

## Literature Search Request

<b>Search query</b>	COVID-19
<b>Search strategy</b> 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 202101*.up. (827) ***** [mp=abstract, title, original title, broad terms, heading words, identifiers, cabicodes]
<b>Date of coverage</b>	January 2021

### Search results

	Date searched	No of items found
<b>CAB Abstracts</b>	8/4/2021	827

### References from CAB Abstracts

<1>

Accession Number

20210035932

Author

Castro, F. A. G. de; Santos, A. O. dos; Reis, G. V. L.; Viveiros, L. B.; Torres, M. H.; Oliveira Junior, P. P. de

Title

Rural telemedicine and COVID-19: expanding access where distance was already the rule. [Portuguese]

Source

Revista Brasileira de Medicina de Familia e Comunidade; 2020. 15(42). 22 ref.

Publisher

Sociedade Brasileira de Medicina de Familia e Comunidade

Location of Publisher

Florianopolis

Country of Publication

Brazil

Abstract

**Introduction:** Faced with the pandemic caused by the new coronavirus (SARS-CoV-2), avoiding crowds and guaranteeing access to health services for those in need has been a major concern for professionals and managers. In rural areas, access barriers are even greater. **Methods:** This is an experience report of the implementation of telemedicine via an app of messages and calls by a preceptor and residents of the Residency Program in Family Medicine and Community of Ouro Preto, in a rural Basic Health Unit. Three weeks after the introduction of the tool, a database was manually generated using the Microsoft ExcelR 2016 program, with subsequent descriptive statistical analysis. **Results:** In the analyzed period, there were 329 interactions through WhatsApp, an average of 25.3 people per day. All demands were met within a maximum of 24 hours. Teleconsultations were conducted in the form of written messages, audios and video calls. The demand for renewing prescriptions for medications for continued use corresponded to 20% of the consultations and the request for appraisal of test results was 9%. Administrative questions represented 22% of the contacts made. Seventy-four percent of the teleconsultations were resolved virtually and in 26% of the cases, face-to-face evaluation was required. There was a positive perception in reaction to the satisfaction of patients seen virtually, according to the reports of the Community Health Workers and through messages received directly by the medical team through the app. **Conclusions:** The use of a messaging and calling app as a Telemedicine tool proved to be a viable strategy during the SARS-CoV-2 pandemic, especially important in rural areas. Further studies are needed to investigate its impacts on the health system and on the relevant outcomes for the population.

Publication Type

Journal article.

<2>

Accession Number

20210035919

Author

Nabuco, G.; Oliveira, M. H. P. P. de; Afonso, M. P. D.

Title

The impact of COVID-19 pandemic on mental health: what is the role of primary health care?  
[Portuguese]

Source

Revista Brasileira de Medicina de Familia e Comunidade; 2020. 15(42). 51 ref.

Publisher

Sociedade Brasileira de Medicina de Familia e Comunidade

Location of Publisher

Florianopolis

Country of Publication

Brazil

Abstract

Introduction: At times like the COVID-19 pandemic, there is evidence that mental health-related morbidity and mortality tends to overcome that directly related to infection, resulting from the pandemic itself and also from measures of social distance. Background: To present a proposal for primary care teams in dealing with the population's mental health issues related to the pandemic. Methods: Reviewing the risk factors and stressors and recovering the attributes and potential of primary health care, an essay was written with proposals for the role of primary care. Results and Discussion: The main risk factors for mental distress include social vulnerability, contracting the disease or living with someone infected, existence of a previous mental disorder, being elderly or being a health professional. Social isolation and excessive and unreliable information are adding stressors to the crisis. The specifics of bereavement during the pandemic also increase the risk of complicated bereavement. In the Brazilian context, there is still the institutional political crisis increasing the population's anxiety. It is recommended that primary health care, with its characteristics and attributes, should: identify families at increased risk for mental illness; articulate intersectorally so that the demands of the most vulnerable are met; guide the population on how to minimize the factors that generate anxiety; support families to enable the grieving process. Conclusions: This essay intends to qualify the discussion about the role of PHC in attending to the population's mental health needs and, therefore, to subsidize actions that enhance the care provided by the teams during the COVID-19 pandemic.

Publication Type

Journal article.

<3>

Accession Number

20210035444

Author

Kitamura, K.; Sadamasu KenJi; Muramatsu, M.; Yoshida, H.

Title

Efficient detection of SARS-CoV-2 RNA in the solid fraction of wastewater.

Source

Science of the Total Environment; 2021. 763. 40 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

In the context of the coronavirus disease 2019 (COVID-19) pandemic, environmental surveillance for the detection of SARS-CoV-2 has become increasingly important. Studies have demonstrated that the SARS-CoV-2 RNA is present in the feces of infected individuals; further, its presence in wastewater has been reported. However, an optimized method for its detection in sewage has not yet been adequately investigated. Therefore, in this study, the efficient detection of SARS-CoV-2 RNA in the solid fraction of wastewater was investigated using two quantitative PCR assays. In particular, wastewater samples were collected from a manhole located in the commercial district of a metropolitan region in Japan, where COVID-19 is highly prevalent, and two wastewater treatment plants (WWTPs). The samples were concentrated using four separate methods, namely, electronegative membrane adsorption, polyethylene glycol precipitation, ultrafiltration, and solid precipitation. Each method revealed a significant concentration of pepper mild mottle virus (PMMoV) RNA, which is an indicator virus for wastewater. As expected, non-enveloped PMMoV RNA was enriched in the supernatant fraction such that relatively low concentrations were detected in the solid fraction of the wastewater samples. In contrast, higher SARS-CoV-2 RNA concentrations were consistently detected in the solid fractions compared with the supernatant fractions based on the other methods that were investigated in this study. Spearman's correlation tests showed that the SARS-CoV-2 RNA concentrations in wastewater samples from the WWTP were significantly correlated with the number of COVID-19 cases recorded during the data collection period. These results demonstrate that viral recovery from the solid fraction is an effective method for SARS-CoV-2 RNA surveillance in an aqueous environment.

Publication Type

Journal article.

<4>

Accession Number

20210035330

Author

Kostakoglu, U.; Kant, A.; Atalar, S.; Ertunc, B.; Erensoy, S.; Dalmanoglu, E.; Yilmaz, I.; Sevimli, B.; Erturk, A.; Yilmaz, G.

Title

Diagnostic value of chest CT and initial real-time RT-PCR in COVID-19 infection.

Source

Pakistan Journal of Medical Sciences; 2021. 37(1):234-238. 18 ref.

Publisher

Professional Medical Publications

Location of Publisher

Karachi

Country of Publication

Pakistan

Abstract

**Objectives:** To evaluate the diagnostic value of the rtRT-PCR test and CT in patients presenting with typical clinical symptoms of COVID-19. **Methods:** The study with the participation of four center in Turkey was performed retrospectively from 20 March-15 April 2020 in 203 patients confirmed for COVID-19. The initial rtRT-PCR test was positive in 142 (70.0%) of the patients (Group-I) and negative in 61 patients (Group-II). **Results:** The mean age of the patients in Group-I was 49.7+or-18.0 years and the time between the onset of symptoms and admission to the hospital was 3.6+or-2.0 days; whereas the same values for the patients in Group-II were 58.1+or-19.9 and 5.3+or-4.2, respectively ( $p=0.004$ ;  $p=0.026$ ). Initial rtRT-PCR was found positive with 83.5% sensitivity and 74.1% PPV in patients with symptom duration of less than five days. It was found that rtRT-PCR positivity correlated negatively with the presence of CT findings, age, comorbidity, shortness of breath, and symptom duration, while rtRT-PCR positivity correlated positively with headache. Presence of CT findings was positively correlated with age, comorbidity, shortness of breath, fever, and the symptom duration. **Conclusions:** It should be noted that a negative result in the rtRT-PCR test does not rule out the possibility of COVID-19 diagnosis in patients whose symptom duration is longer than five days, who are elderly with comorbidities and in particular who present with fever and shortness of breath. In these patients, typical CT findings are diagnostic for COVID-19. A normal chest CT is no reason to loosen up measures of isolation in patients with newly beginning symptoms until the results are obtained from the PCR test.

Publication Type

Journal article.

<5>

Accession Number

20210034963

Author

Oliveira, L. M. da S.; Tiyo, B. T.; Silva, L. T. da; Fonseca, L. A. M.; Rocha, R. C.; Santos, V. A. dos; Ceneviva, C.; Bedin, A. A.; Almeida, A. de; Duarte, A. J. da S.; Oshiro, T. M.

Title

Prevalence of anti-SARS-CoV-2 antibodies in outpatients of a large public university hospital in Sao Paulo, Brazil.

Source

Revista do Instituto de Medicina Tropical de Sao Paulo; 2020. 62. 17 ref.

Publisher

Instituto de Medicina Tropical de Sao Paulo

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

Coronavirus disease 19 (COVID-19) is caused by SARS-Cov-2 and the manifestations of this infection range from an absence of symptoms all the way up to severe disease leading to death. To estimate the prevalence of past infection in a population, the most readily available method is the detection of antibodies against the virus. This study has investigated the prevalence of anti-SARS-CoV-2 antibodies in outpatients of the Hospital das Clinicas, in Sao Paulo city (Brazil), which is a large university hospital belonging to the public health system that cares for patients with complex diseases who need tertiary or quaternary medical care. Our serological inquiry was carried out for 6 weeks, with once-a-week blood sampling and included 439 patients from several outpatient services. Overall, 61 patients tested positive for anti-SARS-CoV-2 IgG (13.9%); 56.1% of the patients live in Sao Paulo city, with the remaining living in other towns of the metropolitan area; 32.8% of the patients testing positive for IgG antibodies to SARS-CoV-2 were asymptomatic, 55.7% developed mild or moderate disease and 11.5% had to be hospitalized. The prevalence of SARS-CoV-2 positive serology was lower among patients who had received the seasonal influenza vaccine compared to the ones who did not. These findings may indicate that those individuals care more about health issues, and/or that they have a better access to health care and/or a better quality of health care service. The large proportion of patients who were unaware of having had contact with SARS-CoV-2 deserves attention, reflecting the scarcity of tests performed in the population.

Publication Type

Journal article.

<6>

Accession Number

20210034472

Author

Chu BiWu; Zhang ShuPing; Liu Jun; Ma QingXin; He Hong

Title

Significant concurrent decrease in PM2.5 and NO2 concentrations in China during COVID-19 epidemic.

Source

Journal of Environmental Sciences; 2021. 99:346-353. 31 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The strict control measures and social lockdowns initiated to combat COVID-19 epidemic have had a notable impact on air pollutant concentrations. According to observation data obtained from the China National Environmental Monitoring Center, compared to levels in 2019, the average concentration of NO<sub>2</sub> in early 2020 during COVID-19 epidemic has decreased by 53%, 50%, and 30% in Wuhan city, Hubei Province (Wuhan excluded), and China (Hubei excluded), respectively. Simultaneously, PM<sub>2.5</sub> concentration has decreased by 35%, 29%, and 19% in Wuhan, Hubei (Wuhan excluded), and China (Hubei excluded), respectively. Less significant declines have also been found for SO<sub>2</sub> and CO concentrations. We also analyzed the temporal variation and spatial distribution of air pollutant concentrations in China during COVID-19 epidemic. The decreases in PM<sub>2.5</sub> and NO<sub>2</sub> concentrations showed relatively consistent temporal variation and spatial distribution. These results support control of NO<sub>x</sub> to further reduce PM<sub>2.5</sub> pollution in China. The concurrent decrease in NO<sub>x</sub> and PM<sub>2.5</sub> concentrations resulted in an increase of O<sub>3</sub> concentrations across China during COVID-19 epidemic, indicating that coordinated control of other pollutants is needed.

Publication Type

Journal article.

<7>

Accession Number

20210034426

Author

Zhu XiangYu; Luo ZiYu; Chen Ying; Wang LiNa; Chi WenXin; Jiang LuLian; Liu Ke; Zhao LiPing; Zhang Yu; Zhang HaiBo

Title

Tai Chi for the elderly patients with COVID-19 in recovery period: a protocol for systematic review and meta-analysis.

Source

Medicine (Baltimore); 2021. 100(3). 38 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Background: The coronavirus disease 2019 (COVID-19) outbreak has caused a great impact in many countries. Older people are more susceptible to the virus than other people. As a good health exercise suitable for the elderly, Tai Chi has a positive impact on heart function, blood pressure, lung function, immunity, etc. It can enhance cardiopulmonary function, increase the elasticity of blood vessels, and improve the body's self-regulation function. For the elder patients with COVID-19, Tai Chi has outstanding merits. Methods: We will search PubMed, EMBASE, MEDLINE, the Cochrane Library, Chinese National Knowledge Infrastructure, Chinese Biomedical Literature Database, Chinese Science and Technology Periodical Database, Wanfang Database, Clinical Trials and Chinese Clinical Trial Registry. The complete process will include study selection, data extraction, risk of bias assessment and meta-analyses. Endnote X9.3 will be used to manage data screening. The statistical analysis will be completed by Stata/SE 15.1 software. Results: This proposed study will evaluate the effectiveness and safety of Tai Chi for the improvement of psychological pressure, cardiopulmonary function, and immunity in elderly COVID-19 patients during the recovery period. Conclusion: The conclusion of this study will provide evidence to prove the safety and effectiveness of Tai Chi on elderly COVID-19 patients during the recovery period.

Publication Type

Journal article.

<8>

Accession Number

20210034126

Author

Haidar, A.; Khoei, A.; Alex, S. E.; Blick, C.; Lopez, E.; Wendt, S.; Ghanta, R.; Almohamad, M.; Cousins, S.; Noyola, J.; Tien, J.; Markham, C.; Sharma, S. V.

Title

Community-academic partnerships to promote health literacy and address social needs among low-income families during COVID-19.

Source

Journal of Nutrition Education and Behavior; 2021. 53(1):75-78.



**Publisher**

Elsevier Inc.

**Location of Publisher**

Philadelphia

**Country of Publication**

USA

**Abstract**

Brighter Bites is a school-based health promotion program that delivers fresh produce and nutrition education to low-income children and their families across 6 locations in the US. This article provides a perspective on how, despite coronavirus disease 2019-related school closures, Brighter Bites pivoted rapidly to collaborate with medical and public health institutions to improve health and food literacy among their families. Through these partnerships, Brighter Bites was able to rapidly provide accurate, evidence-based information related to coronavirus disease 2019 and other social needs, including food, housing, transportation, and access to health care, to help fill a needed gap in vulnerable communities.

**Publication Type**

Journal article.

<9>

**Accession Number**

20210034117

**Author**

Patten, E. V.; Beckstead, E.; Jones, M.; Spruance, L. A.; Hayes, D.

**Title**

School nutrition professionals' employee safety experiences during the onset of the COVID-19 pandemic.

**Source**

Journal of Nutrition Education and Behavior; 2021. 53(1):2-9. 29 ref.

**Publisher**

Elsevier Inc.

**Location of Publisher**

Philadelphia

**Country of Publication**

USA

**Abstract**

Objective: To explore the real-time personal/employee safety experiences and perspectives of school nutrition professionals ranging from frontline staff to state leadership across the US as they responded to the initial weeks of the coronavirus pandemic. Methods: A cross-sectional survey was administered electronically March 31-April 20, 2020, to school nutrition staff, managers, directors, and state agency personnel. Descriptive statistics were calculated, and a thematic analysis of an open-ended item was conducted. Results: School nutrition professionals (n = 504) from 47 states responded. Most (86.6%) reported that ensuring employee safety was somewhat or much more difficult during the pandemic, and they were unaware of an emergency plan. Themes from open-ended responses regarding employee safety concerns included, exposure and transmission risk, processes, and personal concerns. Conclusions and Implications: Attention to the safety and concerns of school nutrition employees is vital for continuation of these programs during this pandemic and for future emergency situations.

#### Publication Type

Journal article.

<10>

#### Accession Number

20210034045

#### Author

Hamilton, H.; Henry, R.; Rounsevell, M.; Moran, D.; Cossar, F.; Allen, K.; Boden, L.; Alexander, P.

#### Title

Exploring global food system shocks, scenarios and outcomes.

#### Source

Futures (Oxford); 2020. 123.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Globalised food supply chains are increasingly susceptible to systemic risks, with natural, social and economic shocks in one region potentially leading to price spikes and supply changes experienced at the global scale. Projections commonly extrapolate from recent histories and adopt a 'business as usual' approach that risks failing to take account of shocks or unpredictable events that can have dramatic consequences for the status quo, as seen with the global Covid-19 pandemic. This study used an explorative stakeholder process and shock centred narratives to discuss the potential impact of a diversity of shocks, examining system characteristics and trends that may amplify their impact. Through the development of

scenarios, stakeholders revealed concerns about the stability of the food system and the social, economic and environmental consequence of food related shocks. Increasing connectivity served as a mechanism to heighten volatility and vulnerability within all scenarios, with reliance on singular crops and technologies (i.e. low diversity) throughout systems highlighted as another potential source of vulnerability. The growing role of social media in shaping attitudes and behaviours towards food, and the increasing role of automation emerged as contemporary areas of concern, which have thus far been little explored within the literature.

