygiene practices among health care workers reduce hospital-associated infections during the COVID-19 pandemic.

Source

Journal of Primary Care & Community Health; 2020. 11. 7 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

The experiences of these recent months have left us with as many new questions as they have given us new solutions. The main question that infection prevention and control department is having these days is "Why have hospital-associated infections (HAIs) reduced during COVID-19 pandemic?" What is the one unique strategy that has brought decline in increasing HAIs? Would it be appropriate to say that rigorous hand hygiene practices among health care workers (HCWs) have reduced HAIs in a tertiary care hospital of

Pakistan? This commentary is written to understand the effect of rigorous hand hygiene among HCWs on number of HAIs during COVID-19 pandemic. Given the seriousness of this outbreak, it was observed that the hand hygiene has occupied a new place of importance in the minds of HCWs. We observed 4 times increase in the consumption of hand sanitizers after COVID-19 outbreak. The increased consumption of hand sanitizers was reflected in improved hand hygiene practices. A reduction was observed in the number of HAIs after the COVID-19 outbreak, and we assume that the dip in HAIs is associated with the improvement in hand hygiene practices in the recent months. In the wake of COVID-19 pandemic, these trends reassure us that hand hygiene compliance by HCWs alone can be effective in reducing HAIs in a hospital setting.

Publication Type

Journal article.

<774>

Accession Number

20210074644

Author

Fatima, S.; Syed Shams Zaidi; Alsharidah, A. S.; Aljaser, F. S.; Banu, N.

Title

Possible prophylactic approach for SARS-CoV-2 infection by combination of melatonin, vitamin C and zinc in animals.

Source

Frontiers in Veterinary Science; 2020. 6(December). 51 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

SARS-CoV-2, an epidemic, causes severe stress in both human and animals and may induce oxidative stress (OS) and increases susceptibility to infection. Domestic animals are found infected by their COVID-2 suffering owners. Chronic immobilization stress (CIS), a model of psychological and physical stress of confinement, can trigger depression and anxiety in animals. We evaluated the ameliorative effect of the proposed SARS-CoV-2 prophylactic drugs melatonin, vitamin C, and zinc on CIS-induced OS, inflammation, and DNA damage in rats. Forty male Swiss albino rats (200-250 g, 7-9 weeks old) were divided into five groups as controls, CIS, treated with melatonin (20 mg/kg), and vitamin C plus zinc [VitC+Zn (250 + 2.5 mg/kg)] alone or in combination (melatonin+VitC+zinc) subjected to CIS for 3 weeks. CIS was induced by

immobilizing the whole body of the rats in wire mesh cages of their size with free movement of head. Exposure to CIS significantly compromised the circulatory activities of superoxide dismutase, catalase, and glutathione with enhanced malondialdehyde, inflammatory markers (IL-6, IL10, and TNF α), and lymphocyte DNA damage in comparison to controls. Treatment with melatonin and VitC+Zn alone or in combination significantly restored the altered biochemical parameters and DNA damage of stressed rats to their respective control values. However, the cumulative action of melatonin with VitC+Zn was more effective in alleviating the CIS-induced OS, inflammation, and DNA damage. The present study indicates that the antioxidant combination can be an effective preventive measure to combat severe psychological and confinement stress-induced biochemical changes in animals due to abnormal conditions such as SARS-CoV-2.

Publication Type

Journal article.

<775>

Accession Number

20210074537

Author

Mahdy, M. A. A.

Title

The impact of COVID-19 pandemic on the academic performance of veterinary medical students.

Source

Frontiers in Veterinary Science; 2020. 6(October). 38 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Many universities and colleges worldwide suspended classroom teaching due to the novel coronavirus pandemic and switched to online teaching. The current cross-sectional study was carried out to analyze the impact of COVID-19 lockdown on the academic performance of veterinary medical students and researchers. Veterinary medical students and researchers were invited to answer an online google form questionnaire. A total of 1,392 participants were from 92 different countries answered the questionnaire with response rate of 94.1%. The data showed that COVID-19 pandemic lockdown affected the academic performance of most participants (96.7%) with varying degrees. The mean evaluation score for the online education in general was 5.1 +or- 2.4 while that for the practical parts was 3.6 +or- 2.6. Although online

education provides an opportunity for self-study, the main challenge that online education faces in veterinary medical science is how to give practical lessons. Since most of the subjects are practical; therefore, it is not easy to learn it online. Students think that it is difficult to fulfill the veterinary competencies only with online education system. Online education could be improved by making it more interactive, showing medical procedures in real situations, giving concise information, and providing 3D virtual tools to mimic the real situation.

Publication Type

Journal article.

<776>

Accession Number

20210074483

Author

Attia, Y. A.; Alagawany, M. M.; Farag, M. R.; Alkhatib, F. M.; Khafaga, A. F.; Abdel-Moneim, A. M. E.; Asiry, K. A.; Mesalam, N. M.; Shafi, M. E.; Al-Harhi, M. A.; El-Hack, M. E.

Title

Phytogenic products and phytochemicals as a candidate strategy to improve tolerance to coronavirus.

Source

Frontiers in Veterinary Science; 2020. 6(October). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Coronaviruses are the causative agents of many infectious diseases in human and animals. These included severe acute respiratory syndrome (SARS), avian infectious bronchitis (IBV) in poultry, Middle East respiratory syndrome (MERS), and coronavirus disease 2019 (COVID-19) in humans. These results had considerable death burdens and negative influences on social-economic life. Since the appearance of the outbreak of the COVID-19 pandemic, continuous investigations have been carried out by researchers to find active compounds, mainly from plants, as natural sources, that could inhibit or stop the proliferation of the causative agent of COVID-19 (SARS-CoV-2). The most common symptoms caused by infections with COVID-19 can include cough, fever, and sore throat. Nevertheless, there is a shortage of active antiviral compounds for treating different strains of coronavirus. Herbal medicine is a class of medication that originates from nature and is aimed at decreasing the use of preservatives, excipients, or other additives and, consequently, lesser side effects. The rapid spread of COVID-19 infection besides the lack of

knowledge about any treatments and the growing concern of the public from the virus directed us toward writing this review article in an aim to provide alternatives to the allopathic medicine use. There is a wealth of chemical diversity in the naturally existing compounds, including their antiviral activities, which may encourage their utilization as therapeutics against viral infections, including coronaviruses. The majority of publications on the herbal remedies of coronavirus, MERS, or SARS focused primarily on the use of polar compounds. These substances displayed encouraging inhibitory influences on coronavirus in humans. These include psoralidin, scutellarein, silvestrol, tryptanthrin, caffeic acid, quercetin, myricetin, saikosaponin B2, griffithsin (lectins), and isobavachalcone. Some other agents like lycorine may be useful, if the antiviral activity is obtained by concentrations below the toxic plasma levels. According to the available literatures, the most promising inhibitors of coronaviruses are polyphenolic compounds, which are small molecules with conjugated fused ring structures.

Publication Type

Journal article.

<777>

Accession Number

20210074462

Author

Dickinson, P. J.

Title

Coronavirus infection of the central nervous system: animal models in the time of COVID-19.

Source

Frontiers in Veterinary Science; 2020. 6(October). 119 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Naturally occurring coronaviral infections have been studied for several decades in the context of companion and production animals, and central nervous system involvement is a common finding, particularly in cats with feline infectious peritonitis (FIP). These companion and production animal coronaviruses have many similarities to recent human pandemic-associated coronaviruses such as SARS-CoV, MERS-CoV, and SARS-CoV2 (COVID-19). Neurological involvement is being increasingly recognized as an important clinical presentation in human COVID-19 patients, often associated with para-infectious processes, and potentially with direct infection within the CNS. Recent breakthroughs in the treatment of

coronaviral infections in cats, including neurological FIP, have utilized antiviral drugs similar to those currently in human COVID-19 clinical trials. Differences in specific coronavirus and host factors are reflected in major variations in incidence and mechanisms of CNS coronaviral infection and pathology between species; however, broad lessons relating to treatment of coronavirus infection present within the CNS may be informative across species.

Publication Type

Journal article.

<778>

Accession Number

20210074457

Author

Sabir Hussain; Abrar Hussain; Ho, J.; Sparagano, O. A. E.; Zia, U. U. R.

Title

Economic and social impacts of COVID-19 on animal welfare and dairy husbandry in central Punjab, Pakistan.

Source

Frontiers in Veterinary Science; 2020. 6(October). 33 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Studies on the impact of the COVID-19 pandemic on animal welfare and dairy husbandry in low-income countries are limited. We conducted a survey between February and June 2020 to evaluate the economic impact and animal health problems upon the pandemic. Participants were lead veterinarians from 14 dairy farms with herd size between 100 and 500 in Lahore. These farms were major suppliers of milk and dairy products to central Punjab, Pakistan. During the pandemic, 10 of the 14 dairy farms relied on feed mill concentrates to provide feeds to their herds. Half of the farms reported feed shortage due to lockdowns. Six (43%) dairy farms have witnessed a 7.5% shortage of dry feed intake. In seven (50%) farms, the body condition score decreased by 0.24 point. The body score reduction was significantly associated with depleted feed intake ($P = 0.005$). The veterinarians of 10 (71%) farms failed to gain access to essential veterinary medications, hampering the treatment of sick animals. Due to feed shortage and drug unavailability, daily milk production reduced by two litters per cow in the herd of five (35%) farms. The reduced feed intake was significantly associated with the decrease in milk production ($P = 0.003$), while

numerous downstream milk-processing facilities were out of service during the pandemic, significantly reducing the profit of six (43%) dairy farms. Finally, our study showed that the dairy farming industry and animal welfare were critically affected by three aspects: feed shortage, inaccessibility to essential veterinary drugs, and a reduced consumer demand for dairy products.

Publication Type

Journal article.

<779>

Accession Number

20210074441

Author

Morais, H. A. de; Santos, A. P. dos; Nascimento, N. C. do; Kmetiuk, L. B.; Barbosa, D. S.; Brandao, P. E.; Guimaraes, A. M. S.; Pettan-Brewer, C.; Biondo, A. W.

Title

Natural infection by SARS-CoV-2 in companion animals: a review of case reports and current evidence of their role in the epidemiology of COVID-19.

Source

Frontiers in Veterinary Science; 2020. 6(October). 107 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), responsible for the coronavirus disease 2019 (COVID-19), is the causative infectious agent of the current pandemic. As researchers and health professionals are still learning the capabilities of this virus, public health concerns arise regarding the zoonotic potential of SARS-CoV-2. With millions of people detected with SARS-CoV-2 worldwide, reports of companion animals possibly infected with the virus started to emerge. Therefore, our aim is to review reported cases of animals naturally infected with SARS-CoV-2, particularly companion pets, shedding light on the role of these animals in the epidemiology of COVID-19.

Publication Type

Journal article.

<780>

Accession Number

20210074411

Author

Hasler, B.; Bazeyo, W.; Byrne, A. W.; Hernandez-Jover, M.; More, S. J.; Ruegg, S. R.; Schwarzmann, O.; Wilson, J.; Yawe, A.

Title

Reflecting on one health in action during the COVID-19 response.

Source

Frontiers in Veterinary Science; 2020. 6(October). 31 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic, a singular disruptive event in recent human history, has required rapid, innovative, coordinated and collaborative approaches to manage and ameliorate its worst impacts. However, the threat remains, and learning from initial efforts may benefit the response management in the future. One Health approaches to managing health challenges through multi-stakeholder engagement are underscored by an enabling environment. Here we describe three case studies from state (New South Wales, Australia), national (Ireland), and international (sub-Saharan Africa) scales which illustrate different aspects of One Health in action in response to the COVID-19 pandemic. In Ireland, a One Health team was assembled to help parameterise complex mathematical and resource models. In New South Wales, state authorities engaged collaboratively with animal health veterinarians and epidemiologists to leverage disease outbreak knowledge, expertise and technical and support structures for application to the COVID-19 emergency. The African One Health University Network linked members from health institutions and universities from eight countries to provide a virtual platform knowledge exchange on COVID-19 to support the response. Themes common to successful experiences included a shared resource base, interdisciplinary engagement, communication network strategies, and looking global to address local need. The One Health approaches used, particularly shared responsibility and knowledge integration, are benefiting the management of this pandemic and future One Health global challenges.

Publication Type

Journal article.

<781>

Accession Number

20210074410

Author

Melo, R. T. de; Rossi, D. A.; Monteiro, G. P.; Fernandez, H.

Title

Veterinarians and one health in the fight against zoonoses such as COVID-19.

Source

Frontiers in Veterinary Science; 2020. 6(October). 26 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Publication Type

Journal article.

<782>

Accession Number

20210074340

Author

Udwadia, Z. F.; Agam Vora; Tripathi, A. R.; Malu, K. N.; Lange, C.; Raju, R. S.

Title

COVID-19 -tuberculosis interactions: when dark forces collide. (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S155-S162. 27 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The SARS-2 pandemic which has moved with frightening speed over the last 5 months has several synergies with another older, and far more neglected airborne disease, tuberculosis. Patients with tuberculosis are not only more likely to be infected by SARS-CoV-2 but also likely to have adverse outcomes once infected. The sequelae of more severe forms of COVID-19 in patients who have recovered from TB but have residual compromised lung function, are also likely to be devastating. These diseases share almost identical bio-social determinants like poverty, overcrowding, diabetes and pollution and some clinical similarities. The consequences of the COVID-19 pandemic, and our global response to it with lockdowns, are likely to leave a profound and long-lasting impact on TB diagnosis and control, potentially leading to an additional 6.3 million cases of TB between 2020 and 2025, and an additional 1.4 million TB deaths during this time. Novel solutions will need to be urgently devised or else TB control targets will never be met and indeed may be set back by 5-8 years.

Publication Type

Journal article.

<783>

Accession Number

20210074339

Author

Bajpai, J.; Akshyaya Pradhan; Abhishek Singh; Surya Kant

Title

Hydroxychloroquine and COVID-19 - a narrative review. (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S147-S154. 42 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

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Abstract

COVID 19 infection is unarguably the worst pandemic of this century. Till date there is no promising drug and vaccine available to treat this deadly viral infection. In the early phase chloroquine phosphate and hydroxychloroquine sulphate have been used to fight this illness on the basis of handful observational and small randomized and small-randomized studies. The paucity of clinical evidences of an unequivocal beneficial effect of chloroquine and hydroxychloroquine on COVID-19 has resulted in the passionate use of the drug for moderate to severe cases only and stimulated the need for large clinical trials for this and other molecules. In this review, we describe in brief the mechanism of action, the clinical studies, factors for cardiac toxicity, guidelines and future directions for hydroxychloroquine use in management of COVID-19 infection.

Publication Type

Journal article.

<784>

Accession Number

20210074335

Author

Isaac, B. T. J.; Henry Kirupakaran; Barney, A. M.; Christopher, D. J.

Title

Lessons from healthcare personnel screening and management during H1N1 pandemic in preparation for the impending COVID-19 pandemic in a tertiary care hospital in India. (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S122-S127. 15 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: In the wake of the COVID-19 pandemic caused by a novel corona virus, health care personnel are at increased risk of acquiring the infection. In preparation for the management of health care personnel that are likely to be infected, we looked in to the data collected during the Influenza pandemic in 2009, caused by a novel strain of H1N1 influenza called swine flu. The care of healthcare personnel in our institution, who had an acute febrile respiratory illness (AFRI) during that period was routed through a

single channel using a uniform protocol. We retrospectively analysed the available data, during the initial four months of the pandemic, to draw lessons from it. Background: To study the prevalence, clinical profile and risk factors of swine flu among health care personnel during the pandemic of 2009 in a tertiary care hospital in South India. Methodology: This retrospective study enrolled all the health care personnel including students of a tertiary care institution in South India, who presented with an AFRI between June to August, the initial four months of the swine flu pandemic of 2009. The clinical profile and risk factors were extracted. The results of the RT PCR for swine flu was obtained. Prevalence in each demographic group was calculated and compared. Characteristics of those with swine flu were compared with those who turned negative for the swine flu. Results: The prevalence of all AFRI and only swine flu among health care personnel during the study period was 18 per thousand and 8.7 per thousand respectively. Highest prevalence of swine flu was found among students and office staff. After adjusting for confounding factors, hyperthermia at presentation was significantly higher {OR = 1.97; 95% CI (1.01-3.76)} among those who tested positive for swine flu as compared with those with other AFRI's. Only 2.5% of the entire AFRI group required admission and there was no mortality. Conclusion: Health care personnel are at increased risk of acquiring infection. Our study demonstrated that students and office staff were the most susceptible. Unprotected exposure to unknown infectious patients and relatives is likely to have been an important factor. Though the mode of transmission is similar, compared to H1N1, COVID-19 is associated with different comorbidities and has significantly higher mortality. Therefore, in preparation for the COVID-19 pandemic, the personal protective equipment of the healthcare personnel need to be escalated.

Publication Type

Journal article.

<785>

Accession Number

20210074328

Author

Narasimhaiah Somashekar; Chinnappareddy Ravichandra; Chadha, V. K.

Title

Training strategies practiced for TB elimination. (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S79-S85. 8 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

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Training is the backbone of any public health program and it is true for a vast program like TB. It is urgent when the program is aiming to End TB. The strategy that is followed in India for capacity building of TB workers is presented in this article. Various types of trainings that are needed are described in detail. Also enlisted are the different trainings undertaken at NTI for the last five years. Recent times the effect of Covid-19 has resulted in the acceleration of the effort of going for digital platforms and online trainings and is described.

Publication Type

Journal article.

<786>

Accession Number

20210074325

Author

Sachdeva, K. S.; Malik Parmar; Raghuram Rao; Sandeep Chauhan; Vaibhav Shah; Ra Pirabu; Deepak Balasubramaniam; Bhavin Vadera; Anand, S.; Manu Mathew; Hardik Solanki; Sundar, V. V.

Title

Paradigm shift in efforts to end TB by 2025. (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S48-S60. 50 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

TB is a deadly infectious disease, in existence since time immemorial. This article traces the journey of TB developments in the last few decades and the path breaking moments that have accelerated the efforts towards Ending TB from National Tuberculosis Control Program (NTCP 1962-1992) to Revised National Tuberculosis Control Program (RNTCP - 1992-2019) and to National Tuberculosis Elimination Program (NTEP) as per the vision of Honorable Prime Minister of India. From increased funding for TB, the discovery of newer drugs and diagnostics, increased access to health facilities, greater investment in research and expanded reach of public health education, seasoned with TB activism and media's proactive role, private sector participation to political advocacy and community engagement, coupled with vaccine trials has renewed the hope of finding the elusive and miraculous breakthrough to END TB and it seems the goal is within the realms of the possibility. The recent paradigm shift in the policy and the drive of several states & UTs to move towards TB free status through rigorous population-based vulnerability mapping and

screening coupled with active case finding is expected to act as the driving force to lead the country towards Ending TB by 2025. Continued investments in research, innovations and availability of more effective drugs and the vaccines will add to existing armamentarium towards Ending TB.

Publication Type

Journal article.

<787>

Accession Number

20210074322

Author

Kumar, A. M. V.; Harries, A. D.; Srinath Satyanarayana; Pruthu Thekkur; Shewade, H. D.; Zachariah, R.

Title

What is operational research and how can national tuberculosis programmes in low- and middle-income countries use it to end TB? (Special Issue: Tuberculosis and COVID-19.)

Source

Indian Journal of Tuberculosis; 2020. 67(4 Suppl.):S23-S32. 45 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Despite considerable progress over the years, tuberculosis (TB) still remains the top cause of death among the infectious diseases and has devastating socio-economic consequences for people in low- and middle-income countries. To add to this, the emergence of the COVID-19 pandemic has worsened delivery of TB care across the globe. As a global community, we have committed to end the TB epidemic by 2030. The World Health Organization has framed a strategy to achieve this goal which consists of three pillars namely (i) integrated patient-centred care and prevention, (ii) bold policies and systems and (iii) intensified research and innovation. An analysis of the performance of national tuberculosis programmes (NTPs) across the globe against the ten priority indicators recommended for monitoring the end TB strategy show that there are huge gaps at every step in the cascade of care of TB patients. In our view, these gaps reflect suboptimal implementation of existing strategies known to be efficacious and operational research (OR) is one of the best available tools to plug the gaps. In this paper, we define what operational research is and how it differs from other kinds of research. We also share our views and experiences about how operational research can be used by NTPs to identify implementation gaps and their reasons, and develop and test possible solutions - which are then integrated to make changes to policy and practice and

eventually improve programme outcomes. OR can be defined as research into interventions, strategies and tools which produces practical useable knowledge that can be used to enhance the quality, coverage, effectiveness and efficiency of disease control programmes, health services or health systems in which the research is conducted. The key steps in integrating operational research in the NTPs include: (i) securing political commitment reflected by inclusion of OR in the national strategic plans of NTPs and earmarked funding, (ii) having a critical mass of dedicated and trained human resources in OR within the NTP, (iii) setting research priorities and steering the direction of research in the country, (iv) using output-oriented models of capacity building such as the Structured Operational Research Training Initiative (SORT IT) model and building communities of practice, (v) harnessing existing capacity in the country by forging partnerships with academia, (vi) NTP-led nationwide, multicentre OR studies, (vii) providing access to anonymized patient and programme surveillance data, (viii) creating a forum for evidence dissemination and fostering policy change and (ix) monitoring and accountability. In conclusion, ending the TB epidemic will not be possible without new tools (diagnostics, drugs, vaccines) and a multi-sectoral response involving stakeholders beyond the health ministry, including private providers, patients and communities. However, timely conduct of operational research to fine-tune programme implementation and ensuring proper deployment of new tools will be equally crucial to maximize the effectiveness and efficiency of interventions and ultimately contribute towards ending TB.

Publication Type

Journal article.

<788>

Accession Number

20210074221

Author

More, S. A.; Patil, A. S.; Sakle, N. S.; Mokale, S. N.

Title

Network analysis and molecular mapping for SARS-CoV-2 to reveal drug targets and repurposing of clinically developed drugs.

Source

Virology; 2021. 555:10-18. 28 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Novel coronavirus (SARS-CoV-2), turned out to be a global pandemic with unstoppable morbidity and mortality rate. However, till date there is no effective treatment found against SARS-CoV-2. We report on the major in-depth molecular and docking analysis by using antiretroviral (Lopinavir and ritonavir), antimalarial (Hydroxychloroquine), antibiotics (Azithromycin), and dietary supplements (Vitamin C and E) to provide new insight into drug repurposing molecular events involved in SARS-CoV-2. We constructed three drug-target-pathways-disease networks to predict the targets and drugs interactions as well as important pathways involved in SARS-CoV-2. The results suggested that by using the combination of Lopinavir, Ritonavir along with Hydroxychloroquine and Vitamin C may turned out to be the effective line of treatment for SARS-CoV-2 as it shows the involvement of PARP-1, MAPK-8, EGFR, PRKCB, PTGS-2, and BCL-2. Gene ontology biological process analysis further confirmed multiple viral infection-related processes ($P < 0.001$), including viral life cycle, modulation by virus, C-C chemokine receptor activity, and platelet activation. KEGG pathway analysis involves multiple pathways ($P < 0.05$), including FoxO, GnRH, ErbB, Neurotrophin, Toll-like receptor, IL-17, TNF, Insulin, HIF-1, JAK-STAT, Estrogen, NF-kappa, Chemokine, VEGF, and Thyroid hormone signaling pathway in SARS-CoV-2. Docking study was carried out to predict the molecular mechanism Thus, the potential drug combinations could reduce viral infectivity, viral replication, and abnormal host inflammatory responses and may be useful for multi-target drugs against SARS-CoV-2.

Publication Type

Journal article.

<789>

Accession Number

20210074062

Author

Chiocchetti, R.; Galiazzo, G.; Fracassi, F.; Giancola, F.; Pietra, M.

Title

ACE2 expression in the cat and the tiger gastrointestinal tracts.

Source

Frontiers in Veterinary Science; 2020. 6(August). 29 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Angiotensin-converting enzyme 2 (ACE2) has been identified as the functional receptor for Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2). It has been identified in the human gastrointestinal

tract (GIT), and SARS-CoV-2 has been isolated in human and animal fecal samples. The aim of the present study was to investigate the expression of ACE2 in the gastrointestinal tract of domestic (cat) and wild (tiger) felines. Samples of the pylorus, duodenum, and distal colon were collected from six cats and one tiger. The tissues were processed for immunofluorescence assay with an anti-human ACE2 antibody. Angiotensin-converting enzyme 2 was widely expressed in the gastrointestinal mucosa of the cats and the tiger. In both the species, ACE2-immunoreactivity (ACE2-IR) was expressed by the mucosal epithelial cells of the GIT and by the enteric neurons. In the cats, ACE2-IR was also expressed by the smooth muscle cells of the blood vessels and the tunica muscularis. The expression of the ACE2 receptor in enteric neurons may support the potential neurotropic properties of SARS-CoV-2. Although the evidence of ACE2-IR in the feline GIT does not necessarily indicate the possibility of viral replication and SARS-CoV-2 spread with stool, the findings in the present study could serve as an anatomical basis for additional studies considering the risk of the SARS-CoV-2 fecal-oral transmission between cats/felids, and between cats/felids and humans.

Publication Type

Journal article.

<790>

Accession Number

20210074000

Author

Hafez, H. M.; Youssef A. Attia

Title

Challenges to the poultry industry: current perspectives and strategic future after the COVID-19 outbreak.

Source

Frontiers in Veterinary Science; 2020. 6(August). 142 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Poultry immunity, health, and production are several factors that challenge the future growth of the poultry industry. Consumer confidence, product quality and safety, types of products, and the emergence and re-emergence of diseases will continue to be major challenges to the current situation and the strategic future of the industry. Foodborne and zoonotic diseases are strictly linked with poultry. Eradication, elimination, and/or control of foodborne and zoonotic pathogens present a major challenge to the poultry industry. In addition, the public health hazards from consuming foods with high antibiotic

residues will remain a critical issue. The theory of poultry production described in this review will not be limited to considering disease control. Rather, it will also incorporate the interconnection of the animals' health, welfare, and immunity. It is essential to know that chickens are not susceptible to intranasal infection by the SARS-CoV-2 (COVID-19) virus. Nevertheless, the COVID-19 pandemic will affect poultry consumption, transport, and the economics of poultry farming. It will also take into consideration economic, ethical, social dimensions, and the sustenance of the accomplishment of high environmental security. Stockholders, veterinarians, farmers, and all the partners of the chain of poultry production need to be more involved in the current situation and the strategic future of the industry to fulfill human demands and ensure sustainable agriculture. Thus, the present review explores these important tasks.

Publication Type

Journal article.

<791>

Accession Number

20210073998

Author

Purens, A. G. M.

Title

Facemask alternatives in veterinary medicine in the context of COVID-19 shortages.

Source

Frontiers in Veterinary Science; 2020. 6(August). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has caused a widespread shortage of facemasks and other personal protective equipment in veterinary medicine without clear, research-based guidance on alternatives to FDA-certified disposable surgical masks. In the absence of detailed veterinary research, an in-depth review of the human medical literature was conducted to evaluate the viability of reusable, sterilizable cloth, medical textile, or other material alternatives that may be quickly manufactured and used by veterinarians. The results at the time of publication support the AVMA, CDC, and WHO recommendations to extend use, reuse, and resterilize facemasks before considering using a homemade facemask. Pending further research, or until and unless the FDA certifies a reusable homemade mask or design, the substitution of homemade masks for FDA-certified surgical masks should only be considered as a last resort. Most homemade masks are not

suitable replacements for N95 FFRs. If a homemade facemask must be made, the following materials and testing guidelines are suggested: - densely woven cotton fabric (270 thread count), medical textile, or other impermeable, breathable material that can be laundered and reesterilized - make pleated or fitted pocket style facemasks to maximize fit - make masks with two sets of ties, not elastics, to endure laundering and autoclaving - internal wire or fabric tape may be used to mold masks over the nose - filter material should be designed for use near mucus membranes, such as facial tissue or paper towel - if possible, fit test homemade masks against an FDA-certified surgical mask as a control - if higher filtration efficiency is required, test according to the FDA Enforcement Policy for Face Masks and Respirators During the Coronavirus Disease (COVID-19) Public Health Emergency - Maintain enough masks to change as frequently as one would change disposable surgical masks to maintain appropriate hygiene.

Publication Type

Journal article.

<792>

Accession Number

20210073991

Author

Enticott, G.; Maye, D.

Title

Missed opportunities? COVID-19, biosecurity and one health in the United Kingdom.

Source

Frontiers in Veterinary Science; 2020. 6(August). 43 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Whatever we read about Covid-19, the word unprecedented is not far away: whether in describing policy choices, the daily death tolls, the scale of upheaval, or the challenges that await a readjusting world. This paper takes an alternative view: if not unpredictable, the crisis unfolding in the United Kingdom (UK) is not unprecedented. Rather, it is foretold in accounts of successive animal health crises. Social studies of biosecurity and animal disease management provide an "anticipatory logic" - a mirror to the unfolding human catastrophe of Covid-19, providing few surprises. And yet, these accounts appear to be routinely ignored in the narrative of Covid-19. Do social studies of animal disease really have no value when it comes to guiding and assessing responses to Covid-19? To answer this question, we describe the narrative arc of

the UK's approach to managing Covid-19. We then overlay findings from social studies of animal disease to reveal the warnings they provided for a pandemic like Covid-19. We conclude by reflecting on the reasons why these studies have been paid minimal attention and the extent to which the failure to learn from these lessons of animal health management signals a failure of the One Health agenda.

Publication Type

Journal article.

<793>

Accession Number

20210073957

Author

Nadoushan, A. H. J.; Shirdel, S.; Shokrani, M.; Haghghi, P. P.; Alavi, M. S.; Alavi, K.

Title

Difficulties and concerns of patients with severe mental disorders and their caregivers during hospitalization and after discharge during the first wave of COVID-19 epidemic.

Source

Iranian Journal of Psychiatry and Clinical Psychology; 2020. 26(3):348-359. 32 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Objectives: The Covid-19 has caused anxiety and stress in people all over the world. One of the most vulnerable groups during this epidemic are people with psychiatric disorders. In this study, we investigate the leading causes of concern among patients with psychiatric disorders and their families during and after hospitalization. The purpose of this study is to improve the care and service given to these patients and their caregivers regarding their concerns. **Methods:** In this study, 48 patients with psychiatric disorders hospitalized from late February to late April 2020 in the Iran Psychiatric Hospital were contacted by telephone. They completed a questionnaire related to the covid-19 pandemic and the problems caused by it during and after their hospitalization. **Results:** Inability to meet with family and the fear of infection to Covid-19 were among the main concerns of these patients at the time of admission. Their most worrying factors after discharge were the negative impact of quarantine on the recurrence of psychiatric illness. On the other hand, the most significant concern during the hospitalization of a patient with Covid-19 is the caregivers of these patients after discharge and the inaccessibility to a physician. **Conclusion:** The Covid-19 pandemic has caused challenges in treating psychiatric patients; thus, this study suggests some solutions

such as providing a safe place for doctors to visit the patients, recommending the patients and the caregivers to observe self-hygiene protocols, and seeing patients virtually.

Publication Type

Journal article.