#### Publication Type

Journal article.

<11>

#### Accession Number

20210033952

#### Author

Peralta, E. A.; Taveras, M.

#### Title

Effectiveness of teleconsultation use in access to mental health services during the coronavirus disease 2019 pandemic in the Dominican Republic.

#### Source

Indian Journal of Psychiatry; 2020. 62(9 (Suppl.)):492-494. 4 ref.

#### Publisher

Medknow Publications

#### Location of Publisher

Mumbai

#### Country of Publication

India

#### Abstract

**Background:** The unique aspects of the global situation with respect to the 2019 novel coronavirus disease (COVID-19) pandemic places a significant burden on health and mental health services. During this period, there has been an increased demand in mental health-care services, whose prepandemic access was lower than necessary in many developing countries and is currently limited by international social distancing recommendations and protocols. **Aim:** This study aims to determine the effectiveness of teleconsultation use to increase access to mental health services, provided by volunteer staff during the quarantine of the COVID-19 pandemic in the Dominican Republic. **Materials and Methods:** A special telephone service was enabled, organized by different governmental and private entities, in addition, it was published a list of telephone numbers of a team of volunteers consisting of 598 psychologists and seventy psychiatrists, who interacted from March 25 to May 17 with people who needed their help using calls, video calls, and

electronic messaging services. After providing mental healthcare, each volunteer completed an online form to record relevant consultation data provided with a total of 6800 interventions to date. Results: Nearly 67.3% of the interventions were requested by women. About 77.8% were adults between the ages of 18 and 59.27.1% of the interventions were requested by people who worked as health personnel. Forty-six percent of the interventions were requested by people living in the province of Santo Domingo and 4.8% by people living outside the country. Of the interventions, 43% reported anxiety, 26%, sleep problems, 15%, depression, and 2% reported behaviors related to suicide. Of all the interventions, 5.3% required referral to a crisis intervention unit for face-to-face follow-up. Conclusions: The enablement of this teleconsultation model and the number of interventions made during this period of the COVID-19 pandemic, suggests that access to mental healthcare in the Dominican Republic has increased. Problems with anxiety, sleep, and depression are common during the COVID-19 pandemic. Only a small group of patients have needed to be referred for face-to-face care, demonstrating that teleconsultation has been an effective tool.

#### Publication Type

Journal article.

<12>

#### Accession Number

20210033948

#### Author

Ng, B.

#### Title

Solutions to prevent and address physician burnout during the pandemic in Mexico.

#### Source

Indian Journal of Psychiatry; 2020. 62(9 (Supl.)):467-469. 5 ref.

#### Publisher

Medknow Publications

#### Location of Publisher

Mumbai

#### Country of Publication

India

#### Abstract

Background: The COVID-19 pandemic has tested the level of preparedness and readiness of governments globally. The demand for services exceeding the capacity of the health systems in both developed and developing countries has been the rule rather than the exception. Physicians and the rest of the health-care personnel have been put through unprecedented levels of demand, within a field of uncertainty, from an evolving and insufficient understanding of the pathophysiology of the viral process, the unclear benefit of face coverings used by the general public, numerous pharmacological candidates, insufficient personal

protection equipment, and the highly expected vaccine. Aims and Objectives: Design a program to address the emotional and psychiatric needs of COVID-19 first response Healthcare personnel in Mexico. Materials: in march 2020, the Mexican Psychiatric Association was invited to be part of the Workgroup for the fortification of Mental Health during Disasters of the Ministry of Health in Mexico. The charge was to develop a program to address the needs and prevent burn out in physicians and the rest of healthcare personal. The details of how this program was planned, implemented, and launched will be presented. Results: The program was launched in two phases. Phase A through a chat with text messaging capability was launched on 25 April, 2020. B through telepsychiatric video calls, was launched on 15 June, 2020. Phase A had a very limited demand. Phase B also had a very limited demand until the month 5 September, 2020. Conclusions: from the time of program launch through the first four months, the demand was very low, what may be explained due to "normalization" of stress and/or stigma among healthcare professionals. Our personnel deserve the utmost support from their society.

#### Publication Type

Journal article.

<13>

#### Accession Number

20210033931

#### Author

Debanjan Banerjee; Mrugesh Vaishnav; Rao, T. S. S.; Raju, M. S. V. K.; Dalal, P. K.; Afzal Javed; Gautam Saha; Mishra, K. K.; Vinay Kumar; Jagiwala, M. P.

#### Title

Impact of the COVID-19 pandemic on psychosocial health and well-being in South-Asian (World Psychiatric Association zone 16) countries: a systematic and advocacy review from the Indian Psychiatric Society.

#### Source

Indian Journal of Psychiatry; 2020. 62(9 (Supl.)):343-353. 57 ref.

#### Publisher

Medknow Publications

#### Location of Publisher

Mumbai

#### Country of Publication

India

#### Abstract

Background: Coronavirus disease 2019 (COVID-19) has emerged as a global health threat. The South-Asian (SA) countries have witnessed both the initial brunt of the outbreak as well as the ongoing rise of cases. Their unique challenges in relation to mental health during the pandemic are worth exploring. Materials and Methods: A systematic review was conducted for all the original studies on the impact of COVID-19 and

lockdown on psychological health/well-being in the SA countries of the World Psychiatric Association Zone 16. PubMed, Google Scholar, PSYCHINFO, EMBASE, and SCOPUS were searched till June 2020. Studies conducted in the age group of 18-60 years with a minimum sample size of 10, and statistically significant results were included. Results: Thirteen studies were included in the review. They showed increase prevalence in nonpsychotic depression, anxiety, somatic concerns, alcohol-related disorders, and insomnia in the general population. Psychological symptoms correlated more with physical complaints of fatigue and pain in older adults and were directly related to social media use, misinformation, xenophobia, and social distancing. Frontline workers reported guilt, stigma, anxiety, and poor sleep quality, which were related to the lack of availability of adequate personal protective equipment, increased workload, and discrimination. One study validated the Coronavirus anxiety scale in the Indian population while another explored gaming as a double-edged sword during the lockdown in adolescents. Another study from Bangladesh explored psychosexual health during lockdown. Most studies were cross-sectional online surveys, used screening tools and had limited accessibility. Conclusion: The ongoing COVID-19 crisis and its impact serve as an important period for adequate mental healthcare, promotion, research, and holistic biopsychosocial management of psychiatric disorders, especially in vulnerable groups. Mental healthcare and research strategies during the pandemic and preparedness for postpandemic aftermath are advocated subsequently.

#### Publication Type

Journal article.

<14>

#### Accession Number

20210033897

#### Author

Vedder, V.; Schildgen, V.; Lusebrink, J.; Tillmann, R. L.; Domscheit, B.; Windisch, W.; Karagiannidis, C.; Brockmann, M.; Schildgen, O.

#### Title

Differential cytology profiles in bronchoalveolar lavage (bal) in COVID-19 patients: a descriptive observation and comparison with other corona viruses, influenza virus, Haemophilus influenzae, and Pneumocystis jirovecii.

#### Source

Medicine (Baltimore); 2021. 100(1). 8 ref.

#### Publisher

Lippincott Williams & Wilkins, Inc.

#### Location of Publisher

Hagerstown

#### Country of Publication

USA

## Abstract

Brochoalveolar lavages (BALs) from patients suffering from hospitalized infections with SARS-CoV-2, other corona viruses (human coronavirus (HCoV)-229E, HCoV-OC43, HCoV-NL63, and HCoV-HKU1), Influenza virus type A and B, Haemophilus influenzae and Pneumocystis jirovecii were compared cytopathologically. The aim of the study was to evaluate if the cellular profile detectable in BAL may be specific for the respective pathogens and could lead to diagnosis of COVID-19 even in the absence of PCR results. Differential cytology and flow cytometry datasets of 62 patients were observed and compared. We observed a significant association between individual cell pattern changes and the causing pathogen, but no general cell distribution pattern. The cytology pattern of the BAL fluid in COVID-19 is not specific enough to use it as a sole diagnostic criterion, although it may support clinical decision making.

## Publication Type

Journal article.

<15>

## Accession Number

20210033648

## Author

Formisano, E.; Maio, P. di; Ivaldi, C.; Sferrazzo, E.; Arieta, L.; Bongiovanni, S.; Panizzi, L.; Valentino, E.; Pasta, A.; Giudice, M.; Demontis, S.

## Title

Nutritional therapy for patients with coronavirus disease 2019 (COVID-19): practical protocol from a single center highly affected by an outbreak of the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.

## Source

Nutrition; 2021. 82. 38 ref.

## Publisher

Elsevier

## Location of Publisher

New York

## Country of Publication

USA

## Abstract

**Objectives:** Coronavirus disease 2019 (COVID-19) carries a high risk for malnutrition owing to the state of debilitation that results from acute respiratory failure symptoms. The aim of this study was to provide an approach to reduce the risk for malnutrition and improve patients' clinical outcomes. **Methods:** Short age-adjusted Nutritional Risk Screening was performed with 94 non-intensive care unit (ICU) patients admitted

to the Giovanni Borea Civil Hospital in Sanremo. Forty-nine patients in the ICU were considered at risk for malnutrition without screening and were fed with enteral nutrition plus supplemental parenteral nutrition. In the non-ICU setting, patients underwent a personalized nutritional protocol, considering their conditions, which consisted of a high-protein and high-calorie pureed diet, oral nutritional supplements, and/or artificial nutrition or other personalized nutritional path. Results: The nutritional treatment was well tolerated by the patients. Of the non-ICU patients, 19.1% died. They were mainly women, with higher body mass indices and older in age. Of the patients in the ICU, 53.1% died. Of the 94 non-ICU patients, 72 scored positive on at least one nutritional risk screening item (excluding age). Of the 94 non-ICU patients, 68 were >70 y of age. Non-ICU patients whose energy and protein needs were not met were older ( $P = 0.01$ ) and had a higher death rate than patients whose needs were met ( $P < 0.001$ ). Conclusions: This protocol should not be considered as a guideline; rather, it is intended to report the clinical experience of a nutrition team in an Italian reference center for the treatment of patients with COVID-19. Nutritional strategies should be implemented to prevent worsening of clinical outcomes.

#### Publication Type

Journal article.

<16>

#### Accession Number

20210033647

#### Author

Xu Jing; Gao LiangQin; Liang HuiQing; Chen ShaoDong

#### Title

In silico screening of potential anti-COVID-19 bioactive natural constituents from food sources by molecular docking.

#### Source

Nutrition; 2021. 82. 32 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

**Objectives:** The aim of this study was to seek potential natural compounds that can resist COVID-19 using computer virtual screening technology through molecular docking of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) 3CL hydrolytic enzyme (3CLpro) and angiotensin-converting enzyme 2 (ACE2). **Methods:** Molecular docking was achieved by using the Autodock Vina software. The natural



phytocompounds acting on 3CLpro and ACE2 were then selected from the Traditional Chinese Medicine Systems Pharmacology Database and Analysis Platform. This was followed by speculation on the mechanism of action of phytocompounds. Results: Six potential natural anti-COVID-19 phytocompounds were selected and were evaluated for absorption, distribution, metabolism and excretion (ADME) and Lipinski rules. The content of the six phytocompounds in various fruits and vegetables was determined via a literature search. Red wine, Chinese hawthorn, and blackberry were recommended as supplements because they contained antiviral phytocompounds. Conclusion: Red wine, Chinese hawthorn, and blackberry show promise for resisting COVID-19 and are thus recommended as supplements to prevent the infection of COVID-19 during its outbreak period.

#### Publication Type

Journal article.

<17>

#### Accession Number

20210033645

#### Author

Majeed, M.; Nagabhushanam, K.; Gowda, S.; Mundkur, L.

#### Title

An exploratory study of selenium status in healthy individuals and in patients with COVID-19 in a south Indian population: the case for adequate selenium status.

#### Source

Nutrition; 2021. 82. 20 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

The acute respiratory syndrome coronavirus-2 (SARS-CoV-2) pandemic has affected millions of individuals, causing major health and economic disruptions worldwide. The pandemic is still raging, with a second and third wave in a few countries, while new infections steadily rise in India. Nutrition and immune status are two critical aspects of fighting the virus successfully. Recently, selenium status was reported to positively correlate with the survival of patients with COVID-19 compared with non-survivors. We analyzed the blood serum levels in 30 apparently healthy individuals and in 30 patients with confirmed COVID-19 infection in the southern part of India. The patients showed significantly lower selenium levels of 69.2 ± 8.7 ng/mL than controls 79.1 ± 10.9 ng/mL. The difference was statistically significant (P = 0.0003). Interestingly,

the control group showed a borderline level of selenium, suggesting that the level of this micronutrient is not optimum in the population studied. The results of this exploratory study pave the way for further research in a larger population and suggest that selenium supplementation may be helpful in reducing the effects of the virus.

#### Publication Type

Journal article.

<18>

#### Accession Number

20210033641

#### Author

Gorji, A.; Khaleghi Ghadiri, M.

#### Title

Potential roles of micronutrient deficiency and immune system dysfunction in the coronavirus disease 2019 (COVID-19) pandemic.

#### Source

Nutrition; 2021. 82. 147 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

Preliminary studies indicate that a robust immune response across different cell types is crucial in recovery from coronavirus disease 2019 (COVID-19). An enormous number of investigations point to the vital importance of various micronutrients in the interactions between the host immune system and viruses, including COVID-19. There are complex and multifaceted links among micronutrient status, the host immune response, and the virulence of pathogenic viruses. Micronutrients play a critical role in the coordinated recruitment of innate and adaptive immune responses to viral infections, particularly in the regulation of pro- and anti-inflammatory host responses. Furthermore, inadequate amounts of micronutrients not only weaken the immune system in combating viral infections, but also contribute to the emergence of more virulent strains via alterations of the genetic makeup of the viral genome. The aim of this study was to evaluate the evidence that suggests the contribution of micronutrients in the spread as well as the morbidity and mortality of COVID-19. Both the presence of micronutrient deficiencies among infected individuals and the effect of micronutrient supplementation on the immune responses and overall outcome of the disease could be of great interest when weighing the use of micronutrients in the

prevention and treatment of COVID-19 infection. These investigations could be of great value in dealing with future viral epidemics.

Publication Type

Journal article.

<19>

Accession Number

20210033555

Author

Soliman, S.; Faris, M. E.; Ratemi, Z.; Halwani, R.

Title

Switching host metabolism as an approach to dampen SARS-CoV-2 infection.

Source

Annals of Nutrition and Metabolism; 2020. 76(5):297-303. 46 ref.

Publisher

S Karger AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: COVID-19 pandemic, a global threat, adversely affects all daily lives, altered governmental plans around the world, and urges the development of therapeutics and prophylactics to avoid the expansion of the viral infection. With the recent gradual opening after long lockdown, several recommendations have been placed, with dietary modification as one of the most important approaches that have been appraised. Summary: Here, we are reviewing how changing the host metabolism, particularly changing the host metabolic state from the carbohydrate-dependent glycolytic state to a fat-dependent ketogenic state, may affect viral replication. Furthermore, the impact of intermittent fasting (IF) in triggering metabolic switch along with the impact of supplementation with medium-chain triglycerides (MCTs) such as lauric acid in repressing the envelope formation and viral replication is also addressed. The amalgamation of IF and a ketogenic diet rich in MCTs is thought to work as a prophylactic measure for normal people and adjunct therapy for infected persons. Key Message: A diet regimen of ketogenic breakfast along with supplementation with two doses of lauric acid-rich MCTs at breakfast and lunch times, followed by 8-12-h IF and a dinner rich with fruits and vegetables, could be a potential prophylactic strategy and adjuvant therapy to combat SARS-CoV-2 infections.

Publication Type

<20>

Accession Number

20210033404

Author

Bardosh, K. L.; Vries, D. H. de; Abramowitz, S.; Thorlie, A.; Cremers, L.; Kinsman, J.; Stellmach, D.

Title

Integrating the social sciences in epidemic preparedness and response: a strategic framework to strengthen capacities and improve Global Health security.