<794>

Accession Number

20210073954

Author

Asadi, N.; Salmani, F.; Pourkhajooyi, S.; Mahdavifar, M.; Royani, Z.; Salmani, M.

Title

Investigating the relationship between corona anxiety and nursing care behaviors working in Corona's referral hospitals.

Source

Iranian Journal of Psychiatry and Clinical Psychology; 2020. 26(3):306-319. 35 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Objectives: The prevalence of Coronavirus and its health-related psychosocial consequences is one of the most important human social events of the 21st century. Nurses, due to close contact with patients, are vulnerable to be infected with Covid-19. Therefore, they face severe psychological consequences. This study aimed to determine the relationship between Corona's anxiety and nursing care behaviors in working in Corona referral hospitals in Kerman in 2020. **Methods:** The present study is cross-sectional descriptive-correlational research. Sampling was performed by the census method. A total of 166 nurses entered the study. In the present study, three demographic questionnaires, the Corona Disease Anxiety Scale (CDAS) and Caring Behaviors Inventory (CBI) were used. The analysis was done using Descriptive and Inferential statistics SPSS V. 18 software. **Results:** The overall score of Corona anxiety among the nurses was 21.39+or-9.8, and the overall score of the nursing behavior of the studied nurses was 109.7+or-4.2 with a range of 94 to 118. Spearman's correlation coefficient showed that there was no significant relationship between corona anxiety and caring behaviors. **Conclusion:** The present study showed that nurses working in corona wards suffer from moderate anxiety, and the level of caring behaviors provided by nurses was optimal. According to the current study findings, it is suggested that during the outbreak of emerging and epidemic

diseases, to reduce nursing staff's anxiety, coping strategies and resilience skills, and problem-solving, managers should pay more attention.

Publication Type

Journal article.

<795>

Accession Number

20210073952

Author

Rezaei, S.; Toosarvandani, A. S.; Zebardast, A.

Title

Effect of COVID-19-induced home quarantine on parental stress and its relationship with anxiety and depression among children in Guilan province.

Source

Iranian Journal of Psychiatry and Clinical Psychology; 2020. 26(3):280-293. 36 ref.

Publisher

Tehran University of Medical Sciences, Centre for Electronic Resources Provision and Journal Improvement

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Objectives: Acute attacks of epidemics and the physical risk have adverse severe psychological effects on children due to their lower protective capacity. This study aimed to determine home quarantine's psychological effect because of Coronavirus (COVID-19) on parental stress and its relationship with anxiety and depression in children. **Methods:** This research was conducted during 17-26 March 2017 - the initial stages of the Iranian people's public call for quarantine - in Guilan province. The study's statistical population included all children aged 5 to 12 years and their parents who were purposefully sampled, and 181 people responded voluntarily to the Child Symptom Inventory-4 (CSI-4)-Parental Form and the Impact of Event Scale-Revised (IES-R). For data analysis, the Pearson correlation coefficient, independent t-test, and regression analysis were used. **Results:** After eliminating the effect of demographic variables, it was found that more parents > scores on the intrusion subscale ($\beta=0.568$, $P=0.004$) and hyperarousal ($\beta=0.772$, $P < 0.0001$) could predict more anxiety scores. None of the IES-R components in parents could predict children's depression scores ($P > 0.05$). In general, the higher parental scores on IES-R, the more likely the child to have anxiety scores ($\beta=0.258$, $P=0.011$) and depression ($\beta=0.325$, $P < 0.0001$) in children. **Conclusion:** Based on the results, it can be said that the psychological effect of home quarantine caused by Covid-19 pandemic in parents can have a devastating impact on children's anxiety and

depression, and these results necessitate the training programs of psychological support for parents and their children.

Publication Type

Journal article.

<796>

Accession Number

20210073879

Author

Fekkar, A.; Lampros, A.; Mayaux, J.; Pognon, C.; Demeret, S.; Constantin, J. M.; Marcelin, A. G.; Monsel, A.; Luyt, C. E.; Blaize, M.

Title

Occurrence of invasive pulmonary fungal infections in patients with severe COVID-19 admitted to the ICU.

Source

American Journal of Respiratory and Critical Care Medicine; 2021. 203(3):307-317. 32 ref.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

Rationale: Whether severe coronavirus disease (COVID-19) is a significant risk factor for the development of invasive fungal superinfections is of great medical interest and remains, for now, an open question. **Objectives:** We aim to assess the occurrence of invasive fungal respiratory superinfections in patients with severe COVID-19. **Methods:** We conducted the study on patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-related pneumonia admitted to five ICUs in France who had respiratory and serum sampling performed for specific screening of fungal complications. **Measurements and Main Results:** The study population included a total of 145 patients; the median age was 55 years old. Most of them were male (n = 104; 72%), were overweight (n = 99; 68%), and had hypertension (n = 83; 57%) and diabetes (n = 46; 32%). Few patients presented preexisting host risk factors for invasive fungal infection (n = 20; 14%). Their global severity was high; all patients were on invasive mechanical ventilation, and half (n = 73, 54%) were on extracorporeal membrane oxygenation support. Mycological analysis included 2,815 mycological tests (culture, galactomannan, beta-glucan, and PCR) performed on 475 respiratory samples and 532 sera. A probable/putative invasive pulmonary mold infection was diagnosed in 7 (4.8%) patients and linked to high mortality. Multivariate analysis indicates a significantly higher risk for solid organ transplant recipients (odds ratio, = 4.66; interquartile range, 1.98-7.34; P = 0.004). False-positive fungal test and clinically

irrelevant colonization, which did not require the initiation of antifungal treatment, was observed in 25 patients (17.2%). Conclusions: In patients with no underlying immunosuppression, severe SARS-CoV-2-related pneumonia seems at low risk of invasive fungal secondary infection, especially aspergillosis.

Publication Type

Journal article.

<797>

Accession Number

20210073829

Author

Sosa-Rubi, S. G.; Seiglie, J. A.; Chivardi, C.; Manne-Goehler, J.; Meigs, J. B.; Wexler, D. J.; Wirtz, V. J.; Gomez-Dantes, O.; Servan-Mori, E.

Title

Incremental risk of developing severe COVID-19 among Mexican patients with diabetes attributed to social and health care access disadvantages.

Source

Diabetes Care; 2021. 44(2):373-380. 38 ref.

Publisher

The American Diabetes Association

Location of Publisher

Washington

Country of Publication

USA

Abstract

OBJECTIVE: Diabetes is an important risk factor for severe coronavirus disease 2019 (COVID-19), but little is known about the marginal effect of additional risk factors for severe COVID-19 among individuals with diabetes. We tested the hypothesis that sociodemographic, access to health care, and presentation to care characteristics among individuals with diabetes in Mexico confer an additional risk of hospitalization with COVID-19. **RESEARCH DESIGN AND METHODS:** We conducted a cross-sectional study using public data from the General Directorate of Epidemiology of the Mexican Ministry of Health. We included individuals with laboratory-confirmed severe acute respiratory syndrome coronavirus 2 between 1 March and 31 July 2020. The primary outcome was the predicted probability of hospitalization, inclusive of 8.5% of patients who required intensive care unit admission. **RESULTS:** Among 373,963 adults with COVID-19, 16.1% (95% CI 16.0-16.3) self-reported diabetes. The predicted probability of hospitalization was 38.4% (37.6-39.2) for patients with diabetes only and 42.9% (42.2-43.7) for patients with diabetes and one or more comorbidities (obesity, hypertension, cardiovascular disease, and chronic kidney disease). High municipality-level of social deprivation and low state-level health care resources were associated with a 9.5% (6.3-12.7) and 17.5%

(14.5-20.4) increased probability of hospitalization among patients with diabetes, respectively. In age-, sex-, and comorbidity-adjusted models, living in a context of high social vulnerability and low health care resources was associated with the highest predicted probability of hospitalization. CONCLUSIONS: Social vulnerability contributes considerably to the probability of hospitalization among individuals with COVID-19 and diabetes with associated comorbidities. These findings can inform mitigation strategies for populations at the highest risk of severe COVID-19.

Publication Type

Journal article.

<798>

Accession Number

20210073776

Author

Gao, F.; Tao LiAng; Ma Xiao; Lewandowski, D.; Shu, Z.

Title

A study of policies and guidelines for collecting, processing, and storing coronavirus disease 2019 patient biospecimens for biobanking and research. (Special Issue: International perspectives into biobanking during the COVID-19 pandemic.)

Source

Biopreservation and Biobanking; 2020. 18(6):511-516. 30 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

Biobanking has been playing a crucial role in the development of new vaccines, drugs, biotechnology, and therapeutics for the prevention and treatment of a wide range of human diseases. This puts biobanks at the forefront of responding to the ongoing worldwide outbreak of the severe pandemic, coronavirus disease 2019 (COVID-19). The leading public health institutions around the world have developed and established interim policies and guidelines for researchers and biobank staff to handle the infectious biospecimens safely and adequately from COVID-19 patients. A study of these important and complementary policies and guidelines is conducted in this study. It should be emphasized that the COVID-19 biospecimens must be collected, processed, and preserved by trained personnel equipped with right personal protective equipment to prevent the transmission of the coronavirus and ensure the specimen quality for testing and research. Six of the leading global public health organizations or institutions included

in this study are the World Health Organization, the Pan American Health Organization, the U.S. Centers for Disease Control and Prevention, the Public Health England, the U.S. Food and Drug Administration, and the Office of Research at the University of California, San Francisco. In conclusion, following the recommended guidance and policies with extreme precautions is essential to ensure the quality of the collected COVID-19 biospecimens and accuracy of the conducted research or treatment, and prevent any possible transmission. Efforts from cryobiologist and biobanking engineers to optimize the protocol of COVID-19 biospecimen cryopreservation and develop the user-friendly and cost-effective devices are urgently required to meet the urgent and increased needs in the specimen biobanking and transportation.

Publication Type

Journal article.

<799>

Accession Number

20210073671

Author

Yeung, D. Y.; Chung, E. K. H.; Lam, A. H. K.; Ho, A. K. K.

Title

Effects of subjective successful aging on emotional and coping responses to the COVID-19 pandemic.

Source

BMC Geriatrics; 2021. 21(128):(17 February 2021). 66 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Middle-aged and older adults are more vulnerable to hospitalization and mortality if they are infected with the COVID-19 virus. The present study investigates the longitudinal effects of subjective successful aging on middle-aged and older adults' emotional and coping responses to the COVID-19 pandemic, and explores an underlying mechanism through perceived time limitation during the pandemic. **Methods:** A sample of 311 Hong Kong Chinese middle-aged and older adults (Mage = 64.58, SD = 10.14, Range = 45-90 years) were recruited from an Adult Development and Aging Project and participated in a questionnaire study via an online platform or phone interview. Their levels of subjective successful aging, perceived time limitation, and emotional and coping responses to the pandemic were measured. **Results:** The respondents who perceived themselves as more successful in aging process reported more positive and fewer negative emotions compared with their counterparts with lower levels of subjective successful

aging. The mediation analysis showed that perceived time limitation could partially account for the effects of subjective successful aging on emotional and coping responses. Conclusions: Findings of this study unveil the beneficial effects of subjective views of successful aging on emotional and coping responses to the pandemic through alleviating their perception of time limitation.

Publication Type

Journal article.

<800>

Accession Number

20210073542

Author

Arunima Chaudhuri; Suhrita Paul; Tanushree Mondal; Ayan Goswami

Title

Online teaching-learning experience among medical students in a developing country during the Coronavirus disease-19 pandemic: a pilot study.

Source

National Journal of Physiology, Pharmacy and Pharmacology; 2021. 11(1):62-67. 19 ref.

Publisher

Association of Physiologists, Pharmacists and Pharmacologists (APPP)

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Background: Coronavirus disease (COVID)-19 pandemic has brought a sudden change in education across the globe. To ensure social distancing, Medical Colleges in India also started online medical teaching since Nation Wide lockdown from 24 March 2020. Aim and Objective: To assess the impact and effectiveness of online teaching program provided by the Department of Physiology in Burdwan Medical College, West Bengal, among the first Prof. M.B.B.S students. Materials and Methods: This pilot study was conducted in a time span of 3 months after obtaining Institutional ethical clearance. Two hundred students enrolled in 1st year participated in this study. Mode of teaching was Flipped Class Room Assisted Self-directed Learning. Multiple assessments were conducted. Two surveys to assess stress level with the perceived stress scale of Sheldon Cohen and three feedback surveys to assess and modify the online teaching program were conducted. Results: Academic activities carried by the majority of students were 5 h or more. About 77.1% were satisfied with the online support, 86.1% felt that regular assessment and feedback provided to them were beneficial, and 11.4% had difficulty in studying physiology in online mode. About 87% students wanted the online support to continue along with offline mode in the near future. Students performed

significantly better in post-test sessions (65.155 +or- 4.74 vs. 53.378 +or- 5.4; P=0.0045**) as compared to pre-test sessions. There was no significant difference in performance between traditional lecture (even with revision) classes and online sessions. No significant difference in stress scores was observed between two surveys conducted in consecutive 2 months. Conclusions: It is evident that online teaching is an effective tool in teaching physiology to undergraduate medical students and may be taken into consideration in future teaching-learning and assessment program.

Publication Type

Journal article.

<801>

Accession Number

20210073475

Author

Marty, L.; Lauzon-Guillain, B. de; Labesse, M.; Nicklaus, S.

Title

Food choice motives and the nutritional quality of diet during the COVID-19 lockdown in France. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 157.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

To limit the transmission of COVID-19, nationwide lockdown was imposed in France between March, 17th and May 10th, 2020. This disruption in individuals' daily routines likely altered food consumption habits. We examined how changes in food choice motives related to changes in nutritional quality during the lockdown compared to before. A convenience sample of 938 French adults completed online questionnaires on the Qualtrics platform at the end of April 2020. Participants were retrospectively asked about their food choice motives and food consumption during the month before and in the first month of the lockdown. The importance of nine food choice motives was assessed: health, convenience, sensory appeal, natural content, ethical concern, weight control, mood, familiarity, and price, scoring from 1 to 4. Food intakes were recorded using a food frequency questionnaire including 110 foods, 12 non-alcoholic beverages and 4 alcoholic beverages. Adherence to the French dietary recommendations before and during the lockdown was estimated using the simplified PNNS-GS2, scoring from -17 to 11.5. The nutritional

quality of diet was lower during the lockdown compared to before (-0.32, SD 2.28, $p < 0.001$). Food choice motives significantly changed and an increase in the importance of weight control was associated with increased nutritional quality ($\beta=0.89$, $p < 0.001$, partial $r=0.032$), whereas an increase in the importance of mood was associated with decreased nutritional quality ($\beta=-0.43$, $p=0.021$, partial $r=0.006$). The lockdown period in France was related to a decrease in nutritional quality of diet on average, which could be partly explained by changes in food choice motives. The lockdown was indeed related to modification of food choice motives, notably with an increase of mood as a food choice motive for 48% of the participants, but also with an increase of health (26%), ethical concern (21%) and natural content (19%) suggesting a growing awareness of the importance of sustainable food choices in some participants.

Publication Type

Journal article.

<802>

Accession Number

20210073474

Author

Poelman, M. P.; Gillebaart, M.; Schlinkert, C.; Dijkstra, S. C.; Derksen, E.; Mensink, F.; Hermans, R. C. J.; Aardening, P.; Ridder, D. de; Vet, E. de

Title

Eating behavior and food purchases during the COVID-19 lockdown: a cross-sectional study among adults in the Netherlands. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 157.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

On March 15, 2020, the Dutch Government implemented COVID-19 lockdown measures. Although self-quarantine and social-distancing measures were implemented, restrictions were less severe compared to several other countries. The aim of this study was to assess changes in eating behavior and food purchases among a representative adult sample in the Netherlands ($n=1030$), five weeks into lockdown. The results show that most participants did not change their eating behaviors (83.0%) or food purchases (73.3%). However, socio-demographic differences were observed among those that reported changes during

lockdown. For example, participants with overweight (OR=2.26, 95%CI=1.24-4.11) and obesity (OR=4.21, 95%CI=2.13-8.32) were more likely to indicate to eat unhealthier during lockdown compared to participants with a healthy weight. Those with a high educational level (OR=2.25, 95%-CI=1.03-4.93) were also more likely to indicate to eat unhealthier during lockdown compared to those with a low educational level. Older participants were more likely to indicate to experience no differences in their eating behaviors compared to those of younger age, who were more likely to indicate that they ate healthier (OR=1.03, 95%CI=1.01-1.04) as well as unhealthier (OR=1.04, 95%CI=1.02-1.06) during lockdown. Participants with obesity were more likely to indicate to purchase more chips/snacks (OR=2.79, 95%CI=1.43-5.45) and more nonalcoholic beverages (OR=2.74, 95%CI=1.36-5.50) during lockdown in comparison with those with a healthy weight. Of those that used meal delivery services before, 174 (29.5%) indicated to use meal delivery services more frequently during lockdown. Although the results confirm the persistence of dietary routines, profound socio-demographic differences were observed for those that did report changes. Especially for individuals with overweight and obesity, the lockdown has taken its toll on healthy dietary choices. Further research should unravel underlying mechanisms for these observations.

Publication Type

Journal article.

<803>

Accession Number

20210073414

Author

Vishvanath Tiwarishow More

Title

Denovo designing, retro-combinatorial synthesis, and molecular dynamics analysis identify novel antiviral VTRM1.1 against RNA-dependent RNA polymerase of SARS CoV2 virus.

Source

International Journal of Biological Macromolecules; 2021. 171:358-365. 29 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

A novel coronavirus disease (COVID-19) caused by SARS-CoV2 has now spread globally. Replication/transcription machinery of this virus consists of RNA-dependent RNA polymerase (nsp12 or RdRp) and its two cofactors nsp7 and nsp8 proteins. Hence, RdRp has emerged as a promising target to

control COVID-19. In the present study, we are reporting a novel inhibitor VTRM1.1 against the RdRp protein of SARS CoV2. A series of antivirals were tested for binding to the catalytic residues of the active site of RdRp protein. In-silico screening, molecular mechanics, molecular dynamics simulation (MDS) analysis suggest ribavirin, and remdesivir have good interaction with the binding site of the RdRp protein as compared to other antiviral investigated. Hence, ribavirin and remdesivir were used for the denovo fragments based antiviral design. This design, along with docking and MDS analysis, identified a novel inhibitor VTRM1 that has better interaction with RdRp as compared to their parent molecules. Further, to produce a lead-like compound, retrosynthetic analysis, and combinatorial synthesis were performed, which produces 1000 analogs of VTRM1. These analogs were analysed by docking and MDS analysis that identified VTRM1.1 as a possible lead to inhibit RdRp protein. This lead has a good docking score, favourable binding energy and bind at catalytic residues of the active site of RdRp. The VTRM1.1 also interacts with RdRp in the presence of RNA primer and other cofactors. It was also seen that, VTRM1.1 do not have off-target in human. Therefore, the present study suggests a hybrid inhibitor VTRM1.1 for the RNA-dependent RNA polymerase of SARS CoV2 that may be useful to control infection caused by COVID-19.

Publication Type

Journal article.

<804>

Accession Number

20210073367

Author

Shagufta; Ahmad, I.

Title

The race to treat COVID-19: potential therapeutic agents for the prevention and treatment of SARS-CoV-2.

Source

European Journal of Medicinal Chemistry; 2021. 213. 165 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

The unforeseen emergence of coronavirus disease 2019 (COVID-19), a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at the Wuhan province of China in December 2019, subsequently its abrupt spread across the world has severely affected human life. In a short span of time, COVID-19 has sacked more than one million human lives and marked as a severe global pandemic, which is drastically

accountable for the adverse effect directly to the human society, particularly the health care system and the economy. The unavailability of approved and effective drugs or vaccines against COVID-19 further created conditions more adverse and terrifying. To win the war against this pandemic within time there is a desperate need for the most adequate therapeutic treatment, which can be achieved by the collaborative research work among scientists worldwide. In continuation of our efforts to support the scientific community, a review has been presented which discusses the structure and the activity of numerous molecules exhibiting promising SARS-CoV-2 and other CoVs inhibition activities. Furthermore, this review offers an overview of the structure, a plausible mechanism of action of SARS-CoV-2, and crucial structural features substantial to inhibit the primary virus-based and host-based targets involved in SARS-CoV-2 treatment. We anticipate optimistically that this perspective will provide the reader and researcher's better understanding regarding COVID-19 and pave the path in the direction of COVID-19 drug discovery and development paradigm.

Publication Type

Journal article.

<805>

Accession Number

20210073360

Author

Basiri, A.; Heidari, A.; Nadi, M. F.; Fallahy, M. T. P.; Nezamabadi, S. S.; Sedighi, M.; Saghadzadeh, A.; Rezaei, N.

Title

Microfluidic devices for detection of RNA viruses.

Source

Reviews in Medical Virology; 2021. 31(1). 121 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

There is a long way to go before the coronavirus disease 2019 (Covid-19) outbreak comes under control. qRT-PCR is currently used for the detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of Covid-19, but it is expensive, time-consuming, and not as sensitive as it should be. Finding a rapid, easy-to-use, and cheap diagnostic method is necessary to help control the current outbreak. Microfluidic systems provide a platform for many diagnostic tests, including RT-PCR, RT-LAMP,

nested-PCR, nucleic acid hybridization, ELISA, fluorescence-Based Assays, rolling circle amplification, aptamers, sample preparation multiplexer (SPM), Porous Silicon Nanowire Forest, silica sol-gel coating/bonding, and CRISPR. They promise faster, cheaper, and easy-to-use methods with higher sensitivity, so microfluidic devices have a high potential to be an alternative method for the detection of viral RNA. These devices have previously been used to detect RNA viruses such as H1N1, Zika, HAV, HIV, and norovirus, with acceptable results. This paper provides an overview of microfluidic systems as diagnostic methods for RNA viruses with a focus on SARS-CoV-2.

Publication Type

Journal article.

<806>

Accession Number

20210073103

Author

Amulya Rattan; Parli Ravi; Shalinee Rao; Shivpreet Kaur; Ravi Kant; Misra, M. C.

Title

Embracing the change: resuming advanced trauma training in the COVID-19 era. (Special Issue: Trends in medical education.)

Source

Medical Journal Armed Forces India; 2021. 77(Suppl. 1):S140-S145. 6 ref.

Publisher

Elsevier

Location of Publisher

New Delhi

Country of Publication

India

Abstract

Background: Trauma is slowly regaining its pre-COVID-19 status in terms of prevalence. Advanced trauma training cannot be deferred indefinitely in the current pandemic owing to defense requirements and disaster preparedness in vulnerable regions. Advanced Trauma Life Support (ATLS) India resumed ATLS and Advanced Trauma Care For Nurses (ATCN) courses at one civilian and one military site. **Methods:** Stakeholders of respective centers for advanced trauma training deliberated over safe means to resume ATLS and ATCN. Meticulous screening of all participants and pre- and post-course tracking were deemed the most important components for the safe resumption of courses. 'Paperless' course, 'open-air' skill stations, 'payment protection', 'buddy system', point of care sanitizer installation, packed food, and potable beverages were major organizational changes. Participants above 60 years and with uncontrolled comorbidities were not enrolled. **Results:** Two ATCN, one ATLS (civilian), and one combined ATLS-ATCN

(military) were conducted. 78 delegates trained by 32 faculties and 13 personnel. All underwent daily thermal scanning and smartphone application-based COVID-19 tracking. Manikins were utilized instead of moulages and instructors took up the role of nursing assistants in Initial Assessment. Exit exams were conducted with full PPE precautions at the military site and mask-distancing precautions at the civilian site. High fidelity simulator was used at one station at the civilian site. Expenses at the civilian site per course were USD 570 lower than conventional courses. There was no incidence of COVID-19 in any of the 123 participants at 14 days follow up. Conclusion: With stringent participant selection and moderate precautions, ATLS and ATCN can be resumed safely in the current COVID-19 pandemic. To the best of our knowledge and after a thorough search of published English literature, this is the first paper reporting on resuming Advanced trauma training in the COVID-19 era.

Publication Type

Journal article.

<807>

Accession Number

20210073058

Author

Ayman A. Swelum; Manal E. Shafi; Najah M. Albaqami; Mohamed T. El-Saadony; Ahmed Elsify; Mohamed Abdo; Ayman E. Taha; Abdel-Moneim E. Abdel-Moneim; Naif A. Al-Gabri; Amer A. Almaiman; Abdullah Saleh Al-Wajeih; Tufarelli, V.; Staffa, V. N.; Mohamed E. Abd El-Hack

Title

COVID-19 in human, animal, and environment: a review.

Source

Frontiers in Veterinary Science; 2020. 6(September). 121 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The medical authority in China, especially in Wuhan city, reported on December 2019 a large number of highly fatal, rapidly spreading viral pneumonia caused by an unknown coronavirus. The common history of all the patients was their visiting a Wuhan's whole food store, where live animals and seafood are sold. Irrespective of the efforts of the Chinese authorities, the virus spread rapidly all over the world by travelers, provoking widespread attention by the media and panic. Many previous coronavirus epidemics had been recorded, such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS),

and the recently newly discovered epidemic is named coronavirus disease of 2019 (COVID-19). This disease is caused by SARS Coronavirus-2 (SARS-CoV-2), and this virus is antigenically related to the SARS virus (SARS-CoV), which had been detected in 2002, depending on clinical, serological, and molecular findings. There is rapid competition among the researchers to discover the source of the virus, understand the mechanism of the disease development, establish treatment strategies, and determine the factors affecting the incidence of infection and severity of the disease, and focus on the production of a vaccine.

Coronaviruses are a group of single-stranded, positive-sense RNA genome viruses; its genome length varies from 26 to 32 kb. Coronavirus causes mild to severe respiratory disorders. In December 2019, several cases of pneumonia of unknown causes were found in Wuhan city, which is located in the Hubei province in China. Chinese health authorities investigated the problem and found that a new virus caused such infection and, using next-generation sequencing, found the 2019 novel coronavirus (2019-nCoV). It has been transferred from humans to humans and animals to humans (zoonotic). Coronaviruses cause multiple respiratory problems, varying from common cold to severe infections such as SARS. General symptoms of infection include fatigue, cough, and breathing problems such as shortness of breath, as described by World Health Organization. Serious cases may result in pneumonia, renal failure, and even death. We address current information about the new SARS Coronavirus-2 as well as the COVID-19 disease caused by it in this review.

Publication Type

Journal article.

<808>

Accession Number

20210072980

Author

Stokol, T.; McAloose, D.; Terio, K. A.; Salguero, F. J.

Title

Severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2): a perspective through the lens of the veterinary diagnostic laboratory.

Source

Frontiers in Veterinary Science; 2020. 6(September). 66 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The SARS-CoV-2 pandemic has resulted in unprecedented challenges to veterinary diagnostic laboratories. These challenges include partial or complete shutdowns, interrupted courier services, disruptions in workflow and diagnostic testing, new physical distancing practices, protocol development or enhancement for handling samples from high-risk or susceptible species, and fulfilling requirements for pre-test permission approval from state and federal veterinary agencies, all of which have been implemented to prevent or minimize exposure and transmission of SARS-CoV-2 locally or regionally. As in people, SARS-CoV-2 infects animals through direct animal-to-animal contact and aerosol transmission between animals. Humans can also infect pets or other animals in their care and, although human-to-human transmission is the main route of viral spread in people, infected animals and specimens of their bodily fluids or tissues are a potential source of infection for veterinarians and technical or laboratory personnel that are handling them. In this perspective, we discuss how SARS-CoV-2 has necessitated rapid changes in laboratory operation to minimize zoonotic risk to personnel and to implement tests for identifying the virus in animals. The pandemic has highlighted the adaptability and quick response of veterinary diagnosticians to an emerging infectious disease and their critical role in maintaining animal health, while synergizing with and protecting human public health.

Publication Type

Journal article.

<809>

Accession Number

20210072957

Author

Boyle, J. N. M.; Boyle, L. A.

Title

COVID-19 effects on livestock production: a one welfare issue.

Source

Frontiers in Veterinary Science; 2020. 6(September).

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic highlights that we exist in a global community. From a single city, it spread to 188 countries across the world and infected 30 million people by September 18, 2020. Decades of modeling pandemics predicted potential consequences, but COVID-19's impact on the food supply chain, and

specifically livestock production was unexpected. Clusters of cases among workers in meat processing plants evolved quickly to affect human, animal, and environmental welfare in several countries. In processing plants, the hygiene focus is on product quality and food safety. Because of their close proximity to one another, COVID-19 spread rapidly between workers and the lack of sick leave and health insurance likely resulted in workers continuing to work when infectious. In the United States (U.S.) many processing plants shut down when they identified major outbreaks, putting pressure especially on pig and poultry industries. At one point, there was a 45% reduction in pig processing capacity meaning about 250,000 pigs per day were not slaughtered. This resulted in longer transport distances to plants in operation with extra capacity, but also to crowding of animals on farm. Producers were encouraged to slow growth rates, but some had to cull animals on farm in ways that likely included suffering and caused considerable upset to owners and workers. Carcass disposal was also associated with potential biosecurity risks and detrimental effects on the environment. Hence, this is a One Welfare issue, affecting human, animal, and environmental welfare and highlighting the fragility of intensive, high-throughput livestock production systems. This model needs to be re-shaped to include the animal, human, and environmental elements across the farm to fork chain. Such a One Welfare approach will ensure that food production systems are resilient, flexible, and fair in the face of future challenges.

Publication Type

Journal article.

<810>

Accession Number

20210072920

Author

Shreya Bhattacharya; Arundhati Banerjee; Sujay Ray

Title

Development of new vaccine target against SARS-CoV2 using envelope (E) protein: an evolutionary, molecular modeling and docking based study.

Source

International Journal of Biological Macromolecules; 2021. 172:74-81. 43 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 is one of the fatal pandemic throughout the world. For cellular fusion, its antigenic peptides are presented by major histocompatibility complex (MHC) in humans. Therefore, exploration into residual interaction details of CoV2 with MHCs shall be a promising point for instigating the vaccine development. Envelope (E) protein, the smallest outer surface protein from SARS-CoV2 genome was found to possess the highest antigenicity and is therefore used to identify B-cell and T-cell epitopes. Four novel mutations (T55S, V56F, E69R and G70del) were observed in E-protein of SARS-CoV2 after evolutionary analysis. It showed a coilhelix transition in the protein conformation. Antigenic variability of the epitopes was also checked to explore the novel mutations in the epitope region. It was found that the interactions were more when SARS-CoV2 E-protein interacted with MHC-I than with MHC-II through several ionic and H-bonds. Tyr42 and Tyr57 played a predominant role upon interaction with MHC-I. The higher G values with lesser dissociation constant values also affirm the stronger and spontaneous interaction by SARS-CoV2 proteins with MHCs. On comparison with the consensus E-protein, SARS-CoV2 E-protein showed stronger interaction with the MHCs with lesser solvent accessibility. E-protein can therefore be targeted as a potential vaccine target against SARS-CoV2.

Publication Type

Journal article.

<811>

Accession Number

20210072880

Author

Mohapatra, R. K.; Pintilie, L.; Venkataramana Kandi; Sarangi, A. K.; Debadutta Das; Raghava Sahu; Perekhoda, L.