Source

Globalization and Health; 2020. 16(120). 47 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** The importance of integrating the social sciences in epidemic preparedness and response has become a common feature of infectious disease policy and practice debates. However to date, this integration remains inadequate, fragmented and under-funded, with limited reach and small initial investments. Based on data collected prior to the COVID-19 pandemic, in this paper we analysed the variety of knowledge, infrastructure and funding gaps that hinder the full integration of the social sciences in epidemics and present a strategic framework for addressing them. **Methods:** Senior social scientists with expertise in public health emergencies facilitated expert deliberations, and conducted 75 key informant interviews, a consultation with 20 expert social scientists from Africa, Asia and Europe, 2 focus groups and a literature review of 128 identified high-priority peer reviewed articles. We also analysed 56 interviews from the Ebola 100 project, collected just after the West African Ebola epidemic. Analysis was conducted on gaps and recommendations. These were inductively classified according to various themes during two group prioritization exercises. The project was conducted between February and May 2019. Findings from the report were used to inform strategic prioritization of global investments in social science capacities for health emergencies. **Findings:** Our analysis consolidated 12 knowledge and infrastructure gaps and 38 recommendations from an initial list of 600 gaps and 220 recommendations. In developing our framework, we clustered these into three areas: (1) Recommendations to improve core social science response capacities, including investments in: human resources within response agencies; the creation of social science data analysis capacities at field and global level; mechanisms for operationalizing knowledge; and a set of rapid deployment infrastructures; (2) Recommendations to strengthen applied and basic social

sciences, including the need to: better define the social science agenda and core competencies; support innovative interdisciplinary science; make concerted investments in developing field ready tools and building the evidence-base; and develop codes of conduct; and (3) Recommendations for a supportive social science ecosystem, including: the essential foundational investments in institutional development; training and capacity building; awareness-raising activities with allied disciplines; and lastly, support for a community of practice. Interpretation: Comprehensively integrating social science into the epidemic preparedness and response architecture demands multifaceted investments on par with allied disciplines, such as epidemiology and virology. Building core capacities and competencies should occur at multiple levels, grounded in country-led capacity building. Social science should not be a parallel system, nor should it be "siloeed" into risk communication and community engagement. Rather, it should be integrated across existing systems and networks, and deploy interdisciplinary knowledge "transversally" across all preparedness and response sectors and pillars. Future work should update this framework to account for the impact of the COVID-19 pandemic on the institutional landscape.

#### Publication Type

Journal article.

<21>

#### Accession Number

20210033236

#### Author

Sapag, J. C.; Traub, C.

#### Title

Health workers and COVID-19 pandemic in Chile: mental health challenges. [Spanish]

#### Source

Revista Medica de Chile; 2020. 148(9):1371-1372. 6 ref.

#### Publisher

Sociedad Medica de Santiago

#### Location of Publisher

Santiago

#### Country of Publication

Chile

#### Publication Type

Correspondence.

<22>

Accession Number

20210033127

Author

Dzobo, K.; Chiririwa, H.; Dandara, C.; Dzobo, W.

Title

Coronavirus disease-2019 treatment strategies targeting interleukin-6 signaling and herbal medicine.

Source

OMICS A Journal of Integrative Biology; 2021. 25(1):13-22. many ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

Coronavirus disease-2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is evolving across the world and new treatments are urgently needed as with vaccines to prevent the illness and stem the contagion. The virus affects not only the lungs but also other tissues, thus lending support to the idea that COVID-19 is a systemic disease. The current vaccine and treatment development strategies ought to consider such systems medicine perspectives rather than a narrower focus on the lung infection only. COVID-19 is associated with elevated levels of the inflammatory cytokines such as interleukin-6 (IL-6), IL-10, and interferon-gamma (IFN- $\gamma$ ). Elevated levels of cytokines and the cytokine storm have been linked to fatal disease. This suggests new therapeutic strategies through blocking the cytokine storm. IL-6 is one of the major cytokines associated with the cytokine storm. IL-6 is also known to display pleiotropic/diverse pathophysiological effects. We suggest the blockage of IL-6 signaling and its downstream mediators such as Janus kinases (JAKs), and signal transducer and activators of transcription (STATs) offer potential hope for the treatment of severe cases of COVID-19. Thus, repurposing of already approved IL-6-JAK-STAT signaling inhibitors as well as other anti-inflammatory drugs, including dexamethasone, is under development for severe COVID-19 cases. We conclude this expert review by highlighting the potential role of precision herbal medicines, for example, the Cannabis sativa, provided that omics technologies can be utilized to build a robust scientific evidence base on their clinical safety and efficacy. Precision herbal medicine buttressed by omics systems science would also help identify new molecular targets for drug discovery against COVID-19.

Publication Type

Journal article.

<23>

Accession Number

20210032823

Author

Supriya Mishra; Shweta Singh; Vaibhav Tiwari; Bhavuk Vanza; Neha Khare; Punit Bharadwaj

Title

Assessment of level of perceived stress and sources of stress among dental professionals before and during the COVID-19 outbreak.

Source

Journal of International Society of Preventive and Community Dentistry; 2020. 10(6):794-802. 40 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Context: The recent spread of SARS-CoV-2 pandemic has resulted in a number of mental health issues among healthcare workers and dentists are no exception to this due to their nature of work. Hence, the aim of this study was to evaluate the level of perceived stress (PS) among Chhattisgarh dentists and identify the sources of stress before and during the COVID-19 crisis. Materials and Methods: An online questionnaire-based survey was done to assess the level of PS using perceived stress scale (PSS) and sources of stress among dentists of Chhattisgarh state of India before the onset of COVID-19 in the state and immediately after the nationwide lockdown was announced owing to COVID-19 outbreak. Based on the type of work, the dental practitioners were categorized into three groups--dental practitioners (group A), dental academicians (group B), and dentists who are practitioners as well as academicians (group C). Frequency, percentages, and mean values were calculated and compared among different participant characteristics using Student's t test, paired t test, and one-way ANOVA. Results: During phase I, mean PSS for dentists was 18.61 +or- 6.87 which increased to 20.72 +or- 1.95 in phase II. Group C dentists recorded higher mean PSS during phase I, while group A dentists reported higher mean PSS during phase II. No family time due to long working hours (90%) was the major stressor among the three groups of dentists during phase I and concern about getting infected (83.3%) was identified as the most frequent stressor during phase II followed by stress over financial implications. Conclusion: Chhattisgarh dentists are reeling under psychological stress, which could be highly deteriorating to their mental health. Hence, concerned authorities should come forward and support the dentists by providing adequate guidelines, policies, and monetary support to them.

Publication Type

Journal article.

<24>

Accession Number

20210032746

Author

Sun ShuFang; Goldberg, S. B.; Lin DanHua; Qiao Shan; Operario, D.

Title

Psychiatric symptoms, risk, and protective factors among university students in quarantine during the COVID-19 pandemic in China.

Source

Globalization and Health; 2021. 17(15). 67 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** The COVID-19 pandemic has made unprecedented impact on the psychological health of university students, a population vulnerable to distress and mental health disorders. This study investigated psychiatric symptoms (anxiety, depression, and traumatic stress) during state-enforced quarantine among university students in China (N=1912) through a cross-sectional survey during March and April 2020. **Results:** Psychiatric symptoms were alarmingly prevalent: 67.05% reported traumatic stress, 46.55% had depressive symptoms, and 34.73% reported anxiety symptoms. Further, 19.56% endorsed suicidal ideation. We explored risk and protective factors of psychological health, including demographic variables, two known protective factors for mental health (mindfulness, perceived social support), four COVID-specific factors (COVID-19 related efficacy, perceived COVID-19 threat, perceived COVID-19 societal stigma, COVID-19 prosocial behavior) and screen media usage. Across symptom domains, mindfulness was associated with lower symptom severity, while COVID-19 related financial stress, perceived COVID-19 societal stigma, and perceived COVID-19 threat were associated with higher symptom severity. COVID-19 threat and COVID-19 stigma showed main and interactive effects in predicting all mental health outcomes, with their combination associated with highest symptom severity. Screen media device usage was positively associated with depression. Female gender and COVID-19 prosocial behavior were associated with higher anxiety, while COVID-19 self-efficacy associated with lower anxiety symptoms. **Conclusions:** Findings suggest high need for psychological health promotion among university students during the COVID-19 pandemic and inform an ecological perspective on the detrimental role of stigma during an emerging infectious disease outbreak. Interventions targeting multi-level factors, such as promoting mindfulness and social support at individual and interpersonal levels while reducing public stigma about COVID-19, may be particularly promising. Attending to the needs of disadvantaged groups including those financially impacted by COVID-19 is needed.



Publication Type

Journal article.

<25>

Accession Number

20210032620

Author

Carrouel, F.; Goncalves, L. S.; Conte, M. P.; Campus, G.; Fisher, J.; Fraticelli, L.; Gadea-Deschamps, E.; Ottolenghi, L.; Bourgeois, D.

Title

Antiviral activity of reagents in mouth rinses against SARS-CoV-2.

Source

Journal of Dental Research; 2021. 100(2):124-132. many ref.

Publisher

International and American Associations for Dental Research

Location of Publisher

Alexandria

Country of Publication

USA

Abstract

The oral cavity, an essential part of the upper aerodigestive tract, is believed to play an important role in the pathogenicity and transmission of SARS-CoV-2. The identification of targeted antiviral mouth rinses to reduce salivary viral load would contribute to reducing the COVID-19 pandemic. While awaiting the results of significant clinical studies, which to date do not exist, the commercial availability of mouth rinses leads us to search among them for reagents that would have specific antiviral properties with respect to SARS-CoV-2. The challenges facing this target were examined for 7 reagents found in commercially available mouth rinses and listed on the ClinicalTrials.gov website: povidone-iodine, chlorhexidine, hydrogen peroxide, cyclodextrin, Citrox, cetylpyridinium chloride, and essential oils. Because SARS-CoV-2 is an enveloped virus, many reagents target the outer lipid membrane. Moreover, some of them can act on the capsid by denaturing proteins. Until now, there has been no scientific evidence to recommend mouth rinses with an anti-SARS-CoV-2 effect to control the viral load in the oral cavity. This critical review indicates that current knowledge of these reagents would likely improve trends in salivary viral load status. This finding is a strong sign to encourage clinical research for which quality protocols are already available in the literature.

Publication Type

Journal article.

<26>

Accession Number

20210032582

Author

Jin ShengYang; He Yu; Yang Kai; Gan Qin; Huang Wei; Wang XiaoHong; Meng ChunQing; Wang Hong

Title

The resumption of sports medicine during the COVID-19 post-epidemic period experiences from Wuhan, People's Republic of China.

Source

Journal of Bone and Joint Surgery, American volume; 2021. 103(1):10-14.

Publisher

Journal of Bone and Joint Surgery Incorporated

Location of Publisher

Boston

Country of Publication

USA

Abstract

Coronavirus disease 2019 (COVID-19) is spreading worldwide, with its outlook not looking optimistic. Simultaneously, the epidemic is currently under control in many areas. The resumption of work and production in areas that have achieved control of outbreaks is a problem. Considering the extremely transmissible nature of COVID-19, and the presence of asymptomatic infected people, avoiding nosocomial infection and protecting medical staff and patients during the post-epidemic period remain difficult problems that need to be solved. At present, few articles have examined relevant experiences in the field of sports medicine. Wuhan, the People's Republic of China, was the original epicenter of COVID-19, with physicians as the initial frontline workers. Wuhan is now gradually returning to a more normal state after a series of urgent, strict, and effective measures were utilized to combat the epidemic. During this time, we collected first-hand experiences of sports medicine work resumption in the initial 2-month period, including preparations before resuming work, outpatient management methods, online outpatient services, inpatient ward management, principles for determination of the examination results, and preparations for operations. The strict and feasible management strategies that we conducted were useful in avoiding hospital-based infections. We intend to share our own experiences and thoughts in this area. We hope that this will be helpful and inspiring to our sports medicine colleagues around the world.

Publication Type

Journal article.

<27>

Accession Number

20210032580

Author

Sikka, R.; Lincoln, A. E.; Adamson, B. J. S.; Epstein, J. A.; Krumholz, H. M.

Title

What's important: reopening lessons from the big leagues' experiences with COVID-19.

Source

Journal of Bone and Joint Surgery, American volume; 2021. 103(1):1-3.

Publisher

Journal of Bone and Joint Surgery Incorporated

Location of Publisher

Boston

Country of Publication

USA

Publication Type

Journal article.

<28>

Accession Number

20210032516

Author

Roquaiya Nishat; Babu, N. A.; Murthy, S. T. S.; Deepak, V.; Shirsha Mukherjee; Behura, S. S.

Title

Assessment of knowledge of oral pathologists and postgraduate students on safe laboratory practices during the COVID.19 pandemic.

Source

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: Oral pathologists are involved in laboratory diagnosis and receive specimens of biopsy, oral cytologic smears and samples for hematology, biochemistry and microbiology and thus are at a risk for laboratory-acquired infections, which may occur inadvertently and can be considered as an occupational hazard. Aim and Objectives: This study was conducted during the coronavirus disease (COVID-19) pandemic to assess the knowledge of oral pathologists and oral pathology postgraduate students regarding the safe laboratory practices, procedures and guidelines. Materials and Methods: The study was a cross-sectional online questionnaire-based study. Questions were framed to evaluate the knowledge on specimen/sample collection, its handling, disposal and protective measures for laboratory personnel. The study population comprised oral pathologists and oral pathology postgraduate students of various dental colleges in India. A Google Doc format was used to create an effective computerized questionnaire system, and the link was forwarded to around 500 participants. The survey was fielded online between August 29, 2020, and September 5, 2020. Three hundred and twelve responses were received, which were downloaded as spreadsheets for subsequent data analysis. Results: Mean value of right answers for the oral pathologists was 8.11 +or- 2.02 and for postgraduate students was 7.38 +or- 1.75. When the knowledge score between the two groups was compared, a statistically significant difference was found. Conclusion: This article compares and highlights the knowledge lacunae among the oral pathologists and oral pathologists postgraduate students in relation to guidelines to be followed for safety in the laboratory. Adhering to these biosafety regulations reduces occupational health hazards and enhances a safe working environment in the laboratory.

Publication Type

Journal article.

<29>

Accession Number

20210032368

Author

Guilherme, F. R.; Nascimento, M. A. do; Fiorillo, R. G.; Silva, M. C. da; Amadeu, G. dos S.; Graca, A.; Santos, S. L. C. dos; Rinaldi, W.

Title

Perceptive changes in endurance athletes during social isolation due to COVID-19.

Source

Revista Brasileira de Medicina do Esporte; 2020. 26(6):473-477. 24 ref.

Publisher

Sociedade Brasileira de Medicina do Esporte

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

**Introduction:** The COVID-19 pandemic has led to social isolation measures in different contexts. In endurance sports, competitions worldwide have been canceled, affecting behavioral, psychological, and physical aspects. **Background:** This study aimed to assess potential associations between stress, motivation, behavioral changes, and physical fitness in endurance athletes, and time in social isolation. **Methods:** A cross-sectional study with the participation of 201 athletes, including mountain bikers (n = 89), runners (n = 88) and triathletes (n = 24). Each participant answered questions about time spent in isolation; body weight; changes in training schedule during the isolation period; levels of motivation; stress levels; loss of physical fitness; what aspect of physical fitness was most jeopardized during the isolation period; alcohol consumption; quality of sleep; quality of diet; and whether they had been ill during the isolation period. **Results:** The results showed significant differences between the percentage of runners (4.5%) and triathletes (16.7%) who had been isolated from 1-10 days, and between the percentage of cyclists (41.6%) and runners (68.2%) in 11-20 days and >20 days (28.1% and 9.1%) respectively. Social isolation was significantly associated with at least one variable for the three groups of athletes; however, the runners were the most affected by the pandemic, presenting an association with low motivation, high stress, poorer quality of sleep, increased alcohol consumption, and loss of physical fitness. **Conclusion:** Our study showed that the period of social isolation, specifically over time > 10 days, generated significant changes in the perceptions of motivation, stress, alcohol consumption, and physical fitness of endurance athletes, with runners being the most affected group. **Level of Evidence III; Diagnostic studies - Investigation of a diagnostic test; Study of non-consecutive patients, without a "gold standard" applied uniformly.**

Publication Type

Journal article.

<30>

Accession Number

20210032365

Author

Humayun, A.; Ul-Haq, I.; Khan, F. R.; Nasir, S.

Title

Designing psychosocial support for COVID-19 frontline responders in Pakistan: a potentially scalable self-help plus blueprint for LMICs.

Source

Intervention, the Journal of Mental Health & Psychosocial Support in Conflict Affected Areas; 2020. 18(2):150-158. many ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

As part of its COVID emergency response, the Government of Pakistan's Ministry of Planning, Development and Special Initiatives has promulgated its first ever Mental Health and Psychosocial Support (MHPSS) initiative. Supported by UNICEF, this initiative will be piloted in Pakistan's federal capital in coordination with other government ministries. The core feature of this initiative is a web-based integrated system that provides MHPSS interventions at multiple levels, including psychosocial support to frontline responders. For this purpose, we developed a self-help tool, MyCare+, to help users assess and manage their own stress, and to consult a counsellor if needed. It is a comprehensive, evidence-driven, confidential application adapted to local needs and consolidates clinical data for further trend analysis. It is a practical, instructed self-guide for assessment and management of stress-related conditions in the field that is based on existing evidence, thus bridging a gap. Overall, the user feedback was positive for the English and Urdu versions of MyCare+, as they found the content relevant and helpful. More than 90% of users were able to follow the instructions and felt confident to use the tool. This article outlines a blueprint for developing this toolkit, which can be easily translated into regional languages and scaled up for supporting larger populations.

Publication Type

Journal article.

<31>

Accession Number

20210032354

Author

Sandeep Grover; Aseem Mehra; Swapnajeet Sahoo; Ajit Avasthi; Adarsh Tripathi; Avinash D'souza; Gautam Saha; Jagadhisha, A.; Mahesh Gowda; Mrugesh Vaishnav; Omprakash Singh; Dalal, P. K.; Parmod Kumar

Title

Impact of COVID-19 pandemic and lockdown on the state of mental health services in the private sector in India.