Title

The recent challenges of highly contagious COVID-19, causing respiratory infections: symptoms, diagnosis, transmission, possible vaccines, animal models, and immunotherapy.

Source

Chemical Biology and Drug Design; 2020. 96(5):1187-1208. many ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

COVID-19 is highly contagious pathogenic viral infection initiated from Wuhan seafood wholesale market of China on December 2019 and spread rapidly around the whole world due to onward transmission. This

recent outbreak of novel coronavirus (CoV) was believed to be originated from bats and causing respiratory infections such as common cold, dry cough, fever, headache, dyspnea, pneumonia, and finally Severe Acute Respiratory Syndrome (SARS) in humans. For this widespread zoonotic virus, human-to-human transmission has resulted in nearly 83 lakh cases in 213 countries and territories with 4,50,686 deaths as on 19 June 2020. This review presents a report on the origin, transmission, symptoms, diagnosis, possible vaccines, animal models, and immunotherapy for this novel virus and will provide ample references for the researchers toward the ongoing development of therapeutic agents and vaccines and also preventing the spread of this disease.

Publication Type

Journal article.

<812>

Accession Number

20210072517

Author

Abadi, E.; Segars, W. P.; Chalian, H.; Samei, E.

Title

Virtual imaging trials for coronavirus disease (COVID-19).

Source

American Journal of Roentgenology; 2021. 216(2):362-368. 29 ref.

Publisher

American Roentgen Ray Society

Location of Publisher

Leeburg

Country of Publication

USA

Abstract

OBJECTIVE. The virtual imaging trial is a unique framework that can greatly facilitate the assessment and optimization of imaging methods by emulating the imaging experiment using representative computational models of patients and validated imaging simulators. The purpose of this study was to show how virtual imaging trials can be adapted for imaging studies of coronavirus disease (COVID-19), enabling effective assessment and optimization of CT and radiography acquisitions and analysis tools for reliable imaging and management of COVID-19. **MATERIALS AND METHODS.** We developed the first computational models of patients with COVID-19 and as a proof of principle showed how they can be combined with imaging simulators for COVID-19 imaging studies. For the body habitus of the models, we used the 4D extended cardiac-torso (XCAT) model that was developed at Duke University. The morphologic features of COVID-19 abnormalities were segmented from 20 CT images of patients who had been confirmed to have COVID-19

and incorporated into XCAT models. Within a given disease area, the texture and material of the lung parenchyma in the XCAT were modified to match the properties observed in the clinical images. To show the utility, three developed COVID-19 computational phantoms were virtually imaged using a scanner-specific CT and radiography simulator. RESULTS. Subjectively, the simulated abnormalities were realistic in terms of shape and texture. Results showed that the contrast-to-noise ratios in the abnormal regions were 1.6, 3.0, and 3.6 for 5-, 25-, and 50-mAs images, respectively. CONCLUSION. The developed toolsets in this study provide the foundation for use of virtual imaging trials in effective assessment and optimization of CT and radiography acquisitions and analysis tools to help manage the COVID-19 pandemic.

Publication Type

Journal article.

<813>

Accession Number

20210072457

Author

Kalina, M.; Tilley, E.

Title

"this is our next problem": cleaning up from the COVID-19 response.

Source

Waste Management; 2020. 108:202-205.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The purpose of this discussion is to highlight the essential role that solid waste management must play in a humanitarian response towards disasters, in particular the ongoing Covid-19 pandemic. We highlight a number of potential avenues for scholarly investigation into the waste impacts of our response to Covid-19, but in particular, briefly unpacks the relationship between disasters, consumption and disposability as one potential research topic. The discussion is intended to start a conversation that is, at the moment, critically relevant, and to contribute to a more inclusive, and less normatively Western waste management studies discourse.

Publication Type

Journal article.

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<814>

Accession Number

20210072263

Author

Nagy, P.; Wernery, U.; Burger, P.; Juhasz, J.; Faye, B.

Title

The impact of COVID-19 on old world camelids and their potential role to combat a human pandemic.

Source

Animal Frontiers; 2021. 11(1):60-66. 31 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Implications: COVID-19 pandemic is affecting the camel sector, which is contributing to food security in arid countries. COVID-19 pandemic has an ambiguous impact by limiting camel development but boosting the demand for camel milk. Camel immunology is unique and supports the combat against coronaviruses.

Publication Type

Journal article.

<815>

Accession Number

20210072262

Author

Simianer, H.; Reimer, C.

Title

COVID-19: a "black swan" and what animal breeding can learn from it.

Source

Animal Frontiers; 2021. 11(1):57-59. 7 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Apart from the immediate impact of the COVID-19 pandemic on the breeding industry, there are some lessons to be learned for the future: Livestock industry, including animal breeding, has a considerable zoonotic potential and thus must act in a responsible and transparent manner. Governments are prepared to take massive action when higher goods are at stake, and the livestock industry will not be exempt from such measures. Breeding programs that strive for maximum efficiency are highly vulnerable, so resilience should be included as a strategic goal of breeding operations. Global heating is likely to be the next major crisis to develop with major impacts on the livestock sector; livestock breeding should be prepared for it.

Publication Type

Journal article.

<816>

Accession Number

20210072261

Author

Gandini, G.; Hiemstra, S. J.

Title

Farm animal genetic resources and the COVID-19 pandemic.

Source

Animal Frontiers; 2021. 11(1):54-56. 4 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Endangered breeds in fragile socio-economic contexts are particularly exposed to population decline and stochastic perturbations expected following COVID-19 pandemic. The interest of richer societies for short food chains, natural food and traceability of products can create opportunities for local breeds production systems in the context of COVID-19. National surveys on the breed diversity status following COVID-19 should address negative situations and opportunities. COVID-19 has revealed risks, fragilities and inequalities for our food systems. The aim is to build resilience at all levels. Agroecology, which implies to conserve breed diversity, can play an important role.

Publication Type

Journal article.

<817>

Accession Number

20210072260

Author

David, X.

Title

COVID-19 pandemic and its impact on the breeding world.

Source

Animal Frontiers; 2021. 11(1):51-53.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Since March 2020, like all other industries worldwide, the breeding world had to face the COVID-19 crisis. Breeding activities belong to essential economic activities being able to continue in some extend services and activities during locked down (for example AI). However, it is interesting to look at the changes that occurred during this time. Moreover, I invite you to discuss the long-term evolution between actors' and also breeders' needs and behaviors.

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Publication Type

Journal article.

<818>

Accession Number

20210072259

Author

Brzakova, M.; Boskova, I.; Vostry, L.; Rychtarova, J.; Bucek, P.

Title

Impact of COVID-19 on animal production in the Czech Republic.

Source

Animal Frontiers; 2021. 11(1):47-50. 13 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

The COVID-19 crisis has not had a strong impact on animal breeding, identification, performance recording, or genetic evaluation. The crisis has affected DNA analysis and basic and applied research. Production of raw milk and cattle slaughtering has not been affected by the crisis. Impacts on prices have affected farmers, processing companies, consumers, and the international trade in agricultural products.

Publication Type

Journal article.

<819>

Accession Number

20210072258

Author

Obese, F. Y.; Osei-Amponsah, R.; Timpong-Jones, E.; Bekoe, E.

Title

Impact of COVID-19 on animal production in Ghana.

Source

Animal Frontiers; 2021. 11(1):43-46. 12 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

COVID-19 has affected the importation of animals and livestock products into Ghana with the potential of lowering the consumption of animal protein. There has been a reduction in the availability of feed resources and farm inputs for animal production, leading to price increases. Animal production activities, including feeding, management, and disease control, have been adversely affected as a result of lockdown due to the COVID-19 pandemic. Capacity building programs in animal breeding have had challenges as a result of.

Publication Type

Journal article.

<820>

Accession Number

20210072257

Author

Ding YaQiong; Wang ChengYu; He LiuQin; Tang YuLong; Li TieJun; Yin YuLong

Title

Effect of COVID-19 on animal breeding development in China and its countermeasures.

Source

Animal Frontiers; 2021. 11(1):39-42. 6 ref.

Publisher

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Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Since the global outbreak of COVID-19 in 2020, China's agricultural production has been severely affected. COVID-19 presents a huge challenge to the development of animal breeding. This review mainly focuses on the negative effects of COVID-19 on animal breeding development in China and then puts forward the strategies to reduce the negative effects and help promote the sustainable, stable, and healthy development of animal breeding in China. This review should also provide a theoretical basis and feasible solutions for the sustainable and healthy development of animal husbandry in China and even all over the world.

Publication Type

Journal article.

<821>

Accession Number

20210072254

Author

Tokach, M. D.; Goodband, B. D.; Derouchev, J. M.; Woodworth, J. C.; Gebhardt, J. T.

Title

Slowing pig growth during COVID-19, models for use in future market fluctuations.

Source

Animal Frontiers; 2021. 11(1):23-27. 22 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

COVID-19 resulted in significant challenges for swine production in the United States and globally due to temporary limitations of harvest capacity at swine processing facilities. The U.S. swine industry worked collaboratively to discuss, evaluate, and disseminate strategies to reduce the growth rate of pigs in order to avoid pigs growing past a stage where processing facilities could no longer accept them. A combination of management and nutritional approaches has been extremely effective in restricting pig growth rate in response to the COVID-19 pandemic-namely feeding reduced protein diets, increasing stocking density, and ambient temperature, among others.

Publication Type

Journal article.

<822>

Accession Number

20210072253

Author

D'Souza, D. N.; Dunshea, F. R.

Title

Impact of COVID-19 on the Australian pork industry.

Source

Animal Frontiers; 2021. 11(1):19-22.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Australia as an island was able to quickly respond to a pandemic such as COVID-19 by closing international and domestic borders to reduce the introduction of COVID-19 and an introduction of lockdown procedures. Hotel quarantine of returning travelers was very effective in reducing the introduction of COVID-19 to the community. However, breakdown in training and adequate use of PPE resulted in a second wave emanating from hotel quarantine in one jurisdiction (Melbourne), which was controlled by very strict lockdown. Introduction of federal government support for employees from businesses impacted by COVID-19 reduced the social impacts of COVID-19 although gaps occurred. The COVID-19 pandemic and associated lockdown resulted in some stockpiling of essential items, including meat. During the initial lockdown when restaurants and food service were closed, there was an initial surplus of pork, in particular, premium cuts. However, ongoing lockdowns resulted in an increase in household demand for pork, particularly roasts and mince. Food service has rebounded since lockdowns were removed. The decline in air travel and increased

freight costs has reduced both exports and frozen imports of pork. The latter generally makes up a substantial proportion of processed pork products and this has been picked up by domestic production.

Publication Type

Journal article.

<823>

Accession Number

20210072252

Author

Millet, S.; Smet, S. de; Knol, E. F.; Bee, G.; Trevisi, P.; Vigors, S.; Nilsson, K.; Meensel, J. van

Title

How two concurrent pandemics put a spoke in the wheel of intensive pig production.

Source

Animal Frontiers; 2021. 11(1):14-18. 24 ref.

Publisher

Oxford University Press

Location of Publisher

Cary

Country of Publication

USA

Abstract

Implications: Intensive pig production is an example of a cost-efficient production system: an optimized meat chain with highly specialized links. External factors, such as the COVID-19 and African swine fever pandemics, are having an immense impact on the chain and farmers' income. These crises may exacerbate societal concerns about industrialized production, especially when linked with poor animal welfare and the risk for future pandemics. Transition from a supply-driven to a demand-driven market may result in more sustainable business models.

Publication Type

Journal article.

<824>

Accession Number

20210072167

Author

Ko JaeHoon; Lee JiYeon; Kim HyunAh; Kang SeungJi; Baek JinYang; Park SuJin; Hyun MiRi; Jo IkJoon; Chung ChiRyang; Kim YaeJean; Kang EunSuk; Choi YoungKi; Chang HyunHa; Jung SookIn; Peck KyongRan

Title

Serologic evaluation of healthcare workers caring for COVID-19 patients in the Republic of Korea.

Source

Frontiers in Microbiology; 2020. 11(November). 21 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The safety of healthcare workers (HCWs) against severe acute respiratory syndrome virus 2 (SARS-CoV-2) transmission is an important aspect of managing the coronavirus disease 2019 (COVID-19) pandemic. In the South Korea, highly stringent infection prevention and control (IPC) guidelines are implemented, and reports of healthcare-associated SARS-CoV-2 transmission among HCWs are limited. However, subclinical infections may have been missed by the current symptom-based screening strategy. To evaluate the risk of undetected SARS-CoV-2 transmissions from COVID-19 patients to HCWs, we conducted a multicenter seroprevalence study after the first surge of the COVID-19 outbreak. A total of 432 HCWs were evaluated, comprising 309 HCWs designated to laboratory-confirmed COVID-19 patient care and 123 non-designated HCWs. Designated HCWs wore personal protective equipment including an N95 respirator, eye protection, hooded overalls, shoe covers, and inner and outer gloves. Use of a powered air-purifying respirator was recommended for aerosol-generating procedures or long-duration care activities. A high-sensitivity (99.1%) fluorescence immunoassay immunoglobulin G (IgG) kit was used as the initial screening test, and two enzyme-linked immunosorbent assay kits for total and IgG antibodies were used to confirm the test results. A microneutralization test was additionally performed to evaluate the neutralizing activity of positive specimens. Among the evaluated HCWs, none of the non-designated HCWs had a positive result, while one of the HCWs designated for COVID-19 patient care (1/309, 0.3%) was seropositive for SARS-CoV-2 with confirmed neutralizing activity (1:40). This finding suggests that subclinical seroconversion may occur among HCWs caring for COVID-19 patients, although the risk is low under strict IPC guidance.

Publication Type

Journal article.

<825>

Accession Number

20210072058

Author

Xing Yue; Li Xiao; Gao Xiang; Dong QunFeng

Title

Natural polymorphisms are present in the furin cleavage site of the SARS-CoV-2 spike glycoprotein.

Source

Frontiers in Genetics; 2020. 11(July). 16 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

The furin cleavage site in the spike glycoprotein of the SARS-CoV-2 coronavirus is considered important for the virus to enter the host cells. By analyzing 45828 SARS-CoV-2 genome sequences, we identified 103 strains of SARS-CoV-2 with various DNA mutations including 18 unique non-synonymous point mutations, one deletion, and six gains of premature stop codon that may affect the furin cleavage site. Our results revealed that the furin cleavage site might not be required for SARS-CoV-2 to enter human cells in vivo. The identified mutants may represent a new subgroup of SARS-CoV-2 coronavirus with reduced tropism and transmissibility as potential live-attenuated vaccine candidates.

Publication Type

Journal article.

<826>

Accession Number

20210072011

Author

Shen Min; Liu Chao; Xu Run; Ruan ZiJing; Zhao ShiYing; Zhang HuiDong; Wang Wen; Huang XinHe; Yang Li; Tang Yong; Yang Tai; Jia Xu

Title

Predicting the animal susceptibility and therapeutic drugs to SARS-CoV-2 based on spike glycoprotein combined with ace2.

Source

Frontiers in Genetics; 2020. 11(October). 32 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Recently, a few animals have been frequently reported to have been diagnosed with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Whether they are SARS-CoV-2 intermediate hosts is worthy of great attention. The interaction of SARS-CoV-2 spike protein and its acceptor protein ACE2 is an important issue in determining viral host range and cross-species infection, while the binding capacity of Spike protein to ACE2 of different species is unknown. Here, we used the atomic structure model of SARS-CoV-2 and human ACE2 to assess the receptor utilization capacity of ACE2s from 10 kinds of animals. Results show that chimpanzees, domestic cats and cattles are more susceptible to infection by SARS-CoV-2. Cats in particular, such as pet cats and stray cats, interact very closely with humans, implying the necessity to carefully evaluate the risk of cats during the current COVID-19 pandemic. Furthermore, based on ACE2(cats)-SARS-CoV-2-RBD model, through high-throughput screening methods using a pool of 30,000 small molecules, eight compounds were selected for binding free energy calculations. All the eight compounds can effectively interfere with the binding of ACE2 and Spike protein, especially Nelfinavir, providing drug candidates for the treatment and prevention of SARS-CoV-2, suggesting further assessment of the anti-SARS-CoV-2 activity of these compounds in cell culture. Although we only reported the results of the simulation, and more laboratory and epidemiological investigation are required. Like cats are a risk factor, we can further detect SARS-CoV-2 according to the susceptibility of different animals, find the potential host of infection, and completely cut off the living space of the virus. Especially, cats could be a choice of animal model for screening antiviral drugs or vaccine candidates against SARS-CoV-2.

Publication Type

Journal article.

<827>

Accession Number

20210071987

Author

Gao ChengWen; Wu ChuanHong; Zhang Qian; Zhao Xia; Wu MingXuan; Chen RuiRui; Zhao YaLin; Li ZhiQiang

Title

Characterization of chloroplast genomes from two *Salvia* medicinal plants and gene transfer among their mitochondrial and chloroplast genomes.

Source

Frontiers in Genetics; 2020. 11(October). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Salvia species have been widely used as medicinal plants and have played an important role in the treatment and recovery of individuals with COVID-19. In this study, we reported two newly identified whole chloroplast genome sequences of *Salvia* medicinal plants (*Salvia yangii* and *Salvia miltiorrhiza* f. *alba*) and compared them with those of seven other reported *Salvia* chloroplast genomes. These were proven to be highly similar in terms of overall size, genome structure, gene content, and gene order. We identified 10 mutation hot spots (*trnK-rps16*, *atpH-atpI*, *psaA-ycf3*, *ndhC-trnV*, *ndhF*, *rpl32-trnL*, *ndhG-ndhI*, *rps15-ycf1*, *ycf1a*, and *ycf1b*) as candidate DNA barcodes for *Salvia*. Additionally, we observed the transfer of nine large-sized chloroplast genome fragments, with a total size of 49,895 bp (accounting for 32.97% of the chloroplast genome), into the mitochondrial genome as they shared >97% sequence similarity. Phylogenetic analyses of the whole chloroplast genome provided a high resolution of *Salvia*. This study will pave the way for the identification and breeding of *Salvia* medicinal plants and further phylogenetic evolutionary research on them as well.

Publication Type

Journal article.

<828>

Accession Number

20210071823

Author

Mastronardi, L.; Cavallo, A.; Romagnoli, L.

Title

Diversified farms facing the COVID-19 pandemic: first signals from Italian case studies.

Source

Sustainability; 2020. 12(14). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The paper focuses on the effects of the Covid-19 pandemic on some Italian farms. In particular, the aim is to investigate the consequences of the health emergency on diversified farms, their reactions, and their agricultural and rural policy needs in order to overcome the crisis. The research path investigates five farms of central Italy through semi-structured interviews. The identified case studies are characterized by the heterogeneity of features and farms' activities. These activities include agritourism, on-farm processing of plant and animal products (mainly olive oils, fruits, and cheese), bio-energy production, tastings and leisure activities, educational farms, and contracting of farm equipment. A qualitative-quantitative analysis based on textual analysis techniques, particularly content and sentiment analysis, was performed. The results highlight the importance of farm diversification and networks in farms' strategies in dealing with the Covid-19 crisis. Furthermore, the presence of both synergies and trade-offs in different types of diversification is found. These results have interesting policy implications that should be more explicitly taken into account to target the next rural development measures.

Publication Type

Journal article.

<829>

Accession Number

20210071663

Author

Ganeson Malanashita; Amirthalingam SasikalaDevi; Kim KwaSiew

Title

Five tips for teaching and learning during the COVID-19 movement control order era: a family medicine perspective.

Source

MJMS - The Malaysian Journal of Medical Sciences; 2020. 27(6):183-186. 9 ref.

Publisher

School of Medical Sciences

Location of Publisher

Pulau Pinang

Country of Publication

Malaysia

Abstract

The Malaysian government's ongoing movement control order (MCO) to prevent coronavirus disease 2019 (COVID-19) spread, has disrupted the teaching and learning (T&L) activities of higher education institutions in the country. This paper seeks to outline the steps taken by the Department of Family Medicine of the International Medical University (IMU), Malaysia, to adapt its online teaching and learning activities. The five tips are: (i) understand how to use online T&L platforms; (ii) teachers should create multiple communication channels; (iii) ensure attendance is captured; (iv) enhance the online T&L experience and (v) conduct online formative assessments.

Publication Type

Journal article.

<830>

Accession Number

20210071384

Author

Al-Salihi, K. A.; Khalaf, J. M.

Title

The emerging SARS-CoV, MERS-CoV, and SARS-CoV-2: an insight into the viruses zoonotic aspects.

Source

Veterinary World; 2021. 14(1):190-199. 78 ref.

Publisher

Veterinary World

Location of Publisher

Wankaner

Country of Publication

India

Abstract

Zoonotic coronavirus disease (COVID) has emerged in the past two decades and caused a pandemic that has produced a significant universal health alarm. Severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome-CoV (MERS-CoV) emerged in 2002 and 2012, respectively, provoking severe lower respiratory infection and deadly pneumonia. COVID-19 is a severe respiratory disease caused by the new strain of novel CoV (SARS-CoV-2). The zoonotic aspects of the SARS-CoV-2 in comparison to SARS-CoV and MERS-CoV are highlighted in this article. COVID-19 has rapidly become a pandemic and has spread and infected millions of people worldwide. As of November 19, 2020, the date of submitting this review, the total CoV cases, deaths, and recovered patients are 56,828,218, 1,359,320, and 39,548,923, respectively. In conclusion, COVID-19 has particularly altered the opinion of the significance of zoonotic diseases and their animal origins and the intermediate reservoirs, which may be unknown wild animals. Genetically, the SARS-CoV-2 is related to the SARS-like bat CoVs and shares 85% identity with the SARS-CoV that is derived from the SARS-like bat CoVs. However, the virus is related to a lesser extent to the MERS-CoV. The SARS-CoV-2 uses the same receptor-binding domain receptor of the SARS-CoV - the angiotensin-converting enzyme 2; conversely, DPP4 (CD26). It has not been proved that the MERS-CoVs primary receptor is the receptor of the SARS-CoV-2.

Publication Type

Journal article.

<831>

Accession Number

20210071246

Author

Cui PanPan; Wang PanPan; Wang Kun; Ping ZhiGuang; Wang Peng; Chen ChangYing

Title

Post-traumatic growth and influencing factors among frontline nurses fighting against COVID-19.

Source

Occupational and Environmental Medicine; 2021. 78(2):129-135. 39 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To explore the level and influencing factors of frontline nurses' post-traumatic growth (PTG) during COVID-19 epidemic. **Methods:** A cross-sectional survey was conducted in February 2020 in three hospitals in China. The Post-traumatic Growth Inventory (PTGI) was used to investigate the PTG of frontline

nurses. Data on related factors, including demographic characteristics and subjective variables, were collected. The Event-Related Rumination Inventory was used to assess rumination. Pearson's or Spearman's correlation was calculated for bivariate analysis. Independent sample t-tests or one-way analysis of variance and multiple linear regression analysis were used to examine the related factors. Results: A total of 179 frontline nurses were recruited, and 167 were included in the analyses. The mean PTG score was 70.53±17.26. The bivariate analyses showed that deliberate rumination was modestly positively correlated with PTG ($r=0.557$, $p < 0.01$), while intrusive rumination had a modest negative correlation with PTG ($r=-0.413$, $p < 0.01$). Multiple linear regression demonstrated that working years, self-confidence in frontline work, awareness of risk, psychological intervention or training during the epidemic and deliberate rumination were the main influencing factors of PTG among frontline nurses and accounted for 42.5% of the variance ($F=31.626$, $p < 0.001$). Conclusions: The PTG of frontline nurses was at a medium to high level and was influenced by working years, self-confidence in frontline work, awareness of risk, psychological intervention or training and deliberate rumination. It is necessary to strengthen psychological guidance and training for frontline nurses and promote their deliberate rumination on epidemic events to improve their PTG.

Publication Type

Journal article.

<832>

Accession Number

20210071058

Author

Deeh, P. B. D.; Kayri, V.; Orhan, C.; Sahin, K.

Title

Status of novel coronavirus disease 2019 (COVID-19) and animal production.

Source

Frontiers in Veterinary Science; 2020. 6(November). 96 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

In December 2019, a severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) that caused severe disease clusters was first reported in Wuhan, the capital of China's Hubei province. This viral disease, which is reported to originate from a seafood market where wild animals are illegally sold, has been transmitted

among humans worldwide through close contact. Given the growing number of infected people worldwide and the disastrous consequences in all aspects of life, COVID-19 is a serious public health issue that requires special attention. In some countries, the epidemic curve of infection which was in the plateau phase or decreasing phase during the lockdown period increases day by day since the reopening, indicating the second phase of contamination. Therefore, the preventive measures recommended by the World Health Organization (WHO) must be respected to stop the spread of the disease. The international crisis due to the COVID-19 pandemic negatively affects many sectors, including animal production and its related industries. Indeed, with the cessation of imports and exports between countries, it is not possible to provide feeds that are considered as basic raw materials in livestock raising. This situation impairs animal movements, decreases production inputs availability, and negatively affects the economy. The sustainability of animal production is also affected by a shortage of workers due to the lockdown/curfew, the strong decrease in the purchasing power of the consumer, and the intensification of health care tasks. To prevent contamination of animal products and the spread of the disease with food, the U.S. Centers for Disease Control and Prevention (CDC) recommends frequent disinfection of food and human contact surfaces at production sites using an appropriate antiseptic. The purpose of this review article is to describe the current status of COVID-19 and investigate its effects on animal production. We propose potential approaches to keep animal products processing units and staff safe from SARS-CoV-2 infection and some strategies to improve animal production quantity and economy.

Publication Type

Journal article.

<833>

Accession Number

20210071045

Author

Cardoso, N. P.; Mansilla, F. C.; Benedetti, E.; Turco, C. S.; Barone, L. J.; Iserte, J. A.; Soria, I.; Baumeister, E.; Capozzo, A. V.

Title

Bovine interferon lambda is a potent antiviral against SARS-CoV-2 infection in vitro.

Source

Frontiers in Veterinary Science; 2020. 6(November). 47 ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

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Interferon lambda (IFN- λ) is an antiviral naturally produced in response to viral infections, with activity on cells of epithelial origin and located in the mucosal surfaces. This localized activity results in reduced toxicity compared to type I IFNs, whose receptors are ubiquitously expressed. IFN- λ has been effective in the therapy of respiratory viral infections, playing a crucial role in potentiating adaptive immune responses that initiate at mucosal surfaces. Human IFN- λ has polymorphisms that may cause differences in the interaction with the specific receptor in the human population. Interestingly, bovine IFN- λ 3 has an in silico-predicted higher affinity for the human receptor than its human counterparts, with high identity with different human IFN- λ variants, making it a suitable antiviral therapeutic candidate for human health. Here, we demonstrate that a recombinant bovine IFN- λ (rbIFN- λ) produced in HEK-293 cells is effective in preventing SARS-CoV-2 infection of VERO cells, with an inhibitory concentration 50% (IC50) between 30 and 50 times lower than that of human type I IFN tested here (a2b and beta1a). We also demonstrated the absence of toxicity of rbIFN- λ in human PBMCs and the lack of proinflammatory activity on these cells. Altogether, our results show that rbIFN- λ is as an effective antiviral potentially suitable for COVID-19 therapy. Among other potential applications, rbIFN- λ could be useful to preclude virus dispersion to the lungs and/or to reduce transmission from infected people. Moreover, and due to the non-specific activity of this IFN, it can be potentially effective against other respiratory viruses that may be circulating together with SARS-CoV-2.

Publication Type

Journal article.

<834>

Accession Number

20210070755

Author

Abrishami, M.; Tohidinezhad, F.; Daneshvar, R.; Omidtabrizi, A.; Amini, M.; Sedaghat, A.; Amini, S.; Reihani, H.; Allahyari, A.; Seddigh-Shamsi, M.; Tayyebi, M.; Naderi, H.; Bojdy, A.; Khodashahi, R.; Eslami, S.

Title

Ocular manifestations of hospitalized patients with COVID-19 in northeast of Iran.

Source

Ocular Immunology and Inflammation; 2020. 28(5):739-744. 10 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Purpose: To evaluate ocular findings in patients with Coronavirus Disease 2019 (COVID-19) in the Northeast of Iran. **Methods:** In a cross-sectional, observational study all consecutive patients with confirmed COVID-19 diagnosis at the central referral center of these patients in northeast of Iran were included. Ocular examinations (external and slit) were randomly performed for the patients who were admitted to the Intensive Care Unit (ICU) and six COVID wards of the hospital. Moreover, Chart records and serum chemistry results were collected. **Results:** A total of 142 patients with the mean age of 62.6 +or- 15 years (range: 23-96 years) and almost equal gender distribution (male: N=77, 54.2%) were included in the study. During the initial external examination by the ophthalmologist, 44 (31%) patients were found to have conjunctival hyperemia and 22 (15.5%) patients had chemosis. Consecutive slit examination showed 41 (28.9%) conjunctival hyperemia, 22 (15.5%) chemosis, 11 (7.7%) cataract, and 9 (6.3%) diabetic retinopathy. The patients with at least one ocular manifestation had significantly higher blood urea levels at the time of admission compared to those with no obvious ocular involvement (median: 41.5, IQR: 28-66.3 vs. median: 33, IQR: 23.8-51.8, P=.023). Moreover, a significant difference was observed in the total white blood cell count, lymphocyte percent, neutrophil count, Erythrocyte Sedimentation Rate (ESR), and blood urea level between patients with positive and negative Polymerase Chain Reaction (PCR) for SARS-CoV-2 virus. None of the patients reported ocular symptoms prior to systemic involvement. The proportion of patients with at least one ocular manifestation was significantly higher in those admitted in the ICU compared to the non-ICU wards. While conjunctival hyperemia was the most prevalent ocular finding in all patients, chemosis was the most common ocular manifestation in ICU admitted patients. **Conclusion:** Ocular manifestation was observed in more than half of our COVID-19 patients. Hence, it seems important to involve ophthalmologist in the diagnosis and management of these patients.

Publication Type

Journal article.

<835>

Accession Number

20210070488

Author

Hernandez, D. C.; Holtzclaw, L. E.

Title

The impact of the COVID-19 pandemic and the economic recession on food insecurity: short- and long-term recommendations to assist families and communities.

Source

Family and Community Health; 2021. 44(2):84-86.

Publisher

Lippincott Williams & Wilkins

Location of Publisher

Philadelphia

Country of Publication

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USA

Publication Type

Journal article.

<836>

Accession Number

20210070450

Author

Sato, T.; Ueha, R.; Goto, T.; Yamauchi, A.; Kondo, K.; Yamasoba, T.

Title

Expression of ACE2 and TMPRSS2 proteins in the upper and lower aerodigestive tracts of rats: implications on COVID 19 infections.