Source

Indian Journal of Psychiatry; 2020. 62(5):488-493. 13 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

**Background:** No information is available about the impact of lockdown and COVID-19 pandemic on the mental health services in the private practice in India. **Aim:** The current study is aimed to assess the impact of the COVID-19 pandemic and lockdown on the state of Mental Health Services in the Private Sector in India. **Materials and Methods:** An online survey was carried out using the Survey Monkey platform during the period of 1st to 15th May 2020 among the members of the Indian Psychiatric Society. **Results:** Three hundred and ninety six responses were analysed. There was a reduction in revenue generation by about 70%. All kinds of services, including outpatient services, inpatient services, psychotherapy services, consultation-liaison, and electroconvulsive therapy (ECT) services, were severely affected. One-third of the participants were using the teleservices during the pandemic. The most common problem faced in running the services included modifying the psychological treatment to maintain social distancing, and managing the staff. Besides providing clinical care to the patients, the majority of the mental health professionals reported that they were involved in increasing awareness about the mental health consequences of pandemic and the lockdown and addressing myths related to the spread of infection. **Conclusion:** The pandemic and the lockdown have markedly impacted mental health services in the private sector. ECT services, inpatient services, psychotherapy services and outpatient services are the most affected. However, the COVID-19 pandemic and lockdown have led to the expansion of teleconsultation services.

Publication Type

Journal article.

<32>

Accession Number

20210032211

Author

Sun ShuangYi; Xie Zhen; Yu KeTing; Jiang BingQian; Zheng SiWei; Pan XiaoTing

Title

COVID-19 and healthcare system in China: challenges and progression for a sustainable future.

Source

Globalization and Health; 2021. 17(14). 55 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

With the ongoing COVID-19 outbreak, healthcare systems across the world have been pushed to the brink. The approach of traditional healthcare systems to disaster preparedness and prevention has demonstrated intrinsic problems, such as failure to detect early the spread of the virus, public hospitals being overwhelmed, a dire shortage of personal protective equipment, and exhaustion of healthcare workers. Consequently, this situation resulted in manpower and resource costs, leading to the widespread and exponential rise of infected cases at the early stage of the epidemic. To limit the spread of infection, the Chinese government adopted innovative, specialized, and advanced systems, including empowered Fangcang and Internet hospitals, as well as high technologies such as 5G, big data analysis, cloud computing, and artificial intelligence. The efficient use of these new forces helped China win its fight against the virus. As the rampant spread of the virus continues outside China, these new forces need to be integrated into the global healthcare system to combat the disease. Global healthcare system integrated with new forces is essential not only for COVID-19 but also for unknown infections in the future.

Publication Type

Journal article.

<33>

Accession Number

20210032208

Author

Hashemi, S. A.; Bathaie, S. Z.

Title

Molecular mechanism of inhibition of SARS-CoV-2 binding to host receptor by antiviral flavonoids; bavachinin, corylifoln and luteolin. [Persian]

Source

Journal of Knowledge & Health; 2020. 15(3):fa19-fa30. 52 ref.

Publisher



Shahroud University of Medical Sciences

Location of Publisher

Shahroud

Country of Publication

Iran

Abstract

**Introduction:** The worldwide SARS-COV-2 outbreak caused COVID-19 pandemic. Understanding the mechanism of host receptor recognition by virus is inevitably helpful for developing appropriate drugs and treatment strategies. **Methods:** In the present study, applying a standard systematic review protocol, we surveyed the literature using Google Scholar and PubMed for experimental reports on the plant derived compounds effective against coronavirus family members. Original articles meeting the inclusion criteria for the present study were selected and underwent more scrutiny for introducing plant compounds for further analysis. The interaction of the compounds with receptor binding domain (RBD) of SARS-COV-2 spike protein was analyzed using molecular docking analysis. Top three compounds with the best binding affinity to RBD were selected and their mechanisms of interaction were investigated using Pymol, MOE, and Ligplot softwares. **Results:** Three herbal compounds, bavachinin, croylifol, and luteolin with G values of -8.4, -8.1, and -7.6, respectively, showed the best interaction with RBD and inhibition of virus-host binding among 24 compounds analyzed. The binding of these ligands to RBD was mediated through receptor binding motif (RBM) and a group of amino acids including Leu455, Gln493, and Asn501. **Conclusion:** Considering the experimental antiviral effects as well as favorable interaction with SARS-COV-2 spike protein, bavachinin, croylifol, and luteolin are suggested for use in clinical trial investigations of COVID-19.

Publication Type

Journal article.

<34>

Accession Number

20210032110

Author

Lee JiHo; Lee Hocheol; Kim JiEon; Moon SeokJun; Nam EunWoo

Title

Analysis of personal and national factors that influence depression in individuals during the COVID-19 pandemic: a web-based cross-sectional survey.

Source

Globalization and Health; 2021. 17(3). 27 ref.

Publisher

BioMed Central Ltd

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Location of Publisher

London

Country of Publication

UK

Abstract

Background: The World Health Organization (WHO) declared coronavirus disease (COVID-19) a pandemic on March 11, 2020. Previous studies of infectious diseases showed that infectious diseases not only cause physical damage to infected individuals but also damage to the mental health of the public. Therefore this study aims to analyze the factors that affected depression in the public during the COVID-19 pandemic to provide evidence for COVID-19-related mental health policies and to emphasize the need to prepare for mental health issues related to potential infectious disease outbreaks in the future. Results: This study performed the following statistical analyses to analyze the factors that influence depression in the public during the COVID-19 pandemic. First, to confirm the level of depression in the public in each country, the participants' depression was plotted on a Boxplot graph for analysis. Second, to confirm personal and national factors that influence depression in individuals, a multi-level analysis was conducted. As a result, the median Patient Health Questionnaire-9 (PHQ-9) score for all participants was 6. The median was higher than the overall median for the Philippines, Indonesia, and Paraguay, suggesting a higher level of depression. In personal variables, depression was higher in females than in males, and higher in participants who had experienced discrimination due to COVID-19 than those who had not. In contrast, depression was lower in older participants, those with good subjective health, and those who practiced personal hygiene for prevention. In national variables, depression was higher when the Government Response Stringency Index score was higher, when life expectancy was higher, and when social capital was higher. In contrast, depression was lower when literacy rates were higher. Conclusions: Our study reveals that depression was higher in participants living in countries with higher stringency index scores than in participants living in other countries. Maintaining a high level of vigilance for safety cannot be criticized. However, in the current situation, where coexisting with COVID-19 has become inevitable, inflexible and stringent policies not only increase depression in the public, but may also decrease resilience to COVID-19 and compromise preparations for coexistence with COVID-19. Accordingly, when establishing policies such as social distancing and quarantine, each country should consider the context of their own country.

Publication Type

Journal article.

<35>

Accession Number

20210031948

Author

Ho, R. J. Y.

Title

Warp-speed COVID-19 vaccine development: beneficiaries of maturation in biopharmaceutical technologies and public-private partnerships.

Source

Journal of Pharmaceutical Sciences; 2021. 110(2):615-618. 8 ref.

Publisher

Elsevier Inc.

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

It is anticipated that effective vaccines will enable the resumption of social and economic normalcy. Current calls for masking, social distancing and other restrictive measures for the public-good are difficult to enforce and are unsustainable. As ~2-4% of the 50 million SARS-CoV2-infected have succumbed to Covid-19, the US department of Health and Human Services has organized a public-private partnership called Operation Warp Speed (OWS) to develop, produce and deliver 300 million doses of safe and effective vaccines with a January 2021 target. While a majority of the 300+ Covid-19 vaccine candidates are in various stages of preclinical and early-stage clinical testing, 6 clinical candidates are supported with over 10 billion USD plus integrated resources under the OWS agenda. This unprecedented approach is investing in the manufacture of product candidates ahead of product approval. It is enabled by new gene and recombinant pharmaceutical platform technologies that are accelerating the clinical study timeline from ~10 to less than 1 year. It is anticipated that one or more of the 6 candidates under the OWS initiative will be safe, effective and provide a sustained immune response to prevent infection and disease progression. This way, social and economic activities could return to normalcy.

Publication Type

Journal article.

<36>

Accession Number

20210031872

Author

Frey, M. K.; Chapman-Davis, E.; Glynn, S. M.; Lin, J.; Ellis, A. E.; Tomita, S.; Fowlkes, R. K.; Thomas, C.; Christos, P. J.; Cantillo, E.; Zeligs, K.; Holcomb, K.; Blank, S. V.

Title

Adapting and avoiding coping strategies for women with ovarian cancer during the COVID-19 pandemic.

Source

Gynecologic Oncology; 2021. 160(2):492-498. 46 ref.

Publisher

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Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic has resulted in unprecedented challenges for people living with cancer, impacting not only physical health but psychological well-being. The psychological response affects the individual as well as the community and can persist long after the outbreak. We aim to assess coping strategies employed by women with ovarian cancer during the COVID-19 pandemic. Methods: Women with a current or prior diagnosis of ovarian cancer completed an online survey which included a query about coping strategies during the COVID-19 pandemic. The survey was distributed from March 30th through April 13, 2020 through survivor networks and social media. Results: Six hundred and three women visited the survey website during the study period and 555 (92.0%) completed the survey. Four hundred and eight (73.5%) provided information on coping strategies utilized during COVID-19. Among those who responded, the median age was 58 years (range 20-85) and 150 participants (40.8%) were undergoing active cancer treatment. Commonly utilized adaptive coping strategies included emotional support (159, 39.0%), self care (148, 36.3%), hobbies (139, 34.1%), planning (87, 21.3%), positive reframing (54, 13.2%), religion (50, 12.3%) and instrumental support (38, 9.3%). Many participants also relied on avoidance coping strategies including self distraction (111, 27.2%) and substance use (19, 4.7%). Conclusions: Most ovarian cancer survivors are using adaptive, problem-focused coping strategies during the COVID-19 pandemic, however many are practicing avoidance strategies as well. As coping mechanisms profoundly impact quality of life, oncology providers must assist patients in identifying coping strategies that optimize physical and psychological well-being.

Publication Type

Journal article.

<37>

Accession Number

20210031758

Author

Coban, C.

Title

The host targeting effect of chloroquine in malaria.

Source

Current Opinion in Immunology; 2020. 66:98-107.

Publisher

## Current Biology Publications

### Location of Publisher

London

### Country of Publication

UK

### Abstract

Due to the rapid onset and spread of the COVID-19 pandemic, the treatment of COVID-19 patients by hydroxychloroquine alone or in combination with other drugs has captured a great deal of attention and triggered considerable debate. Historically, the worldwide use of quinoline based-drugs has led to a spectacular reduction in death from malaria. Unfortunately, scientists have been forced to seek alternative drugs to treat malaria due to the emergence of chloroquine-resistant parasites in the 1960s. The repurposing of hydroxychloroquine against viral infections, various types of cancer and autoimmune diseases has been ongoing for more than 70 years, with no clear understanding of its mechanism of action (MOA). Here, we closely examine the MOA of this old but influential drug in and beyond malaria. Better insights into how chloroquine targets the host's cellular and immune responses may help to develop applications against new pathogens and diseases, and perhaps even restore the clinical utility of chloroquine against malaria.

### Publication Type

Journal article.

<38>

### Accession Number

20210031720

### Author

Svenningsen, E. B.; Thyrtsted, J.; Blay-Cadanet, J.; Liu Han; Lin ShaoQuan; Moyano-Villameriel, J.; Olganier, D.; Idorn, M.; Paludan, S. R.; Holm, C. K.; Poulsen, T. B.

### Title

Ionophore antibiotic C-206 is a potent inhibitor of SARS-CoV-2 infection in vitro.

### Source

Antiviral Research; 2021. 185. 28 ref.

### Publisher

Elsevier

### Location of Publisher

Amsterdam

### Country of Publication

Netherlands

#### Abstract

Pandemic spread of emerging human pathogenic viruses, such as the current SARS-CoV-2, poses both an immediate and future challenge to human health and society. Currently, effective treatment of infection with SARS-CoV-2 is limited and broad spectrum antiviral therapies to meet other emerging pandemics are absent leaving the World population largely unprotected. Here, we have identified distinct members of the family of polyether ionophore antibiotics with potent ability to inhibit SARS-CoV-2 replication and cytopathogenicity in cells. Several compounds from this class displayed more than 100-fold selectivity between viral-induced cytopathogenicity and inhibition of cell viability, however the compound X-206 displayed > 500-fold selectivity and was furthermore able to inhibit viral replication even at sub-nM levels. The antiviral mechanism of the polyether ionophores is currently not understood in detail. We demonstrate, e.g. through unbiased bioactivity profiling, that their effects on the host cells differ from those of cationic amphiphiles such as hydroxychloroquine. Collectively, our data suggest that polyether ionophore antibiotics should be subject to further investigations as potential broad-spectrum antiviral agents.

#### Publication Type

Journal article.

<39>

#### Accession Number

20210031684

#### Author

Feroz, A. S.; Adeel Khoja; Sarah Saleem

#### Title

Equipping community health workers with digital tools for pandemic response in LMICS.

#### Source

Archives of Public Health; 2021. 79(1). 13 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** Community health workers (CHWs) are well-positioned to play a pivotal role in fighting the pandemic at the community level. The Covid-19 outbreak has led to a lot of stress and anxiety among CHWs

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as they are expected to perform pandemic related tasks along with the delivery of essential healthcare services. In addition, movement restrictions, lockdowns, social distancing, and lack of protective gear have significantly affected CHWs' routine workflow and performance. To optimize CHWs' functioning, there is a renewed interest in supporting CHWs with digital technology to ensure an appropriate pandemic response. Discussion: The current situation has necessitated the use of digital tools for the delivery of Covid-19 related tasks and other essential healthcare services at the community level. Evidence suggests that there has been a significant digital transformation to support CHWs in these critical times such as remote data collection and health assessments, the use of short message service and voice message for health education, use of digital megaphones for encouraging behavior change, and digital contract tracing. A few LMICs such as Uganda and Ethiopia have been successful in operationalizing digital tools to optimize CHWs' functioning for Covid-19 tasks and other essential health services. Conclusion: Yet, in most LMICs, there are some challenges concerning the feasibility and acceptability of using digital tools for CHWs during the Covid-19 pandemic. In most cases, CHWs find it difficult to adopt and use digital health solutions due to lack of training on new digital tools, weak technical support, issues of internet connectivity, and other administrative related challenges. To address these challenges, engaging governments would be essential for training CHWs on user-friendly digital health solutions to improve routine workflow of CHWs during the Covid-19 pandemic.

#### Publication Type

Journal article.

<40>

#### Accession Number

20210031584

#### Author

Li JingWen; Long Xi; Zhang Qing; Fang Xi; Li Na; Lin ZhiCheng; Li JingHong; Xiong Nian

#### Title

Mild manifestations of COVID-19 in healthcare workers.

#### Source

PLoS Neglected Tropical Diseases; 2020. 14(12). 7 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

Medical staff treating Coronavirus Disease 2019 (COVID-19) patients are at high risk for exposure to Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), and many have been infected, which may cause panic among medical workers, their relatives, health professionals, and government leaders. We report the epidemiologic and clinical characteristics of healthcare workers and that the majority of infected medical staff had milder symptoms/conditions with a better prognosis than admitted patients. Timely improvement to medical staff's working conditions such as allowing adequate rest and providing sufficient medical protection is extremely important.

#### Publication Type

Journal article.

<41>

#### Accession Number

20210031535

#### Author

Li QuanMan; Tarimo, C. S.; Miao YuDong; Zeng Xin; Wu CuiPing; Wu Jian

#### Title

Effects of mask wearing on anxiety of teachers affected by COVID-19: a large cross-sectional study in China.

#### Source

Journal of Affective Disorders; 2021. 281:574-580. 27 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

**Objective:** There is a limited information on mask wearing in relation to anxiety. The aim of this study was to evaluate the association between mask wearing practice and the risk of anxiety during the COVID-19 epidemic among teachers in Henan province, China. **Methods:** We enrolled 88,611 teachers in an online cross-sectional survey across three cities of Henan Province in China. A total of 94.75% of study participants completed an online questionnaire between February 4, 2020 and February 12, 2020. Mask wearing practice was defined according to its type, how it is worn, and the behavior exhibited in relation to wearing a mask. We used the Generalized Anxiety Disorder tool (GAD-7) to assess anxiety levels among study participants. Odds ratios (OR) with 95% confidence intervals (CI) were used to estimate the association between mask wearing practice and anxiety by using multivariable logistic regression models. **Results:** A total of 67,357 registered teachers (25.91% men) were included in this study. After adjusting for potential



confounders, participants who knew the wrong type of mask had 17% increased odds of having anxiety compared to those who knew the proper type (Aor = 1.17; 95%CI: 1.11-1.24). Odds for anxiety were higher for teachers who did not know the proper way of wearing mask compared to those who knew it properly (aOR = 1.18; 95%CI: 1.07-1.30). Not adhering to proper behavior of mask wearing was associated with 39% increased odds for anxiety (aOR = 1.39; 95%CI: 1.18-1.64). The odds for anxiety for teachers who did not adhere to all the three parameters of proper mask wearing was about 2.55 times as much compared to those who reported full compliance to the parameters (aOR = 2.55; 95%CI: 1.22-5.35). We observed similar ORs on stratified analyses across gender and age groups. Conclusion: Our findings suggest that improper mask wearing is another important attribute that play a significant role in increasing the risk of anxiety during the COVID-19 epidemic situation. However, these results should be considered as exploratory and hence interpreted with caution.

#### Publication Type

Journal article.

<42>

#### Accession Number

20210031506

#### Author

Yang Fan

#### Title

Coping strategies, cyberbullying behaviors, and depression among Chinese netizens during the COVID-19 pandemic: a web-based nationwide survey.

#### Source

Journal of Affective Disorders; 2021. 281:138-144. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

**Background:** As a major life stressor now, the COVID-19 pandemic could substantially increase risks of cyberbullying and depression for global people, especially in the context of increased digital interconnectedness and strict social distancing. Though people are adopting different coping strategies, still little is known about their cyberbullying and depression and how the two associated with coping strategies. **Methods:** A web-based nationwide questionnaire survey was conducted among 5,608 netizens during the peak time of COVID-19 in China. The study collected cross-sectional data on participants' coping strategies,

general cyberbullying behaviors, cyberbullying behaviors specifically to residents of Hubei Province where first COVID-19 case was reported, and depression. Results: A two-factor structure applied to participants' coping strategies, namely problem-focused coping and emotion-focused coping, and the former was more adopted. There existed gender, age, education, and income differences in the coping strategies. Problem-focused coping was associated with less cyberbullying behaviors while had no correlation with depression; emotion-focused coping was found positively correlated with cyberbullying and depression. The association between emotion-focused coping and depression was mediated by cyberbullying. Limitations: The study used cross-sectional design, and its findings should be cautioned to be generalized to other countries, due to the differences in culture, stage of crisis, and government policies on COVID-19. Conclusions: Problem-focused coping was associated with less cyberbullying, and emotion-focused coping predicted cyberbullying and depression. Cyberbullying mediated the correlation between emotion-focused coping and depression. These findings provide new perspectives for interventions on people's coping strategies towards COVID-19 pandemic.

#### Publication Type

Journal article.

<43>

#### Accession Number

20210030853

#### Author

Nimisha Ghosh; Nikhil Sharma; Indrajit Saha; Sudipto Saha

#### Title

Genome-wide analysis of Indian SARS-CoV-2 genomes to identify T-cell and B-cell epitopes from conserved regions based on immunogenicity and antigenicity.

#### Source

International Immunopharmacology; 2021. 91.

#### Publisher

Elsevier B.V.

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

SARS-CoV-2 has a high transmission rate and shows frequent mutations, thus making vaccine development an arduous task. However, researchers around the globe are working hard to find a solution e.g. synthetic vaccine. Here, we have performed genome-wide analysis of 566 Indian SARS-CoV-2 genomes to extract the potential conserved regions for identifying peptide based synthetic vaccines, viz. epitopes

with high immunogenicity and antigenicity. In this regard, different multiple sequence alignment techniques are used to align the SARS-CoV-2 genomes separately. Subsequently, consensus conserved regions are identified after finding the conserved regions from each aligned result of alignment techniques. Further, the consensus conserved regions are refined considering that their lengths are greater than or equal to 60nt and their corresponding proteins are devoid of any stop codons. Subsequently, their specificity as query coverage are verified using Nucleotide BLAST. Finally, with these consensus conserved regions, T-cell and B-cell epitopes are identified based on their immunogenic and antigenic scores which are then used to rank the conserved regions. As a result, we have ranked 23 consensus conserved regions that are associated with different proteins. This ranking also resulted in 34 MHC-I and 37 MHC-II restricted T-cell epitopes with 16 and 19 unique HLA alleles and 29 B-cell epitopes. After ranking, the consensus conserved region from NSP3 gene is obtained that is highly immunogenic and antigenic. In order to judge the relevance of the identified epitopes, the physico-chemical properties and binding conformation of the MHC-I and MHC-II restricted T-cell epitopes are shown with respect to HLA alleles.

#### Publication Type

Journal article.

<44>

#### Accession Number

20210030833

#### Author

Einstein, A. J.; Shaw, L. J.; Hirschfeld, C.; Williams, M. C.; Villines, T. C.; Better, N.; Vitola, J. V.; Cerci, R.; Dorbala, S.; Raggi, P.; Choi, A. D.; Lu Bin; Sinitsyn, V.; Sergienko, V.; Kudo, T.; Norgaard, B. L.; Maurovich-Horvat, P.; Campisi, R.; Milan, C.; Louw, L.; Allam, A. H.; Mona Bhatia; Malkovskiy, E.; Goebel, B.; Cohen, Y.; Randazzo, M.; Narula, J.; Pascual, T. N. B.; Pynda, Y.; Dondi, M.; Paez, D.

#### Title

International impact of COVID-19 on the diagnosis of heart disease.

#### Source

Journal of the American College of Cardiology; 2021. 77(2):173-185. 18 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

**Background:** The coronavirus disease 2019 (COVID-19) pandemic has adversely affected diagnosis and treatment of noncommunicable diseases. Its effects on delivery of diagnostic care for cardiovascular

disease, which remains the leading cause of death worldwide, have not been quantified. Objectives: The study sought to assess COVID-19's impact on global cardiovascular diagnostic procedural volumes and safety practices. Methods: The International Atomic Energy Agency conducted a worldwide survey assessing alterations in cardiovascular procedure volumes and safety practices resulting from COVID-19. Noninvasive and invasive cardiac testing volumes were obtained from participating sites for March and April 2020 and compared with those from March 2019. Availability of personal protective equipment and pandemic-related testing practice changes were ascertained. Results: Surveys were submitted from 909 inpatient and outpatient centers performing cardiac diagnostic procedures, in 108 countries. Procedure volumes decreased 42% from March 2019 to March 2020, and 64% from March 2019 to April 2020. Transthoracic echocardiography decreased by 59%, transesophageal echocardiography 76%, and stress tests 78%, which varied between stress modalities. Coronary angiography (invasive or computed tomography) decreased 55% ( $p < 0.001$  for each procedure). In multivariable regression, significantly greater reduction in procedures occurred for centers in countries with lower gross domestic product. Location in a low-income and lower-middle-income country was associated with an additional 22% reduction in cardiac procedures and less availability of personal protective equipment and telehealth. Conclusions: COVID-19 was associated with a significant and abrupt reduction in cardiovascular diagnostic testing across the globe, especially affecting the world's economically challenged. Further study of cardiovascular outcomes and COVID-19-related changes in care delivery is warranted.

#### Publication Type

Journal article.

<45>

#### Accession Number

20210030817

#### Author

Ma XianCai; Zou Fan; Yu Fei; Li Rong; Yuan YaoChang; Zhang YiWen; Zhang XianTao; Deng JieYi; Chen Tao; Song Zheng; Qiao YiDan; Zhan YiKang; Liu Jun; Zhang JunSong; Zhang Xu; Peng ZhiLin; Li YuZhuang; Lin YingTong; Liang LiTing; Wang GuanWen; Chen YingShi; Chen QiEr; Pan Ting; He Xin; Zhang Hui

#### Title

Nanoparticle vaccines based on the receptor binding domain (RBD) and heptad repeat (HR) of SARS-CoV-2 elicit robust protective immune responses.

#### Source

Immunity; 2020. 53(6):1315-1330.e9. many ref.

#### Publisher

Cell Press

#### Location of Publisher

Cambridge

#### Country of Publication

USA

## Abstract

Various vaccine strategies have been proposed in response to the global COVID-19 pandemic, each with unique strategies for eliciting immune responses. Here, we developed nanoparticle vaccines by covalently conjugating the self-assembled 24-mer ferritin to the receptor binding domain (RBD) and/or heptad repeat (HR) subunits of the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) spike (S) protein. Compared to monomer vaccines, nanoparticle vaccines elicited more robust neutralizing antibodies and cellular immune responses. RBD and RBD-HR nanoparticle vaccinated hACE2 transgenic mice vaccinated with RBD and/or RBD-HR nanoparticles exhibited reduced viral load in the lungs after SARS-CoV-2 challenge. RBD-HR nanoparticle vaccines also promoted neutralizing antibodies and cellular immune responses against other coronaviruses. The nanoparticle vaccination of rhesus macaques induced neutralizing antibodies, and T and B cell responses prior to boost immunization; these responses persisted for more than three months. RBD- and HR-based nanoparticles thus present a promising vaccination approach against SARS-CoV-2 and other coronaviruses.

## Publication Type

Journal article.

<46>

## Accession Number

20210030815

## Author

Lederer, K.; Castano, D.; Atria, D. G.; Oguin, T. H., III; Wang, S.; Manzoni, T. B.; Muramatsu, H.; Hogan, M. J.; Amanat, F.; Cherubin, P.; Lundgreen, K. A.; Tam, Y. K.; Fan, S. H. Y.; Eisenlohr, L. C.; Maillard, I.; Weissman, D.; Bates, P.; Krammer, F.; Sempowski, G. D.; Pardi, N.; Locci, M.

## Title

SARS-CoV-2 mRNA vaccines foster potent antigen-specific germinal center responses associated with neutralizing antibody generation.

## Source

Immunity; 2020. 53(6):1281-1295.e5. many ref.

## Publisher

Cell Press

## Location of Publisher

Cambridge

## Country of Publication

USA

## Abstract

The deployment of effective vaccines against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is critical to eradicate the coronavirus disease 2019 (COVID-19) pandemic. Many licensed vaccines confer protection by inducing long-lived plasma cells (LLPCs) and memory B cells (MBCs), cell types canonically generated during germinal center (GC) reactions. Here, we directly compared two vaccine platforms-mRNA vaccines and a recombinant protein formulated with an MF59-like adjuvant-looking for their abilities to quantitatively and qualitatively shape SARS-CoV-2-specific primary GC responses over time. We demonstrated that a single immunization with SARS-CoV-2 mRNA, but not with the recombinant protein vaccine, elicited potent SARS-CoV-2-specific GC B and T follicular helper (Tfh) cell responses as well as LLPCs and MBCs. Importantly, GC responses strongly correlated with neutralizing antibody production. mRNA vaccines more efficiently induced key regulators of the Tfh cell program and influenced the functional properties of Tfh cells. Overall, this study identifies SARS-CoV-2 mRNA vaccines as strong candidates for promoting robust GC-derived immune responses.

Publication Type

Journal article.

<47>

Accession Number

20210030466

Title

WRC moves to pilot study to monitor COVID-19 in wastewater.

Source

Water Wheel; 2020. 19(6):11-11.

Publisher

Water Research Commission

Location of Publisher

Gezina

Country of Publication

South Africa

Publication Type

Journal article.

<48>

Accession Number

20210030369

Title

Daily situation report on coronavirus disease (COVID-19) in Iran; March 23, 2020.

Source

Archives of Academic Emergency Medicine (AAEM); 2021. 8(1).

Publisher

Shahid Beheshti University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

After detection of the first confirmed cases of COVID-19 in Iran, the National Committee on COVID-19 Epidemiology in Ministry of Health and Medical Education was established. This Committee is official source of gathering, analyzing, and reporting the COVID-19 data in Iran. The data of all sources in the country including, medical care monitoring center (MCMC), Hospitals Information Systems (HIS), Laboratory portal, the data of the center for communicable disease control (MOH), as well as the data from community health centers are integrated and used in this regards. This factsheet contain daily situation report on coronavirus disease (covid-19) in Iran; March 23, 2020.

Publication Type

Journal article.

<49>

Accession Number

20210030367

Title

Daily situation report on coronavirus disease (COVID-19) in Iran; March 16, 2020.

Source

Archives of Academic Emergency Medicine (AAEM); 2020. 8(1).

Publisher

Shahid Beheshti University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

After detection of the first confirmed cases of COVID-19 in Iran, the National Committee on COVID-19 Epidemiology in Ministry of Health and Medical Education was established. This Committee is official source of gathering, analyzing, and reporting the COVID-19 data in Iran. The data of all sources in the country including, medical care monitoring center (MCMC), Hospitalsa™ Information Systems (HIS), Laboratory portal, the data of the center for communicable disease control (MOH), as well as the data from community health centers are integrated and used in this regards. This factsheet contain daily situation report on coronavirus disease (covid-19) in Iran; March 16, 2020.

Publication Type

Journal article.

<50>

Accession Number

20210030366

Title

Daily situation report on coronavirus disease (COVID-19) in Iran; March 15, 2020.

Source

Archives of Academic Emergency Medicine (AAEM); 2020. 8(1).

Publisher

Shahid Beheshti University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

After detection of the first confirmed cases of COVID-19 in Iran, the National Committee on COVID-19 Epidemiology in Ministry of Health and Medical Education was established. This Committee is official source of gathering, analyzing, and reporting the COVID-19 data in Iran. The data of all sources in the country including, medical care monitoring center (MCMC), Hospitalsa™ Information Systems (HIS), Laboratory portal, the data of the center for communicable disease control (MOH), as well as the data from



community health centers are integrated and used in this regards. This factsheet contain daily situation report on coronavirus disease (covid-19) in Iran; March 15, 2020.

Publication Type

Journal article.

<51>

Accession Number

20210030365

Title

Daily situation report on coronavirus disease (COVID-19) in Iran; March 14, 2020.

Source

Archives of Academic Emergency Medicine (AAEM); 2020. 8(1). 1 ref.

Publisher

Shahid Beheshti University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

After detection of the first confirmed cases of COVID-19 in Iran, the National Committee on COVID-19 Epidemiology in Ministry of Health and Medical Education was established. This Committee is official source of gathering, analyzing, and reporting the COVID-19 data in Iran. The data of all sources in the country including, medical care monitoring center (MCMC), Hospitalsa™ Information Systems (HIS), Laboratory portal, the data of the center for communicable disease control (MOH), as well as the data from community health centers are integrated and used in this regards. This factsheet contain daily situation report on coronavirus disease (covid-19) in Iran; March 14, 2020.

Publication Type

Journal article.

<52>

Accession Number

20210030353

Author

Najari, D.; Zali, A.; Najari, F.; Soroosh, D.

Title

Legal considerations of COVID-19 patients' disposition in emergency department; report of 10 cases.

Source

Archives of Academic Emergency Medicine (AAEM); 2020. 8(1). 21 ref.

Publisher

Shahid Beheshti University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

COVID-19 pandemic is a challenge in the current era. The spread of this viral infection began in Wuhan City in China, and Iran was also one of the countries struggling with it. Considering the nature of this virus and the current pandemic, it is essential that the healthcare system authorities issue a clear and firm law on treating people infected with COVID-19 to prevent the consequences affecting the professional life of physicians and healthcare staff. The current study aimed at evaluating the legal consequences of COVID-19 cases in emergency department (ED). This case series reported 10 patients that filed complaints against medical staff for problems that occurred on arrival, during the hospital stay or discharge in Shohada-ye-Tajrish and Shahid Modarres educational Hospitals, Tehran, Iran. Consultation with forensic medicine department was requested for all patients and the final decision for each case was reported under the title legal considerations.

Publication Type

Journal article.

<53>

Accession Number

20210030263

Author

Abdelmoniem, R.; Fouad, R.; Shawky, S.; Amer, K.; Elnagdy, T.; Hassan, W. A.; Ali, A. M.; Ezzelarab, M.; Gaber, Y.; Badary, H. A.; Musa, S.; Talaat, H.; Kassem, A. M.; Tantawi, O.

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Title

SARS-CoV-2 infection among asymptomatic healthcare workers of the emergency department in a tertiary care facility. (Special Issue: Coronavirus.)

Source

Journal of Clinical Virology; 2021. 134. 23 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Healthcare workers (HCWs) represent a high-risk category during the coronavirus disease 2019 (COVID-19) pandemic crisis, with frontline HCWs at emergency departments (EDs) may be at an even higher risk. Determining the spread of infection among HCWs may have implications for infection control policies in hospitals. This study aimed to detect severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection among asymptomatic HCWs of the ED of a large tertiary center in Cairo, Egypt. Methods: The study was conducted from June 1st to June 14th, 2020. All the recommended national and international indications on infection control measures were followed. Two hundred and three HCWs were included in the study and tested by nasopharyngeal swab (NPS) and rapid serological test (RST). Descriptive statistical analyses were used to summarize the data. Results: Of the 203 HCWs, 29 (14.3%) tested positive by real-time reverse transcription polymerase chain reaction (RT-PCR). Thirty-seven (18.2%) HCWs tested positive with RST: 20 with both IgM and IgG; 14 with IgM only, and 3 with IgG only. Age, gender, and/or occupation were not risk factors for SARS-CoV-2 infection. Conclusions: Point prevalence of COVID-19 in asymptomatic HCWs in ED of tertiary care facility is 14.3% by RT-PCR. This illustrates the importance of screening all HCWs regardless of symptoms, and the need for strict measures in securing HCWs to reduce transmission from healthcare facilities to the community during the current pandemic.