Source

Laryngoscope; 2021. 131(3):E932-E939. 20 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Objective: Patients with coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), exhibit not only respiratory symptoms but also symptoms of chemosensitive disorders. Cellular entry of SARS-CoV-2 depends on the binding of its spike protein to a cellular receptor named angiotensin-converting enzyme 2 (ACE2), and the subsequent spike protein-priming by host cell proteases, including transmembrane protease serine 2 (TMPRSS2). Thus, high expression of ACE2 and TMPRSS2 is considered to enhance the invading capacity of SARS-CoV-2. **Methods:** To elucidate the underlying histological mechanisms of the aerodigestive disorders caused by SARS-CoV-2, we investigated the expression of ACE2 and TMPRSS2 proteins using immunohistochemistry, in the aerodigestive tracts of the tongue, hard palate with partial nasal tissue, larynx with hypopharynx, trachea, esophagus, and lung of rats. **Results:** Co-expression of ACE2 and TMPRSS2 proteins was observed in the taste buds of the tongue, nasal epithelium, trachea, bronchioles, and alveoli with varying degrees of expression. Remarkably, TMPRSS2 expression was more distinct in the peripheral alveoli than in the central alveoli. These results coincide with the reported clinical symptoms of COVID-19, such as the loss of taste, loss of olfaction, and respiratory dysfunction. **Conclusions:** A wide range of organs have been speculated to be affected by SARS-CoV-2 depending on the expression levels of ACE2 and TMPRSS2. Differential distribution of TMPRSS2 in

the lung indicated the COVID-19 symptoms to possibly be exacerbated by TMPRSS2 expression. This study might provide potential clues for further investigation of the pathogenesis of COVID-19.

Publication Type

Journal article.

<837>

Accession Number

20210070407

Author

Callander, D.; Meunier, E.; Deveau, R.; Grov, C.; Donovan, B.; Minichiello, V.; Kim, J.; Duncan, D.

Title

Investigating the effects of COVID-19 on global male sex work populations: a longitudinal study of digital data.

Source

Sexually Transmitted Infections; 2021. 97(2):93-98. 30 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Recommendations of 'social distancing' and home quarantines to combat the global COVID-19 pandemic have implications for sex and intimacy, including sex work. This study examined the effects of COVID-19 on male sex work globally and investigated how men who sold sex responded to and engaged with the virus in the context of work. **Methods:** This study made use of an existing database of deidentified data extracted from the online profiles maintained by male sex workers on a large, international website. Website engagement metrics were calculated for the periods before (September to December 2019) and during COVID-19 (January to May 2020); Poisson regression analyses were used to assess changes over time before and after, while a content analysis was undertaken to identify modes of engagement with the virus. **Results:** Data were collected from 78 399 profiles representing 19 388 individuals. In the 'before' period, the number of active profiles was stable (inter-rate ratio (IRR)=1.01, 95% CI 0.99 to 1.01, p=0.339) but during COVID-19 decreased by 26.3% (IRR=0.90, 95% CI 0.89 to 0.91, p < 0.001). Newly created profiles also decreased during COVID-19 (59.4%; IRR=0.71, 95% CI 0.69 to 0.74, p < 0.001) after a period of stability. In total, 211 unique profiles explicitly referenced COVID-19; 185 (85.8%) evoked risk reduction strategies, including discontinuation of in-person services (41.2%), pivoting to virtual services (38.9%), COVID-19 status disclosure (20.9%), enhanced sanitary and screening requirements (12.3%) and restricted travel (5.2%).

Some profiles, however, seemed to downplay the seriousness of COVID-19 or resist protective measures (14.7%). Conclusions: These findings support the contention that COVID-19 has dramatically impacted the sex industry; globally, male sex workers may be facing considerable economic strain. Targeted education and outreach are needed to support male sex workers grappling with COVID-19, including around the most effective risk reduction strategies. Those involved with the sex industry must have access to state-sponsored COVID-19 financial and other aid programmes to support individual and public health.

Publication Type

Journal article.

<838>

Accession Number

20210070226

Author

Lee SongI; Koh JeongSuk; Kim YoonJoo; Kang DaHyun; Park DongIl; Park HeeSun; Jung SungSoo; Kim JuOck; Lee JeongEun

Title

Secondary infection among hospitalized COVID-19 patients: a retrospective cohort study in a tertiary care setting.

Source

Respirology; 2020. 26(3):277-278. 4 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Publication Type

Journal article.

<839>

Accession Number

20210070215

Author

Cecchetto, C.; Aiello, M.; Gentili, C.; Ionta, S.; Osimo, S. A.

Title

Increased emotional eating during COVID-19 associated with lockdown, psychological and social distress. (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 160. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Due to the spread of COVID 2019, the Italian government imposed a lockdown on the national territory. Initially, citizens were required to stay at home and not to mix with others outside of their household (Phase 1); eventually, some of these restrictions were lifted (Phase 2). To investigate the impact of lockdown on emotional and binge eating, an online survey was conducted to compare measures of self-reported physical (BMI), psychological (Alexithymia), affective (anxiety, stress, and depression) and social (income, workload) state during Phase 1 and Phase 2. Data from 365 Italian residents showed that increased emotional eating was predicted by higher depression, anxiety, quality of personal relationships, and quality of life, while the increase of bingeing was predicted by higher stress. Moreover, we showed that higher alexithymia scores were associated by increased emotional eating and higher BMI scores were associated with both increased emotional eating and binge eating. Finally, we found that from Phase 1 to Phase 2 binge and emotional eating decreased. These data provide evidence of the negative effects of isolation and lockdown on emotional wellbeing, and, relatedly, on eating behaviour.

Publication Type

Journal article.

<840>

Accession Number

20210070136

Author

Zhang Xu [Zhang, X. S.]; Wang YiFei; Jahanshahi, A. A.; Li JiZhen; Schmitt, V. G. H.

Title

Early evidence and predictors of mental distress of adults one month in the COVID-19 epidemic in Brazil.

Source

Journal of Psychosomatic Research; 2021. 142. 30 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Objective: We aim to provide early evidence of mental distress and its associated predictors among adults one month into the COVID-19 crisis in Brazil. Methods: We conducted an online survey of 638 adults in Brazil on March 25-28, 2020, about one month (32 days) cross-sectionally after the first COVID-19 case in South America was confirmed in Sao Paulo. The 638 adults were in 25 states out of the 26 Brazilian states, with the only exception being Roraima, the least populated state in the Amazon. Of all the participating adults, 24%, 20%, and 18% of them were located in Rio de Janeiro state, Santa Catarina state, and Sao Paulo state respectively. Results: In Brazil, 52% (332) of the sampled adults experienced mild or moderate distress, and 18.8% (120) suffered severe distress. Adults who were female, younger, more educated, and exercised less reported higher levels of distress. Each individual's distance from the Brazilian epicenter of Sao Paulo interacted with age and workplace attendance to predict the level of distress. The "typhoon eye effect" was stronger for people who were older or attended their workplace less. The most vulnerable adults were those who were far from the epicenter and did not go to their workplace in the week before the survey. Conclusion: Identifying the predictors of distress enables mental health services to better target finding and helping the more mentally vulnerable adults during the ongoing COVID-19 crisis.

Publication Type

Journal article.

<841>

Accession Number

20210070121

Author

Jia Peng; Liu Liang; Xie XiaoFen; Yuan ChangZheng; Chen Hui; Guo Bing; Zhou JunMin; Yang ShuJuan

Title

Changes in dietary patterns among youths in China during COVID-19 epidemic: the COVID-19 impact on lifestyle change survey (COINLICS). (Special Issue: Impact of the COVID-19 pandemic on food intake, appetite and weight status.)

Source

Appetite; 2021. 158.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Limited studies have focused on how COVID-19 outbreak and thereby lockdown have affected the youth's diet patterns. This study aimed to assess changes in diet patterns among youths in China under the COVID-19 lockdown, based on the COVID-19 Impact on Lifestyle Change Survey (COINLICS), a nationwide retrospective survey distributed via social media platforms during 9-12 May 2020 where 10,082 youth participants in China have voluntarily reported their basic sociodemographic information and routine diet patterns in the months before and after COVID-19 lockdown. We used paired t-tests or X2 tests to evaluate the significance of differences in consumption patterns of 12 major food groups and beverages across educational levels, between sexes, and before and after COVID-19 lockdown. During the COVID-19 lockdown, significant decreases were observed in the frequency of intake of rice, meat, poultry, fresh vegetables, fresh fruit, soybean products, and dairy products, with significant sex differences (females consuming more rice, fresh vegetables and fruit and less meat, poultry, soybean and dairy products than males). Significant increases were observed in the frequency of consumption of wheat products, other staple foods, and preserved vegetables, with males consuming these foods more frequently than females. Graduate students consumed most foods more frequently except rice and other staple foods and preserved vegetables. The frequency of sugar-sweetened beverage consumption had decreased while frequency of tea drinking had increased. The participating youths' diet patterns had significantly changed during the COVID-19 lockdown, with heterogeneities observed to different extents between sexes and across educational levels. Our findings would inform policy-makers and health professionals of these changes in time for better policy making and public health practice.

Publication Type

Journal article.

<842>

Accession Number

20210070089

Author

Nitish Agarwal; Amol Raheja; Ashish Suri

Title

Guidelines for preoperative testing for neurosurgery in coronavirus disease 2019 (COVID-19) era: Indian viewpoint amidst global practice.

Source

World Neurosurgery; 2021. 146:103-112.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Preoperative testing and evaluation for coronavirus disease 2019 (COVID-19) have been an enigmatic challenge for the neurosurgical community during the pandemic. Since the beginning of the pandemic, laboratory diagnostic methods have evolved substantially, and with them has been the necessity for readily available, fast, and accurate preoperative testing methods. In this article, we provide an overview of the various laboratory testing methods that are presently available and a comprehensive literature review how various institutes and neurosurgical communities across the globe are employing them to ensure safe and effective delivery of surgical care to patients. Through this review, we highlight the guiding principles for preoperative testing, which may serve as a road map for other medical institutions to follow. In addition, we provide an Indian perspective of preoperative testing and share our experience in this regard.

Publication Type

Journal article.

<843>

Accession Number

20210068971

Author

Guner, Y.; Guner, E. K.; Cilingir, D.

Title

Technological innovations in new type Coronavirus and health system. (Special Issue: COVID-19; experiences and future prospects part II.)

Source

Bezmialem Science; 2021. 9(Supplement 1):69-73. 42 ref.

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Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

The new type of Coronavirus disease-19 (COVID-19) spreads rapidly as a global epidemic and affects health, economic and social systems. Increasing the number of patients in COVID-19 hospitals negatively affects the health system by causing insufficient materials and health workers to be exposed to the risk of infection. Ethical dilemmas regarding providing healthcare to all patients are more difficult due to uncertainties caused by the disease, change in social life, stress, emotional deterioration, having to work for a long time, insufficient intensive care conditions and mechanical ventilation during the pandemic period. In this process, new and creative approaches are needed in the health system to effectively meet the health needs of individuals. Telemedicine applications, mobile applications, web-based applications and psychological support applications are among these approaches. In this paper, a new type of COVID-19 pandemic in the world and Turkey was referred to the process of innovation in the health care system.

Publication Type

Journal article.

<844>

Accession Number

20210061926

Author

Zenker, S.; Braun, E.; Gyimothy, S.

Title

Too afraid to travel? Development of a Pandemic (COVID-19) Anxiety Travel Scale (PATS).

Source

Tourism Management; 2021. 84. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Pandemics are affecting tourism in many ways. Being a niche research field before, the coronavirus (COVID-19) pandemic created a strong urgency to develop this topic. For researching pandemic-induced changes in tourist beliefs and travel behaviour, we developed a construct that measures the intra-personal anxiety of travellers (and non-travellers): the Pandemic (COVID-19) Anxiety Travel Scale (PATS), using two large online studies (N=2180; N=2062) and including two different cultural contexts (US and Denmark). In Study 1, explorative and confirmative factors analysis confirms a short and easy-to-use 5-item solution, while the presented model adds face validity. Study 2 confirmed the structure (reliability) and tested nomological validity, by putting PATS into the context of different constructs (xenophobia and prevention focus). Although the proposed scale arose from the coronavirus (COVID-19), it is not limited to this specific pandemic and will hopefully prove to be a valuable measurement tool for future pandemics as well.

Publication Type

Journal article.

<845>

Accession Number

20210061925

Author

Kaczmarek, T.; Perez, K.; Demir, E.; Zaremba, A.

Title

How to survive a pandemic: the corporate resiliency of travel and leisure companies to the COVID-19 outbreak.

Source

Tourism Management; 2021. 84.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

What protects travel and leisure companies from a global pandemic, such as COVID-19? To answer this question, we investigate data on over 1200 travel and leisure companies in 52 countries. We consider 80 characteristics, such as company financial ratios, macroeconomic variables, and government policy responses. Using regressions and machine learning tools, we demonstrate that firms with low valuations,

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limited leverage, and high investments have been more immune to the pandemic-induced crash. We also find a beneficial effect of stringent containment and closure policies. Finally, our results indicate that countries with less individualism may be better positioned to cope with the pandemic. Our findings have implications for regulatory bodies, managers, and investors concerning future pandemic outbreaks.

Publication Type

Journal article.

<846>

Accession Number

20210061115

Author

Grigore, A.; Cord, D.; Tanase, C.; Albulescu, R.

Title

Herbal medicine, a reliable support in COVID therapy. (Special issue.)

Source

Journal of Immunoassay and Immunochemistry; 2020. 41(6):976-999. 96 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

At present, specific therapies for COVID-19 are not well established, being certain only that the immune system plays a decisive role in the initiation and progression of the disease. Plants have given and continue to give compounds with great efficiency and low toxicity, some of them being a starting point for extremely effective synthetic substances. Although herbal remedies are used mainly for preventive purposes, there are also guidelines issued by some countries that indicate the use of traditional remedies for different stages of COVID-19 disease. Europe has a long and strong tradition of using medicinal plants for therapeutic purposes, but clinical trials for this type of approach are scarce, compared to Asia. In this regard, a bridge between tradition and science, would have a strong impact on the capacity for prevention and treatment of COVID-19. The paper reviews compounds of plant origin that have previously proven effective in counteracting some coronaviruses but also some of their major effects - direct action on virus replicative apparatus (viral entry or replication, action on the viral enzymatic system), collateral action of natural compounds on the immune system and also the contribution of herbal medicine as vaccine adjuvants are tackled.

Publication Type

Journal article.

<847>

Accession Number

20210060412

Author

Acar, Y.

Title

The novel coronavirus (COVID-19) outbreak and impact on tourism activities. [Turkish]

Source

Guncel Turizm Arastirmalari Dergisi; 2020. 4(1):7-21. many ref.

Publisher

Murat Bayram

Location of Publisher

Denizli

Country of Publication

Turkey

Abstract

In this study, it is aimed to determine; current and future potential effects of the outbreak which is defined as the Novel Coronavirus (COVID-19) emerged Wuhan in China (Republic of Turkey Ministry of Health-19 Covid-19 Guide 2020:5; WHO, Coronavirus Disease (COVID-19) Outbreak, 2020) on tourism activities. In accordance with this purpose; research data were collected through document analysis, which are constantly updated on the official website of the World Health Organization (WHO), regarding the outbreak, which poses a serious threat to the public health in terms of its effects. Between 31 December 2019 and 10 March 2020, data related to the measures affecting the tourism sector such as the ban on entry and exit to countries applied by national governments, quarantines, international sports and art activities, travel restrictions, etc. were evaluated within the scope of the study. In addition, the reports and warnings of the World Tourism Organization (WTO) on the subject are also included in the study. The impressions obtained as a result of the study findings indicate that the new coronavirus will create damages that can be felt for a long time in the economies of the country, and that the tourism sector will be directly affected by these losses.

Publication Type

Journal article.

<848>

Accession Number

20210053411

Author

Wang MingZhu; Fu DeYu; Yao Lei; Li JianHua

Title

Theoretical study of the molecular mechanism of Maxingyigan decoction against COVID-19: network pharmacology-based strategy.