Publication Type

Journal article.

<54>

Accession Number

20210030216

Author

Kvalsvig, A.; Summers, J.; Gray, L.; Barnard, L. T.; Baker, M. G.

Title

COVID-19 outbreaks in Aotearoa New Zealand: urgent action is required to address systematic causes and consequences of border failures.

Source

New Zealand Medical Journal; 2020. 133(1572):8-11. 19 ref.

Publisher

New Zealand Medical Association

Location of Publisher

Wellington

Country of Publication

New Zealand

Abstract

Between August and November 2020, Aotearoa New Zealand experienced eight known failures of the COVID-19 border control system. Multiple introductions of this highly transmissible virus into New Zealand's almost completely susceptible population present a high risk of uncontrollable spread, threatening New Zealand's elimination strategy. In this editorial, we propose that, although steps are being taken reactively in response to these known breaches, systematic underestimation of risk across the pandemic response makes future failures inevitable. We present an epidemiological framework for identifying and addressing risk, giving examples of actions that can be taken to reduce the probability of further outbreaks and enable New Zealand to benefit from sustained elimination of COVID-19.

Publication Type

Editorial.

<55>

Accession Number

20210030100

Author

Lee ChihHung; Huang ChuChen; Huang JuiTing; Wang ChihChi; Fan Sheng; Wang PiSheng; Lan KuoChung

Title

Live-interactive teledermatology program in Taiwan: one-year experience serving a district hospital in rural Taitung County.

Source

Journal of the Formosan Medical Association; 2021. 120(1 Part 2):422-428. 15 ref.

Publisher

Elsevier (Singapore) Pte Ltd.

Location of Publisher

Singapore

Country of Publication

Singapore

Abstract

Background/Purpose: Population aging and unequal accessibility of health care are increasingly important in developed countries. One strategy to overcome these issues is utilizing telemedicine, which is recently made possible technologically by the advancement of internet speed, high speed zooming cameras, and the information storages. In Taiwan, the telemedicine is granted legally by the amendment for Taiwan's Physician Act in 2018. Methods: Kaohsiung Chang Gung Memorial Hospital (Kaohsiung CGMH) is the first hospital in Taiwan to provide the telemedicine service connecting to Cheng Kung Branch of Taitung Hospital since Nov 2018. Consultation services from Dermatology, ENT, and Ophthalmology have been delivered in the live-interactive and face to face module every week. Results: Dermatology consultation comprises the majorities. In the first year, there were totally 426 dermatology consultation services. Eczema, fungal infections, and scabies infestation were the three most common diseases in the beginning. The disease diagnosis became more diverse after several months, including some ready-to-treat diseases pending correct diagnosis, such as pediculosis, psoriasis, and urticaria. Coupled with dermoscopic images, diseases such as hair loss, pediculosis capitis, skin tumor, and scabies, were diagnosed promptly. The subjective patient improvement rate was more than 75% year-round and the case closure rate was more than 85% year-round. Conclusion: Teledermatology is a promising approach to serve the remote medical-underprivileged regions. The teledermatology is anticipated to help underserved regions, nursing homes, prisons, and in situations with severe pandemic infections, such as COVID-19.

Publication Type

Journal article.

<56>

Accession Number

20210030098

Author

Sheng WangHuei; Liu WangDa; Wang JannTay; Chang SuYuan; Chang ShanChwen

Title

Dysosmia and dysgeusia in patients with COVID-19 in northern Taiwan.

Source

Journal of the Formosan Medical Association; 2021. 120(1 Part 2):311-317. 30 ref.

Publisher

Elsevier (Singapore) Pte Ltd.

Location of Publisher

Singapore

Country of Publication

Singapore

Abstract

**Background/Purpose:** To investigate the characteristics of dysosmia and dysgeusia among patients diagnosed with coronavirus disease 2019 (COVID-19) in Taiwan. **Methods:** Prospective data collection between January 22, 2020 to May 7, 2020 of nucleic acid confirmed COVID-19 hospitalized patients in northern Taiwan by the Taiwan Centers for Disease Control were analyzed. **Results:** Of 217 patients enrolled, 78 (35.9%) reported dysosmia (n = 73, 33.6%) and/or dysgeusia (n = 62, 28.6%). The median duration of COVID-19 associated symptom-onset to development of dysosmia and/or dysgeusia was <1 days (interquartile range [IQR], <1-6 days) and 53 of 78 (67.9%) patients developed dysosmia and/or dysgeusia as one of the initial symptoms of COVID-19. Of 59 closely monitored patients, 41 (69.5%) patients recovered within 3 weeks after symptoms onset and the median time to recovery was 12 days (IQR, 7-20 days). Only 6 of the 59 (10.2%) patients reported persistent dysosmia and/or dysgeusia before discharge from hospitals. Multivariate analysis showed that younger individuals (adjusted hazard ratio [AHR], 0.93 per one-year increase; 95% confidence interval [95% CI], 0.89-0.97; P = 0.001), women (AHR, 2.76; 95% CI, 1.05-7.25; P = 0.04) and travel to North America (AHR, 2.35; 95% CI, 1.05-5.26; P = 0.04) were the significant factors associated with dysosmia and/or dysgeusia. **Conclusion:** Dysosmia and/or dysgeusia are common symptoms and clues for the diagnosis of COVID-19, particularly in the early stage of the disease. Physicians should be alerted to these symptoms to make timely diagnosis and management for COVID-19 to limit spread.

Publication Type

Journal article.

<57>

Accession Number

20210030092

Author

Khajehgoodari, S.; Rahdar, M. A.

Title

Designing a management dashboard for healthcare professionals and managers in the COVID-19 epidemic. [Persian]

Source

Journal of Military Medicine; 2020. 22(10):1013-1024. 39 ref.

Publisher

Baqiyatallah University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background and Aim: Access to integrated information, up-to-date statistics, and timely diagnosis of the disease will help managers and health care providers to manage the crisis caused by the COVID-19 epidemic. In the present study, a management dashboard was designed by determining the key performance indicators of COVID-19. Methods: In the first step, using scientific articles published between 2019 and 2020, the most important symptoms of COVID-19 patients were identified, and demographic characteristics were considered as key performance indicators. In the next step, the data entry method was determined in such a way that after entering the patient data in the dashboard, it is possible to make a decision about his/her infection with Covid-19 and also to examine the statistics of patients by age, sex and time of infection. Finally, using Excel 2016 and QlikView software, the proposed dashboard was designed in two parts: monitoring and diagnostics. Results: Four COVID-19 diagnostic methods including epidemiological history, clinical signs, chest CT images and laboratory diagnosis were considered as components of the diagnostic dashboard and for each of them, related key indicators were identified. In the monitoring dashboard, statistics on patients, age, gender and time of onset were included as key performance indicators. Conclusion: Due to the diagnostic dashboard's ability to integrate data about COVID-19, medical staff is able to make decisions in less time and with fewer mistakes. The management and leadership team can also manage the crisis through the suitable allocation of resources by receiving up-to-date statistics and making the right decisions.

Publication Type

Journal article.

<58>

Accession Number

20210030089

Author

Jazayeri, S. A. M.

Title

Shahid fatemi field hospital services for patients with COVID-19 in bandar abbas, Iran. [Persian]

Source

Journal of Military Medicine; 2020. 22(10):991-992.

Publisher

Baqiyatallah University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

Publication Type

Editorial.

<59>

Accession Number

20210030020

Author

Solomon, G.; Allie, A.; Fakier, R.; Tadmor, D.; Ashtiker, K.; Roux, C. le; Omar, J.; Namane, M.

Title

Family medicine internship support during the COVID-19 pandemic in Cape Town, South Africa - a narrative report. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 5 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The health-service redesign that came with the preparation for the surge of COVID-19 had a potential of disrupting the Family Medicine internship programme like it did to many other health and academic programmes. A team of Cape-Town based Community Health Centre (CHC) doctors mitigated this challenge by designing an innovative tool that facilitated ongoing supervision of the interns in order to achieve the outcomes of the Health Professions Council of South Africa (HPCSA).

Publication Type

Journal article.



<60>

Accession Number

20210030019

Author

Ayisi-Boateng, N. K.; Egblewogbe, D.; Owusu-Antwi, R.; Essuman, A.; Spangenberg, K.

Title

Exploring the illness experiences amongst families living with 2019 coronavirus disease in Ghana: three case reports. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 13 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The 2019 corona virus disease (COVID-19) has wreaked havoc on countries, communities and households. Its effect on individuals and their families, although enormous, has not been adequately explored. We thus present a report on the illness experiences of three families in Ghana who had at least one member diagnosed with COVID-19. We interviewed them and recorded their commonest fears, such as death, stigmatisation and collapse of family business. Respondents had a fair idea about symptoms of COVID-19, mode of transmission and safety precautions. Family separation and loss of income were some of the adverse effects expressed. Majority of them were hopeful that family members with COVID-19 would recover and be reunited. The biopsychosocial impact of COVID-19 is tremendous and family physicians and other primary care workers have an essential role to play in addressing this.

Publication Type

Journal article.

<61>

Accession Number

20210030018

Author

Mash, R.; Goliath, C.; Perez, G.

Title

Re-organising primary health care to respond to the coronavirus epidemic in Cape Town, South Africa.  
(Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 10 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Cape Town is currently one of the hotspots for COVID-19 on the African continent. The Metropolitan Health Services have re-organised their primary health care (PHC) services to tackle the epidemic with a community-orientated primary care perspective. Two key goals have guided the re-organisation, the need to maintain social distancing and reduce risk to people using the services and the need to prepare for an influx of people with COVID-19. Facilities were re-organised to have 'screening and streaming' at the entrance and patients were separated into hot and cold streams. Both streams had 'see and treat' stations for the rapid treatment of minor ailments. Patients in separate streams were then managed further. If patients with chronic conditions were stable, they were provided with home delivery of medication by community health workers. Community health workers also engaged in community-based screening and testing. Initial evaluation of PHC preparedness was generally good. However, a number of key issues were identified. Additional infrastructure was required in some facilities to keep the streams separate with the onset of winter. Managers had to actively address the anxiety and fears of the primary care workforce. Attention also needed to be given to the prevention and treatment of non-COVID conditions as utilisation of these services decreased. The epidemic exposed intersectoral and intrasectoral fault lines, particularly access to social services at a time when they were most needed. Community screening and testing had to be refocused due to limited laboratory capacity and a lengthening turnaround time.

Publication Type

Journal article.

<62>

Accession Number

20210030017

Author

Reid, S.; Ras, T.; Presentin, K. von

Title

The Cape Town International Convention Centre from the inside: the family physicians' view of the 'Hospital of Hope'. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 1 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

This short report captures the week-by-week reflections of a group of family physicians who joined the clinical and operational management teams tasked with providing the in-patient service of an 862-bed COVID-19 field hospital. The 'Hospital of Hope' at the Cape Town International Convention Centre (CTICC) was established as an intermediate care facility specifically to cope with the effects of the COVID-19 pandemic in Cape Town metropole. In an extraordinary feat of engineering, the conference centre floor was transformed within a matter of weeks into wards with piped oxygen at each bed. Whilst the emergency medicine specialists took the lead in designing and commissioning the facility, the medical management and staff were drawn mostly from family physicians. This report is a short reflection on the experience of the first 4 weeks of managing patients in this repurposed space. Our insights evolved during various formal and informal learning conversations as the in-patient service became more organised over time. We hope that these insights, as well as the process of reaching them, will assist other colleagues in serving their communities during this difficult moment in history; moreover, it may reflect a renewed appreciation for team-based interdisciplinary efforts in achieving person-centred care.

Publication Type

Journal article.

<63>

Accession Number

20210030016

Author

Vandyck-Sey, P.; Amoh, G.; Essuman, A.; Lawson, H.

Title

Incidental finding of COVID-19 infection amongst staff at a primary care facility in Ghana. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 7 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The COVID-19 pandemic has affected nearly every country worldwide and all African countries. The issue of healthcare workers (HCWs) contracting the disease is a growing concern in Ghana, because of the risk of spreading infections amongst themselves and to vulnerable patients in their care. This article illustrates how 14 staff at the Korle Bu Polyclinic/Family Medicine Department were incidentally found to be Covid-19 positive with most of them being asymptomatic. This observation led to a modification of the personal protective equipment (PPE) used by clinical staff when attending to patients. Furthermore, this finding suggests that a different criteria or guideline may be needed for testing of HCWs during a pandemic where a significant proportion of infected people are asymptomatic. We conclude that in the primary care setting HCWs must be ready to see all the following cases safely: routine patients, asymptomatic COVID-19 patients and suspected COVID-19 patients.

Publication Type

Journal article.

<64>

Accession Number

20210030015

Author

Porter, J. D.; Mash, R.; Preiser, W.

Title

Turnaround times - the Achilles' heel of community screening and testing in Cape Town, South Africa. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 9 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Cape Town

Country of Publication

South Africa

Abstract

Early in the course of the coronavirus infection disease 2019 (COVID-19) pandemic in South Africa, the Department of Health implemented a policy of community screening and testing (CST). This was based on a community-orientated primary care approach and was a key strategy in limiting the spread of the pandemic, but it struggled with long turnaround times (TATs) for the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) reverse transcriptase polymerase chain reaction test. The local experience at Symphony Way Community Day Centre (Delft, Cape Town), highlighted these challenges. The first positive tests had a median TAT of 4.5 days, peaking at 29 days in mid-May 2020. Issues that contributed to long TATs were unavailability of viral transport medium, sample delivery and storage difficulties, staffing problems, scarcity of testing supplies and other samples prioritised over CST samples. At Symphony Way, many patients who tested COVID-19 positive had abandoned their self-isolation because of the delay in results. Employers were unhappy with prolonged sick leave whilst waiting for results and patients were concerned about not getting paid or job loss. The CST policy relies on a rapid TAT to be successful. Once the TAT is delayed, the process of contacting patients, and tracing and quarantining contacts becomes ineffective. With hindsight, other countries' difficulties in upscaling testing should have served as warning. Community screening and testing was scaled back from 18 May 2020, and testing policy was changed to only include high-risk patients from 29 May 2020. The delayed TATs meant that the CST policy had no beneficial impact at local level.

Publication Type

Journal article.

<65>

Accession Number

20210030014

Author

Furstenburg, P. P.; Mukonkole, S. N.; Kibamba, C. N.; Kuiler, A.; Ngemntu, N.; Lahri, S.; Hoving, D. J. van; Moodley, K.; Erasmus, E.

Title

Emergency centre reorganization in preparation to the COVID-19 pandemic: a district hospital's dynamic adaptation response. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 4 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

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Cape Town

Country of Publication

South Africa

Abstract

The COVID-19 global pandemic forced healthcare facilities to put special isolation measures in place to limit nosocomial transmission. Cohorting is such a measure and refers to placing infected patients (or under investigation) together in a designated area. This report describes the physical reorganisation of the emergency centre at Khayelitsha Hospital, a district level hospital in Cape Town, South Africa in preparation to the COVID-19 pandemic. The preparation included the identification of a person under investigation (PUI) room, converting short stay wards into COVID-19 isolation areas, and relocating the paediatric section to an area outside the emergency centre. Finally, we had to divide the emergency centre into a respiratory and non-respiratory side by utilising part of the hospital's main reception. We are positive that the preparation and reorganization of the emergency centre will limit nosocomial transmission during the expected COVID-19 surge. Our experience in adapting to COVID-19 may have useful implications for ECs throughout South Africa and in low-and-middle income countries that are preparing for this pandemic.

Publication Type

Journal article.

<66>

Accession Number

20210030013

Author

Moolla, M. S.; Broadhurst, A.; Parker, M. A.; Parker, A.; Mowlana, A.

Title

Implementing a video call visit system in a coronavirus disease 2019 unit. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 8 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The lockdown and physical distancing strategies imposed to combat COVID-19 have caused seismic shifts at all levels of society. Hospitals have been particularly affected. Healthcare workers (HCW's) wore PPE during all patient interactions and visitors were prohibited. Life for a patient became lonelier and for those with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) measures were even more severe. HCW's must treat patients following a biopsychosocial approach and promote communication between patients and loved ones. We implemented a low cost Video Call Visit system at Tygerberg Hospital, Cape Town. In this article we discuss the elements of a successful implementation and potential pitfalls in the context of a pandemic, notably cross-infection and privacy. Rapid but responsible innovation using 21st century tools was required to address the many challenges of the pandemic, including improving the lived experience for patients and families. These should be intended to last after the pandemic has passed.

#### Publication Type

Journal article.

<67>

#### Accession Number

20210030012

#### Author

Sehoole, T. J.

#### Title

COVID-19: pandemic burden in sub-Saharan Africa and the right to health - the need for advocacy in the face of growing privatisation. (Special Collection: COVID-19.)

#### Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 14 ref.

#### Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

#### Location of Publisher

Cape Town

#### Country of Publication

South Africa

#### Abstract

For Africa, the backdrop<sup>1</sup> against which COVID-19 emerged is a stark one. Although sub-Saharan Africa accounts for 11% of the world's population, it bears 24% of the global disease burden. The continent is home to 60% of the people with human immunodeficiency virus (HIV), and over 90% of malarial patients. In this region, infectious diseases such as malaria and HIV cause 69% of deaths. As states respond to COVID-19, we need to keep our eyes open to what effective responses are notifying us about our healthcare systems, so that we can craft sustainable interventions as a result and uphold the right to health. This is

especially true in the light of the ongoing nature of pandemics on the continent, making urgent the need to maximise the value of our health system and its resources, as we seek lasting transformation.

#### Publication Type

Journal article.

<68>

#### Accession Number

20210030011

#### Author

Booth, A.; Omed, R. A.; Naidoo, M.

#### Title

Analysis of a SARS-CoV-2 daily screening programme for healthcare workers at a district hospital in KwaZulu-Natal, a quality improvement initiative. (Special Collection: COVID-19.)

#### Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 11 ref.

#### Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

#### Location of Publisher

Cape Town

#### Country of Publication

South Africa

#### Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused an unprecedented burden on our healthcare systems and workers. Healthcare workers are at risk of contracting and spreading SARS-CoV-2 given their proximity to positive cases, often with a lack of personal protective equipment. The South African Department of Health requires that all employees be screened daily for symptoms and potential persons under investigation identified timeously. This report aims to assess the efficacy of daily self-screening tools in detecting and managing potential staff cases of SARS-CoV-2. Our hospital, situated in KwaZulu-Natal, South Africa, developed a daily self-screening tool for all healthcare workers to complete, consisting of questions on symptoms and epidemiological risk factors. The screening tools were collected and assessed after four weeks of use. Fifty-four forms were assessed. Twenty-eight (51.9%) forms were not completed, whilst 12 (22.2%) indicated positive symptoms with no documentation that any further medical assessment, testing or isolation was done. We identified that the poor completion of forms was likely because of the lack of education of staff on the importance of the forms, poor oversight by management, staff forgetfulness or lack of awareness of the forms. Screening of staff is vital during this pandemic but requires constant oversight by line managers, staff motivation and adequate education. Ongoing development of efficient screening programmes is required.



Publication Type

Journal article.

<69>

Accession Number

20210030010

Author

Olagundoye, O.; Enema, O.; Adebowale, A.

Title

Recommendations for a national coronavirus disease 2019 response guideline for the care of older persons in Nigeria during and post-pandemic: a family physician's perspective. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 9 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The older persons in our society are a special group of people in need of additional measures of care and protection. They have medical, financial, emotional and social needs. The novel Coronavirus disease 2019 (COVID-19) only exacerbates those needs. COVID-19 is a new disease, and there is limited information regarding the disease. Based on currently available information, older persons and people of any age who have serious underlying medical conditions may be at higher risk of severe illness from COVID-19. Family physicians provide care for individuals across their lifespan. Because geriatricians are internists or family physicians with post-residency training in geriatric medicine, they are major stakeholders in geriatric care. The authors are concerned about the absence of a COVID-19 response guideline/special advisory targeting the vulnerable population of older adults. The management and response to COVID-19 will be implemented in part based on the local context of available resources. Nigeria has been described as a resource-constrained nation. Infection prevention in older persons in Nigeria will far outweigh the possibilities of treatment given limited resources. The aim was to recommend actionable strategies to prevent COVID-19-related morbidity or mortality among older persons in Nigeria and to promote their overall well-being during and after the pandemic. These recommendations cut across the geriatric medicine domains of physical health, mental health, functioning ability and socio-environmental situation.

Publication Type

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Journal article.

<70>

Accession Number

20210030009

Author

Kusotera, T.; Nhengu, T. G.

Title

Coronavirus-19 and malaria: the great mimics. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 11 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The use of SARS-CoV-2 rapid diagnostic test (RDT) kits by some African countries for screening has raised serious concerns over their role in malaria areas. Coupled with a lack of adequate personal protective equipment and the scarcity of knowledge on the possible interaction between malaria and COVID-19 both in terms of presentations and shared symptoms, this has left many frontline health workers with fears and anxieties. Several anecdotal reports have already raised questions pertaining to possible false-positive COVID-19 results in proven malaria cases by use of SARS-CoV-2 RDT kits with huge costs to already constrained budgets. The report raises concerns on the use of SARS-CoV-2 kits in malaria areas in terms of cost, to prompt research, allay fears and guide policy during this pandemic and beyond.

Publication Type

Journal article.

<71>

Accession Number

20210030008

Author

Madzimbamuto, F. D.

Title

Ventilators are not the answer in Africa. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 13 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The treatment of severely ill coronavirus disease 2019 (COVID-19) patients has brought the worldwide shortage of oxygen and ventilator-related resources to public attention. Ventilators are considered as the vital equipment needed to manage these patients, who account for 3% - 5% of patients with Covid-19. Most patients need oxygen and supportive therapy. In Africa, the shortage of oxygen is even more severe and needs equipment that is simpler to use than a ventilator. Different models of generating oxygen locally at hospitals, including at provincial and district levels, are required. In some countries, hospitals have established small oxygen production plants to supply themselves and neighbouring hospitals. Oxygen concentrators have also been explored but require dependable power supply and are influenced by local factors such as ambient temperature and humidity. By attaching a reservoir tank, the effect of short power outages or high demands can be smoothed over. The local and regional energy unleashed in the citizens to respond to the COVID-19 pandemic should now be directed towards developing appropriate infrastructure for oxygen and critical care. This infrastructure is education and technology intensive, requiring investment in these areas.

Publication Type

Journal article.

<72>

Accession Number

20210030007

Author

Nyasulu, J.; Pandya, H.

Title

The effects of coronavirus disease 2019 pandemic on the South African health system: a call to maintain essential health services. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 33 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

South Africa had its first coronavirus disease 2019 (COVID-19) case on 06 March 2020 in an individual who travelled overseas. Since then, cases have constantly increased and the pandemic has taken a toll on the health system. This requires extra mobilisation of resources to curb the disease and overcome financial losses whilst providing social protection to the poor. Assessing the effects of COVID-19 on South African health system is critical to identify challenges and act timely to strike a balance between managing the emergency and maintaining essential health services. We applied the World Health Organization (WHO) health systems framework to assess the effects of COVID-19 on South African health system, and proposed solutions to address the gaps, with a focus on human immunodeficiency virus (HIV) and expanded programme on immunisation (EPI) programmes. The emergence of COVID-19 pandemic has direct impact on the health system, negatively affecting its functionality, as depletion of resources to curb the emergency is eminent. Diversion of health workforce, suspension of services, reduced health-seeking behaviour, unavailability of supplies, deterioration in data monitoring and funding crunches are some of the noted challenges. In such emergencies, the ability to deliver essential services is dependent on baseline capacity of health system. Our approach advocates for close collaboration between essential services and COVID-19 teams to identify priorities, restructure essential services to accommodate physical distancing, promote task shifting at primary level, optimise the use of mobile/web-based technologies for service delivery/training/monitoring and involve private sector and non-health departments to increase management capacity. Strategic responses thus planned can assist in mitigating the adverse effects of the pandemic whilst preventing morbidity and mortality from preventable diseases in the population.

Publication Type

Journal article.

<73>

Accession Number

20210030006

Author

Reuter, H.; Jenkins, L. S.; Jong, M. de; Reid, S.; Vonk, M.

Title

Prohibiting alcohol sales during the coronavirus disease 2019 pandemic has positive effects on health services in South Africa. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 10 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

As the coronavirus disease 2019 (Covid-19) pandemic evolves globally, we are realising its impact on communities from the disease itself and the measures being taken to limit infection spread. In South Africa (SA), 62 300 adults die annually from alcohol-attributable causes. Alcohol-related harm can be reduced by interventions, such as taxation, government monopolising retail sales, outlet density restriction, hours of sales and an advertising ban. To mitigate the impact of the Covid-19 pandemic, SA instituted a lockdown that also prohibited alcohol sales. This led to a sharp reduction in unnatural deaths in the country from 800-1000/week to around 400/week during the lockdown. We reviewed three 2-week periods at a large rural regional hospital: Before Covid-19 (February), during social distancing (March) and during lockdown with alcohol ban (April). A dramatic drop in patient numbers from 145 to 64 (55.8%) because of assault, from 207 to 83 (59.9%) because of accidents, from 463 to 188 (59.4%) because of other injuries and from 12 to 1 (91.6%) because of sexual assaults was observed during the first 2 weeks of lockdown. As healthcare professionals, we need to advocate for the ban to remain until the crisis is over to ensure that health services can concentrate on Covid-19 and other patients. We encourage other African states to follow suit and implement alcohol restrictions as a mechanism to free up health services. We see this as an encouragement to lobby for a new normal around alcohol sales after the pandemic. The restrictions should focus on all evidence-based modalities.

Publication Type

Journal article.

<74>

Accession Number

20210030004

Author

Johnson, O.; Goronga, T.

Title

Why communities must be at the centre of the coronavirus disease 2019 response: lessons from Ebola and human immunodeficiency virus in Africa. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 6 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

As the Coronavirus disease 2019 (COVID-19) pandemic has spread globally, with no effective treatment or vaccine yet available, governments in many countries have put in place social interventions to control the outbreak. The various lockdown measures may have devastating impacts on economies and livelihoods. This approach risks undermining public trust in government responses and therefore undermines efforts to promote behaviour change, which is key to the success of social interventions. Important lessons can be drawn from past Ebola outbreaks and the human immunodeficiency virus pandemic on how communities should be central to COVID-19 responses. Communities are complex and only their members can inform public health experts about their lived realities, the community's understanding of the outbreak and what will work locally to reduce transmission. The public should be encouraged to take positive actions to ensure their own health and well-being, rather than made to feel powerless. Communities should be supported to develop their own response plans, community leaders should be recognised as vital assets, community representatives should have equal inclusion in strategic meetings and greater empathy should be built into decision-making processes.

Publication Type

Journal article.

<75>

Accession Number

20210030003

Author

Tijani, I. A. O.; Ramatu, O. A.; Bolatito, B. F.; Michael, A. O.

Title

The role of the family physician in the fight against Coronavirus disease 2019 in Nigeria. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 9 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The Coronavirus disease 2019 (COVID-19) pandemic has been ravaging Nigeria and the world with increasing morbidity and mortality. Despite efforts by the Nigerian government implemented through the Nigerian Centre for Disease Control (NCDC) to reduce the scourge of the disease through public enlightenment and regular updates, the number of new cases and mortalities from COVID-19 are still increasing. Family physicians (FPs) who are the first contact of care for most patients accessing private and public health facilities in Nigeria have been working tirelessly to reduce the scourge of the pandemic in Nigeria. They continuously update themselves through regular webinars and online resources and guidelines provided by the Society of Family Physicians of Nigeria (SOFPON). Measures adopted by FPs across the country in the fight against the scourge include triaging patients as they present to the family medicine clinics; health education and enlightenment of the populace; and ensuring social distancing, regular handwashing and compulsory use of face mask by both physicians and patients during clinical consultations. Other measures include incorporating family-focused behavioural interventions in their practice, home-based care to reduce the number of persons visiting the hospital, telemedicine and Hospice and palliative care services to the elderly and terminally ill. In conclusion, FPs in Nigeria are helping to reduce the scourge of COVID-19 through patient education and innovative healthcare delivery that does not put patients at increased risk of the disease whilst promptly recognising potential COVID-19 patients and referring them for early diagnosis and treatment.

Publication Type

Journal article.

<76>

Accession Number

20210030001

Author

Jenkins, L. S.; Pressentin, K. B. von; Naidoo, K.; Schaefer, R.

Title

The evolving role of family physicians during the coronavirus disease 2019 crisis: an appreciative reflection. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 9 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Ten family physicians and family medicine registrars in a South African semi-rural training complex reflected on the coronavirus disease 2019 (COVID-19) crisis during their quarterly training complex meeting. The crisis has become the disruptor that is placing pressure on the traditional roles of the family physician. The importance of preventative and promotive care in a community-oriented approach, being a capacity builder and leading the health team as a consultant have assumed new meanings.

Publication Type

Journal article.

<77>

Accession Number

20210030000

Author

Besigye, I. K.; Mulwooza, M.; Namatovu, J.

Title

Coronavirus disease-2019 epidemic response in Uganda: the need to strengthen and engage primary healthcare. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 9 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town



Country of Publication

South Africa

Abstract

In Uganda, the numbers of new coronavirus disease cases have continued to increase slowly since the first case was confirmed. Given that the disease is likely to be holoendemic, the role of primary care (PC) with its features of comprehensiveness, accessibility, coordination and continuity, functioning at the heart of a primary healthcare (PHC) approach, will be important. The elements of PC are applicable in the epidemic preparation, case finding and management, follow-up and post-epidemic phases of responding to this pandemic. This also presents opportunities and lessons for strengthening PHC as well as for reflections on missed opportunities. The effective use of available resources in response to the epidemic should mainly focus on community mobilisation and PHC teams for the prevention, screening, testing and treatment of mild and moderate cases.

Publication Type

Journal article.

<78>

Accession Number

20210029999

Author

Brey, Z.; Mash, R.; Goliath, C.; Roman, D.

Title

Home delivery of medication during coronavirus disease 2019, Cape Town, South Africa: short report. (Special Collection: COVID-19.)

Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 3 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

The public sector primary care facilities in Cape Town serve a large number of patients with chronic diseases such as human immunodeficiency virus, tuberculosis, diabetes, hypertension, asthma and chronic obstructive pulmonary disease. Prior to the Coronavirus disease 2019 (COVID-19) epidemic, stable patients

with chronic conditions attended the facility or support groups to obtain their medication. During the COVID-19 epidemic, these patients would be put at risk if they had to travel and gather in groups to receive medication. The Metropolitan Health Services, therefore, decided to offer home delivery of medication. A system of home delivery was rapidly established by linking the existing chronic dispensing unit system with the emerging approach to community-orientated primary care in the Metro. Medication was delivered as usual to primary care pharmacies, but then a variety of means were used to disseminate the parcels to local non-profit organisations, where they could be delivered by a city-wide network of community health workers (CHWs). Innovations included various ways of delivering the parcels, including via Uber, bicycles and electric scooters, as well as Google forms to monitor the success of the initiative. It was estimated that up to 200 000 parcels per month could be delivered in this way via 2500 CHWs. The new system was established throughout the Metropole, and its strengths, weaknesses, opportunities and threats are further discussed. The initiative may prevent COVID-19 amongst people with comorbidities who would be at risk of more severe diseases. It may also have de-congested primary care facilities ahead of the expected surge in COVID-19 cases.

#### Publication Type

Journal article.

<79>

#### Accession Number

20210029998

#### Author

David, N.; Mash, R.

#### Title

Community-based screening and testing for Corona Virus in Cape Town, South Africa: short report. (Special Collection: COVID-19.)

#### Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 3 ref.

#### Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

#### Location of Publisher

Cape Town

#### Country of Publication

South Africa

#### Abstract

Corona Virus Infectious Disease 2019 (COVID-19) was first reported in Cape Town in March 2020 and the transmission was soon observed in local communities. Cape Town has many vulnerable communities because of poverty, overcrowding and comorbidities, although it has a relatively small elderly population.

Amongst the unique and early responses to the pandemic in South Africa has been the strategy of community screening and testing (CST). This process has been drawn from health department's prior adoption of a community-orientated primary care (COPC) approach, which relies on teams of community health workers working in delineated communities to prevent disease and provide early interventions for those at higher risk. The COPC principles were applied in the CST programme, which involved collaboration between facility and community-based teams, linking public health and primary care approaches, careful mapping of cases in highly vulnerable communities, targeted screening around cases, testing of those that screened positive, health education and linkage to primary care. The overall aim was to slow down transmission through early identification and isolation of diagnosed cases. Key challenges involved the designing of a screening tool with appropriate sensitivity and specificity as well as the logistics of staffing, transport, consumables, data collection and capture, security, ablutions and personal protective equipment. Key opportunities included synergies between CST and evolving commitment to COPC in the health system. Key threats were the deteriorating security situation in the most vulnerable communities because of loss of income, food insecurity and CST distrust as well as increasing turn-around-times for test results.

#### Publication Type

Journal article.

<80>

#### Accession Number

20210029995

#### Author

Barrett, C. L.

#### Title

Primary healthcare practitioners and patient blood management in Africa in the time of coronavirus disease 2019: safeguarding the blood supply. (Special Collection: COVID-19.)

#### Source

African Journal of Primary Health Care and Family Medicine; 2020. 12(1). 22 ref.

#### Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

#### Location of Publisher

Cape Town

#### Country of Publication

South Africa

#### Abstract

The coronavirus disease 2019 (COVID-19) pandemic has highlighted various weaknesses in global healthcare services. The blood supply in Africa is a critical element of the healthcare service that may be

significantly affected by the pandemic. By implementing principles of patient blood management, primary healthcare practitioners may play an important role in the resilience of the blood supply during the COVID-19 pandemic.

Publication Type

Journal article.

<81>

Accession Number

20210029961

Author

Tsai HueiYi; Chang YuLing; Shen ChengTing; Chung WeiShiuan; Tsai HuiJu; Chen FangMing

Title

Effects of the COVID-19 pandemic on breast cancer screening in Taiwan.

Source

Breast; 2020. 54:52-55. 15 ref.

Publisher

Churchill Livingstone

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

The breast cancer screening program has continued in Taiwan during the COVID-19 pandemic. Our nationwide data showed that the total number of screenings decreased by 22.2%, which was more pronounced for in-hospital examinations (-37.2%), while outreach showed a 12.9% decrease. This decline in screening participation happened at all levels of hospitals, more significantly at the highest level. Our report revealed that outreach services could maintain relatively stable breast cancer screening under this kind of public health crisis. Building a flexible, outreach system into the community might need to be considered when policymakers are preparing for future possible pandemics.

Publication Type

Journal article.

<82>

Accession Number

20210029929

Author

Mayuri Golhar; Tarun Yadav; Walia, H. S.; Sanjay Johar

Title

A study to evaluate behavior of society with COVID-19 frontline health workers.

Source

Asian Journal of Medical Sciences; 2021. 12(1):42-46. 11 ref.

Publisher

Manipal College of Medical Sciences

Location of Publisher

Pokhara

Country of Publication

Nepal

Abstract

Background: Health care workers caring for Covid-19 patients go through mental stress, physical exertion, stigma from society and the fear of losing patients' and colleagues. Aims and Objective: To evaluate frontline health care workers perspective about the society's behavior towards them. Materials and Methods: This questionnaire-based study included a total of 648 participants and included 20 questions about demography, Covid duty, health related issues and behavioral aspect of society during Covid duty. Behavioral related responses were scaled on the basis of response score. Results: Suggested that the overall population behavior was satisfactory but behavioral biases were existent. Major health issue of concern that surfaced during duties was stress. Conclusion: Behavioral prejudices are existent due to the stigma attached to this pandemic and hence needs to be addressed with great concern. Health related issues should be dealt promptly and psychological counseling should be made mandatory.

Publication Type

Journal article.

<83>

Accession Number

20210029902

Author

Mahyuddin, A. P.; Kanneganti, A.; Wong, J. J. L.; Dimri, P. S.; Su, L. L.; Biswas, A.; Illanes, S. E.; Mattar, C. N. Z.; Huang, R. Y. J.; Choolani, M.

Title

Mechanisms and evidence of vertical transmission of infections in pregnancy including SARS-CoV-2s. (Special Issue: 40th anniversary issue.)

Source

Prenatal Diagnosis; 2020. 40(13):1655-1670. 145 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

There remain unanswered questions concerning mother-to-child-transmission of SARS-CoV-2. Despite reports of neonatal COVID-19, SARS-CoV-2 has not been consistently isolated in perinatal samples, thus definitive proof of transplacental infection is still lacking. To address these questions, we assessed investigative tools used to confirm maternal-fetal infection and known protective mechanisms of the placental barrier that prevent transplacental pathogen migration. Forty studies of COVID-19 pregnancies reviewed suggest a lack of consensus on diagnostic strategy for congenital infection. Although real-time polymerase chain reaction of neonatal swabs was universally performed, a wide range of clinical samples was screened including vaginal secretions (22.5%), amniotic fluid (35%), breast milk (22.5%) and umbilical cord blood. Neonatal COVID-19 was reported in eight studies, two of which were based on the detection of SARS-CoV-2 IgM in neonatal blood. Histological examination demonstrated sparse viral particles, vascular malperfusion and inflammation in the placenta from pregnant women with COVID-19. The paucity of placental co-expression of ACE-2 and TMPRSS2, two receptors involved in cytoplasmic entry of SARS-CoV-2, may explain its relative insensitivity to transplacental infection. Viral interactions may utilise membrane receptors other than ACE-2 thus, tissue susceptibility may be broader than currently known. Further spatial-temporal studies are needed to determine the true potential for transplacental migration.

Publication Type

Journal article.

<84>

Accession Number

20210029897

Author

Title

A snapshot of pediatric patients with COVID-19 in a pandemic hospital.

Source

Klinische Padiatrie; 2021. 233(1):24-30. 20 ref.

Publisher

Georg Thieme Verlag KG

Location of Publisher

Stuttgart

Country of Publication

Germany

Abstract

**Aim:** Reports describing coronavirus disease 2019 (Covid-19) in children are fewer than adult studies due to milder clinical picture. We aimed to share our experience at a single center with an emphasis on collective decision making. **Materials and Methods:** A suspected case was defined as the presence of symptoms suggestive of COVID-19 and/or positive contact history. SARS-CoV-2 PCR positive patients were defined as confirmed COVID-19. Between March 12, 2020, and May 15, 2020, all children presenting with fever, cough, or respiratory difficulty were investigated for COVID-19. A total of 719 children were examined at outpatient clinics, and 495 were tested with polymerase chain reaction (PCR) for suspicion of COVID-19. A team was organized for monitoring and treating patients either as outpatients or hospitalization. Patients were evaluated in terms of age, gender, travel history, epidemiological history, clinical symptoms and signs, laboratory and radiological findings, treatment, and outcome. **Results:** Sixty patients were hospitalized for suspicion of COVID-19. Forty-three patients were diagnosed as probable or confirmed COVID-19. 21 of 43 patients (48.8%) were PCR confirmed. The remaining 22 were diagnosed by epidemiologic history, clinical assessment, and computerized thorax tomography (CT) findings. The median age was 126 and 78.5 months in PCR positives and PCR negatives, respectively and the youngest patient was a 28 days old baby. Nineteen of the patients had an upper respiratory infection (44.1%). Although five patients had no clinical signs, chest X-ray, or CT revealed pneumonia. **Conclusions:** As previously reported, the clinical manifestations of COVID-19 in children are mostly mild. Even very young kids can become infected following exposure to sick family members. International and local guidelines are valuable for decision making since it is a new disease. A combination of chest disease, infectious diseases, and emergency care physicians approach will aid the appropriate management of cases.

Publication Type

Journal article.

<85>

Accession Number

20210029813

**Author**

Varun Tiwari; Govind Shiddapur; Narendran Sairam; Asmita Samal

**Title**

Disease wise distribution of pulmonary involvement in HIV seropositive patients and its correlation with CD4 count.

**Source**

Indian Journal of Basic and Applied Medical Research; 2020. 10(1):156-160. 8 ref.

**Publisher**

Indian Journal of Basic and Applied Medical Research (IJBAMR)

**Location of Publisher**

Nashik

**Country of Publication**

India

**Abstract**

**Introduction:** As HIV infection causes decreased humoral and T- cell mediated immune responses, it results in increased susceptibility to many opportunistic infections. As a result PLHIV seem to have an increased incidence of respiratory illness as compared to the general population. Overall reduced immunity in HIV leading to increased frequency of respiratory infections in HIV patients. **Materials and methods:** This descriptive cross-sectional study was conducted in the Dept. of General Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune for 2 years duration. It was approved by the IEC of our university. Assuming a proportion of 30% pulmonary manifestation in HIV positive patient, the sample size calculated using WinPepi software keeping acceptable error at 10% with 95% CI was 60. The desired sample was randomly selected from the line list of HIV positive patients from the General Medicine Department (OPD and IPD). Patients were included in the study after taking their voluntary informed consent. **Results:** The most common respiratory infections seen in HIV seropositive patients was tuberculosis followed by bacterial pneumonia and then pneumocystis pneumonia infection. It was seen that the mean CD4 count in Tuberculosis cases was 255.5 +or- 151.8 cells/cu mm, in Bacterial Pneumonia cases was 305.9 +or- 75.5 cells/cu mm, in Pneumocystis Jiroveci cases was 135.2 +or- 42.6 cells/cu mm, in Covid 19 cases was 348.0 +or- 216.3 cells/cu mm, in Idiopathic infection cases was 344.0 cells/cu mm, in Normal cases was 546.8 +or- 228.7 cells/cu mm. **Conclusion:** On the basis of our results, we conclude that 2/3rd of the HIV seropositive patients had pulmonary involvement. The most common disease observed was tuberculosis followed by bacterial pneumonia and the probable diagnosis of respiratory infection according to the patient's CD4 count can be made using this study.

**Publication Type**

Journal article.

<86>

**Accession Number**



20210029775

Author

Khorsandi, B.; Nasirzadeh, N.; Asadi, L.

Title

Normal vaginal delivery in a woman with COVID-19.

Source

Journal of Clinical and Basic Research; 2020. 4(4):34-40. 31 ref.

Publisher

Golestan University of Medical Sciences

Location of Publisher

Gorgan

Country of Publication

Iran

Abstract

Background: The results of studies on the outcomes and course of coronavirus disease-2019 (COVID-19) in pregnant women are inconsistent. Proper characterization of the disease process can help healthcare providers in the accurate management and control of the disease in vulnerable individuals, particularly pregnant women. We herein report a case of a multiparous pregnant woman with COVID-19. Case description: A 30-year-old pregnant woman (gravida 3 para 2) with gestational age of 39 weeks and six days and a history of occasional fever and chills in the past week was admitted to the midwifery triage with complaints of myalgia as well as severe pubic symphysis and back pain. The patient had the following vital signs at admission: fetal heart rate: 140 beats/min, oxygen saturation: 96%, temperature: 37 degrees C, respiratory rate: 17 breaths/min, pulse rate: 126 beats/min and blood pressure: 100/70 mmHg. The mother was positive for COVID-19 in both PCR and chest CT-scan findings, which demonstrated presence of multiple opacities in both lungs in favor of viral pneumonia. Vaginal delivery was performed and an apparently healthy, term and cephalic baby girl was born with an Apgar score of 9 at one minute and 10 at five minutes after birth. The baby was negative for COVID-19 based on the molecular testing. Conclusion: With proper management and timely separation of the mother from the baby and preparing breast milk by a non-infected person, no maternal or neonatal complications were observed in our case. More studies are required to gain a better understating about the possible morbidities and mortalities associated with COVID-19 during pregnancy.

Publication Type

Journal article.

<87>

Accession Number

20210029732

Author

Kirubanand Senniappan; Srinath Damodaran; Muralidhar Kanchi

Title

Epicardial echocardiography - a plausible alternative cardiac imaging technique in COVID-19 pandemic.

Source

Journal of Cardiothoracic and Vascular Anesthesia; 2021. 35(2):684-686.

Publisher

Elsevier Inc.

Location of Publisher

Philadelphia

Country of Publication

USA

Publication Type

Correspondence.

<88>

Accession Number

20210029691

Author

Kivrak, A.; Ulas, B.; Kivrak, H.

Title

A comparative analysis for anti-viral drugs: their efficiency against SARS-CoV-2.

Source

International Immunopharmacology; 2021. 90. 54 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Coronavirus, known as the coronavirus pandemic, is continuing its spread across the world, with over 42 million confirmed cases in 189 countries and more than 1.15 million deaths. Although, scientists focus on the finding novel drugs and vaccine for SARS-CoV-2, there is no certain treatment for it. Antiviral drugs such as; oseltamivir, favipiravir, umifenovir, lopinavir, remdesivir, hydroxychloroquine, chloroquine, azithromycin, ascorbic acid, corticosteroids, are mostly used for patients. They prevent cytokine storm that is the main reason of deaths related to SARS-CoV-2. In addition, anti-inflammatory agents have critical roles to inhibit the lung injury and multisystem organ dysfunction. The combination with anti-viral drugs with other drugs displays high synergistic effects. In the present study, the drugs used for Covid-19 are analyzed and compare the efficiency for the Covid-19 patients from the different continents including USA, South Korea, Italy, Spain, Germany, Russia, Brazil, Turkey, and China. Nowadays, all countries tried to find vaccine and new drug candidates for SARS-CoV-2, but anti-viral drugs may be the best candidates for the treatment of Covid-19 before finding novel anti-Covid drug.

#### Publication Type

Journal article.

<89>

#### Accession Number

20210029474

#### Author

Karagoz, A.; Tutun, H.; Arslantas, T.; Altintas, O.; Kocak, N.; Altintas, L.

#### Title

Detection of SARS-CoV-2 using five primer sets.

#### Source

Ankara Universitesi Veteriner Fakultesi Dergisi; 2021. 68(1):69-75. 32 ref.

#### Publisher

Ankara Universitesi, Veteriner Fakultesi Dekanlig

#### Location of Publisher

Ankara

#### Country of Publication

Turkey

#### Abstract

A novel coronavirus (SARS-CoV-2) outbreak, responsible for a pneumonia-associated respiratory disorder (COVID-19), has started in early December 2019 in Wuhan, China, and has rapidly spread around the world. Rapid and accurate diagnostic testing plays a crucial role in tackling the COVID-19 pandemic. In this study, it was aimed to compare 5 primer sets designed to amplify different regions for the detection of SARS-CoV-2 and to perform sequence analysis. Conventional RT-PCR was carried out using primers targeting different regions of the virus genome including ORF1ab, Envelope (E), RNA-dependent RNA polymerase (RdRp), Spike

(S) and Nucleocapsid (N) genes for the diagnosis of COVID-19. DNA sequence of ORF1ab gene from each sample were compared with the DNA sequence data of SARS-CoV-2 stored in the GenBank and ORF1ab phylogenetic tree was constructed. The amplicon sizes of ORF1ab, S, E, N and RdRp genes were 588 bp, 440 bp, 145 bp, 323 bp and 196 bp, respectively. The SARS-CoV-2 RNA was detected from 74% of total samples from RdRp gene, 87% for N gene, 74% for S gene, 61% for E gene and 82% for ORF1ab region. The ORF1ab sequences of SARS-CoV-2 from 82 patients were had 100% identity to the sequence of Wuhan isolate and among themselves. The phylogenetic analysis revealed that all isolates formed a cluster. The results of this study suggest that the N region is the best for SARS-CoV-2 identification.

#### Publication Type

Journal article.

<90>

#### Accession Number

20210028896

#### Author

Adams, E. L.; Caccavale, L. J.; Smith, D.; Bean, M. K.

#### Title

Food insecurity, the home food environment, and parent feeding practices in the era of COVID-19.

#### Source

Obesity; 2020. 28(11):2056-2063. 48 ref.

#### Publisher

Wiley

#### Location of Publisher

Boston

#### Country of Publication

USA

#### Abstract

**Objective:** This study aimed to describe changes in families' home food environment and parent feeding practices, from before to during the coronavirus disease 2019 (COVID-19) pandemic, and examine whether changes differed by food security status. **Methods:** Parents (N = 584) in the US completed a single online survey, reporting on food security, home food availability, and feeding practices both retrospectively (considering before COVID-19) and currently (during COVID-19). X2 and univariate regressions examined associations by food security status. **Results:** The percent of families reporting very low food security increased by 20% from before to during COVID-19 (P < 0.01). About one-third of families increased the amount of high-calorie snack foods, desserts/sweets, and fresh foods in their home; 47% increased nonperishable processed foods. Concern about child overweight increased during COVID-19, with a greater increase for food-insecure versus food-secure parents (P < 0.01). Use of restriction, pressure to eat, and

monitoring increased, with a greater increase in pressure to eat for parents with food insecurity compared with food-secure parents ( $P < 0.05$ ). Conclusions: During COVID-19, increases in very low food security and changes in the home food environment and parent feeding practices were observed. Results highlight the need to address negative impacts of COVID-19 on children's obesity risk, particularly among those facing health disparities.

Publication Type

Journal article.

<91>

Accession Number

20210028776

Author

Barre, S. de la; Stone, G.; McKeown, J.; Schroeder, J.

Title

Thinking about leisure during a global pandemic.

Source

World Leisure Journal; 2020. 62(4):306-310. 11 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The COVID-19 pandemic arrested the world in a dramatic manner as of March 2020. As countries placed themselves under lockdown to avoid the worst case scenarios expected from the novel virus, we witnessed economies shut down, and residents of the smallest communities to the largest cities 'shelter in place' as they could. Very quickly, a smorgasbord of disparities and privileges were highlighted and discussions, at local and global levels, began in earnest. This moment is significant in terms of providing us with insights borne of this unique opportunity to better understand diverse aspects of life on this planet, not least our knowledge of climate change and demographic vulnerabilities, but also about the state of leisure. The following Observation Paper presents a few leisure-related insights gained during the spring and summer of 2020 in Canada.

Publication Type

Journal article.

<92>

Accession Number

20210028709

Author

Chernozhukov, V.; Kasahara, H.; Schrimpf, P.

Title

Causal impact of masks, policies, behavior on early COVID-19 pandemic in the U.S. (Special Issue: Pandemic econometrics.)

Source

Journal of Econometrics; 2021. 220(1):23-62. many ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The paper evaluates the dynamic impact of various policies adopted by US states on the growth rates of confirmed Covid-19 cases and deaths as well as social distancing behavior measured by Google Mobility Reports, where we take into consideration people's voluntarily behavioral response to new information of transmission risks in a causal structural model framework. Our analysis finds that both policies and information on transmission risks are important determinants of