Source

Combinatorial Chemistry & High Throughput Screening; 2021. 24(2):294-305.

Publisher

Bentham Science Publishers

Location of Publisher

Sharjah

Country of Publication

United Arab Emirates

Abstract

Aim and Objective: Maxingyigan (MXYG) decoction is a traditional Chinese medicine (TCM) prescription. However, how MXYG acts against coronavirus disease 2019 (COVID-19) is not known. We investigated the active ingredients and the therapeutic targets of MXYG decoction against COVID-19. **Methods:** A network pharmacology strategy involving drug-likeness evaluation, prediction of oral bioavailability, network analyses, and virtual molecular docking was used to predict the mechanism of action of MXYG against COVID-19. **Results:** Thirty-three core COVID-19-related targets were identified from 1023 gene targets through analyses of protein-protein interactions. Eighty-six active ingredients of MXYG decoction hit by 19 therapeutic targets were screened out by analyses of a compound-compound target network. Via network topology, three "hub" gene targets (interleukin (IL-6), caspase-3, IL-4) and three key components (quercetin, formononetin, luteolin) were recognized and verified by molecular docking. Compared with control compounds (ribavirin, arbidol), the docking score of quercetin to the IL-6 receptor was highest, with a score of 5. Furthermore, the scores of three key components to SARS-CoV-2 are large as 4, 5, and 5, respectively, which are even better than those of ribavirin at 3. Bioinformatics analyses revealed that MXYG could prevent and treat COVID-19 through anti-inflammatory and immunity-based actions involving activation of T cells, lymphocytes, and leukocytes, as well as cytokine-cytokine-receptor interaction, and chemokine signaling pathways. **Conclusion:** The hub genes of COVID-19 helped to reveal the underlying pathogenesis and therapeutic targets of COVID-19. This study represents the first report on the molecular mechanism of MXYG decoction against COVID-19.

Publication Type

Journal article.

<849>

Accession Number

20210047909

Author

Ali, M. C.; Nur, A. J.; Khatun, M. S.; Dash, R.; Rahman, M. M.; Karim, M. M.

Title

Identification of potential SARS-CoV-2 main protease inhibitors from *Ficus carica* latex: an in-silico approach. (Special Issue: COVID-19: conventional therapies, fates, and mechanisms.)

Source

Journal of Advanced Biotechnology and Experimental Therapeutics; 2020. 3(4):57-67. 74 ref.

Publisher

Bangladesh Society for Microbiology, Immunology, and Advanced Biotechnology

Location of Publisher

Dhaka

Country of Publication

Bangladesh

Abstract

SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) is the aetiological agent behind the current pandemic of coronavirus disease 2019 (COVID-19). SARS-CoV-2 main protease plays a dynamic role in mediating viral replication and transcription, which is one of the most probable drug targets against SARS-CoV-2. *Ficus carica* latex encompasses notable bioactive molecules with various biological properties, including antiviral activities. In this study, latex compounds of *Ficus carica* were screened to find out active phytochemicals against SARS-CoV-2 main protease through molecular docking, molecular dynamics simulation, and ADMET (absorption, distribution, metabolism, excretion, and toxicity) profiling. A total of 21 compounds were screened, and the compounds, lupeol, α -amyrin, and luteolin, showed the highest binding affinity and intense interaction with the vital catalytic residue His 41 and Cys 145. The molecular dynamics simulation revealed that the amyrin is the most stable compound with higher binding free energy, suggesting that this compound can compete with the native ligands of the main protease. The ADMET analysis indicated that these phytochemicals have considerable physicochemical, pharmacokinetics, and drug-likeness properties and do not possess any considerable detrimental effects and can be considered as potential drug candidates against SARS-CoV-2. However, further in-vitro, in-vivo, and clinical trials are required to observe the exact efficiency of these compounds.

Publication Type

Journal article.

<850>

Accession Number

20210039811

Author

Kanika Mahajan; Shekhar Tomar

Title

COVID-19 and supply chain disruption: evidence from food markets in India.

Source

American Journal of Agricultural Economics; 2020. 103(1):35-52. 28 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

This paper looks at the disruption in food supply chains due to COVID-19 induced economic shutdown in India. We use a novel dataset from one of the largest online grocery retailers to look at the impact on product stockouts and prices. We find that product availability falls by 10% for vegetables, fruits, and edible oils, but there is a minimal impact on their prices. On the farm-gate side, it is matched by a 20% fall in quantity arrivals of vegetables and fruits. We then show that supply chain disruption is the main driver behind this fall. We compute the distance to production zones from our retail centers and find that the fall in product availability and quantity arrivals is larger for items that are cultivated or manufactured farther from the final point of sale. Our results show that long-distance food supply chains have been hit the hardest during the current pandemic with welfare consequences for urban consumers and farmers.

Publication Type

Journal article.

<851>

Accession Number

20210036375

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Author

Hillen, J.

Title

Online food prices during the COVID-19 pandemic. (Special Issue: The COVID-19 pandemic and the agricultural supply chain.)

Source

Agribusiness (New York); 2021. 37(1):91-107. 34 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

During the coronavirus disease-2019 pandemic, online grocery shopping experienced a never seen popularity in many countries. To study how the globally active online grocer Amazon Fresh reacted to this extraordinary demand increase, we analyzed a large dataset of daily price quotes for over 19,000 products for the customer location, Los Angeles. We found that contrary to the US consumer food price index, the overall price level at Amazon Fresh did not increase during the pandemic, but even slightly decreased for several product groups. Amazon seems to follow its low-price strategy also in the grocery sector, even in times of high demand. However, during the lockdown phase, there were more price increases for certain highly demanded product groups such as frozen and prepared foods. Moreover, fewer prices were communicated as promotional prices. Because this change did not influence the general price level, we conclude that such promotional prices are used more as a marketing tool than as a price-setting instrument.

Publication Type

Journal article.

<852>

Accession Number

20210034016

Author

Westhoff, P.; Gerlt, S.; Whistance, J.; Kim Youngjune; Binfield, J.; Meyer, S.

Title

Baseline update for U.S. agricultural markets.

Source

FAPRI-MU Report - Food and Agricultural Policy Research Institute, College of Agriculture, Food and Natural Resources, University of Missouri; 2020. (03-20):21 pp.

Publisher

University of Missouri-Columbia

Location of Publisher

Columbia

Country of Publication

USA

Abstract

This report presents an update to the 2020 US Agricultural Market Outlook. The outbreak of COVID-19, as well as US government response to the outbreak, continues to impact agricultural markets, disrupting supply chains, shifting consumer demand and expanding government outlays. Outcomes of the analysis pertain to total spending on farm support and other conservation programs, farm income, projected developments and expansions, prices, and consumption. Presented data include macroeconomic and policy assumptions as well as the supply and use of various commodities such as corn, soybean, wheat, upland cotton, rice, poultry, and biomass-based diesel among others.

Publication Type

Bulletin.

<853>

Accession Number

20210028945

Author

Abarbanel, B.

Title

Picks on clicks with an RG schtick: building long term sustainability in esports betting growth. (The IGI COVID papers.)

Source

UNLV Gaming Research & Review Journal; 2020. 24(2):7-10. 16 ref.

Publisher

UNLV International Gaming Institute

Location of Publisher

Las Vegas

Country of Publication

USA

Abstract

The COVID-19 environment was a catalyst in accelerating growth in esports, and brought the coexisting profit prospects and potential harm situations to the forefront of gambling discussions. All that is available at the intersection of esports and betting may seem like endless opportunity, but it is argued that it is crucial for esports organizations to protect their consumers to maintain a fun, sustainable environment.

Publication Type

Journal article.

<854>

Accession Number

20210028688

Author

Mizrachi, I.; Gretzel, U.

Title

Collaborating against COVID-19: bridging travel and travel tech.

Source

Information Technology and Tourism; 2020. 22(4):489-496. 20 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

The distinction between "traditional" travel businesses and travel tech companies has remained steady for years due to knowledge, resource and financial reasons, leading them to operate in separate bubbles. The massive damages caused by COVID-19 for both sides of the industry pose a unique opportunity for them to ditch the old transactional working model, and to seek for more strategic collaborations in order to weather the storm. This viewpoint article discusses the business potential behind such collaborations in the short and long runs-from improving immediate safety perceptions to building technological foundations for the travel industry of tomorrow. It argues that local government mediation is needed for it to succeed, in formats such as funded hackathons or incubation programs that are targeted at addressing COVID-19 and its unique challenges.

Publication Type

Journal article.

<855>

Accession Number

20210028451

Author

Foroudi, P.; Tabaghdehi, S. A. H.; Marvi, R.

Title

The gloom of the COVID-19 shock in the hospitality industry: a study of consumer risk perception and adaptive belief in the dark cloud of a pandemic.

Source

International Journal of Hospitality Management; 2021. 92. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

As the new coronavirus (COVID-19) spreads globally, the hospitality industry is at the heart of implementing social distancing, a measure demonstrated to be effective in flattening the epidemic curve. Informed by the perceived risk theory, this research examines how the customer's perception of the shock of the coronavirus pandemic impacts on their beliefs, and how their beliefs could influence their anticipated emotions (negative and positive) which could affect their future desire towards visiting restaurants. Structural equation modelling was used to understand the research constructs' associations. This study provides two key suggestions: (i) that the hospitality industry is built on trust from their customers by supporting and resourcing consumers' self-protection behaviour and adoptive belief, and (ii) that the economic influence and the continuous uncertainty and transformation of the restaurant business need the enhancement of localisation strategies, practices and performance.

Publication Type

Journal article.

<856>

Accession Number

20210028413

Author

Song HyoungJu; Yeon JiHwan; Lee SeoKi

Title

Impact of the COVID-19 pandemic: evidence from the U.S. restaurant industry.

Source

International Journal of Hospitality Management; 2021. 92. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The current study examines how the effect of COVID-19 on U.S. restaurant firms' stock returns varies according to the firms' pre-pandemic characteristics by employing three firm-level dimensions (financial conditions, corporate strategies, and ownership structure). Employing 795 firm-year observations obtained from annual reports and other databases, this study found that restaurant firms with past characteristics of larger size, more leverage, more cash flows, less ROA, and more internationalization are more resilient to stock declines reacting to COVID-19 than otherwise similar firms. Whereas, dividend, franchising, institutional ownership, and managerial ownership did not show any significant moderating effect on the relationship between COVID-19 and stock returns. This study sheds light on the research topic by providing insights into drivers of restaurant firm's stock returns during the COVID-19 shock. Future studies can employ the variables and method used in the current study to extend the understanding of the issue.

Publication Type

Journal article.

<857>

Accession Number

20210028208

Author

Olsen, D. H.; Timothy, D. J.

Title

The COVID-19 pandemic and religious travel: present and future trends. (Special Issue: The impact of COVID-19 on religious tourism and pilgrimage.)

Source

International Journal of Religious Tourism and Pilgrimage; 2020. 8(7):170-188. many ref.

Publisher

Dublin Institute of Technology

Location of Publisher

Dublin

Country of Publication

Irish Republic

Abstract

The COVID-19 pandemic of 2020 has had dramatic effects on both the health and economic stability of countries around the world. While several scholars and media commentators have suggested that the pandemic would be a good time to reset an unsustainable tourism system, left out of these discussions has been the impacts on religion and religious travel. The purpose of this paper is to review the impacts of the COVID-19 pandemic on religion and religious travel, including the tensions that have arisen between religious communities, governments and health officials. The paper then discusses potential futures regarding religious travel in a post-COVID-19 and postsecular world.

Publication Type

Journal article.

<858>

Accession Number

20203557491

Title

Active cities: Olympic Review speaks to the seven Global Active Cities about their post-lockdown sports plans.

Source

Olympic Review; 2020. (115):70-73.

Publisher

Comite International Olympique (International Olympic Committee)

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Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

This article reveals post-lockdown sports plans of seven Global Active Cities. Governments of these cities adapt ways to ensure that their citizens are doing enough physical activity even during the pandemic lockdown. Physical activity management is crucial for alleviating the impact of COVID-19 and promoting active and healthy living. The seven cities are Buenos Aires, Hamburg, Lausanne, Lillehammer, Liverpool, Ljubljana, and Richmond. Maintaining activities in these urban settings is more challenging because they are more closely packed, making people more vulnerable to infection, and opportunities for citizens to be active are less. In Global Active Cities, activities were altered to comply with COVID-19 safety procedures, such as the Online Race in Lillehammer. Common in these cities is that their local government provide funding support to community sports clubs and give their people opportunities to do outdoor sports but in fewer groups and with physical distancing. Outdoor spaces for physical activity were kept open and other spaces were converted to cater a greater number of people for non-contact physical exercises.

Publication Type

Journal article.

<859>

Accession Number

20203517209

Author

Chen RongNing; Liang ShunWei; Peng Yang; Li XueGuo; Chen JianBin; Tang SiYao; Zhao JingBo

Title

Mental health status and change in living rhythms among college students in China during the COVID-19 pandemic: a large-scale survey.

Source

Journal of Psychosomatic Research; 2020. 137. 46 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

This article presented that 7.7% of college students showed depressive symptoms during the COVID-19 pandemic. College students with depressive symptoms had low regulatory emotional self-efficacy. Browsing COVID-19 information over 3 h per day was related to depressive symptoms. Unfavorable living rhythms were associated with depressive symptoms, thus paying attention to college students' mental health during the COVID-19 pandemic.

Publication Type

Journal article.

<860>

Accession Number

20203491767

Title

After COVID-19, a future for the world's children?

Source

Lancet (British edition); 2020. 396(10247):298-300.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The COVID-19 pandemic is exacerbating many of the threats faced by children as enumerated by the WHO-UNICEF-Lancet Commission: climate change and related crises of poverty, migration, and malnutrition; commercial marketing of harmful substances; unsafe roads and hazardous housing; and inadequate education and social protection. Similarly, the World Food Programme has warned of a coming "hunger pandemic" further exacerbated by extreme poverty. In psychosocial aspects, the social isolation brought about by disease mitigation measures has deprived children of social stimuli and has made some more vulnerable to online bullying, exploitation, and intensified commercial marketing as children spend more time online. With all the challenges piling on top of the others, children's future are at risk, especially those who are poor, female, disabled, indigenous, from racial, ethnic, and sexual minorities, or are otherwise vulnerable in unequal societies. To counteract all these, country leaders should put child health and wellbeing at the centre of recovery plans, include experts in children's issues in the relevant task forces and legislative working groups, engage their ministries to work together for children, and ask children and adolescents what changes they would like to see, what is good for children is good for societies.

Publication Type

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Journal article.

<861>

Accession Number

20203465808

Author

Ashish Prasad; Mehanathan Muthamilarasan; Manoj Prasad

Title

Synergistic antiviral effects against SARS-CoV-2 by plant-based molecules.

Source

Plant Cell Reports; 2020. 39(9):1109-1114. 46 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

The exponential spread of Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emphasizes the immediate need for effective antiviral drugs and vaccines that could control and prevent the spread of this pandemic. Several new and repurposed drugs are being tested for their effectiveness in the treatment regime, and the development of vaccines is underway. The availability of genome sequence information of the virus and the identification of potential targets to neutralize and eradicate the infection have enabled the search for novel as well as existing molecules to perform the desired function. However, the application of plants in the development of potential biomolecules, such as antibiotics and vaccines, is limited. Traditional medicines involving plant-based formulations have proven successful in boosting immunity and providing tolerance to virus infections. Still, in-depth studies are not available to explore the bioactive compounds of plant origin and their mechanism of action. Given this, the current opinion article conveys our thoughts and perspectives on the promising usage of plant-based biomolecules in circumventing SARS-CoV-2, and how these molecules can work synergistically with other potential drugs for treating SARS-CoV-2.

Publication Type

Journal article.

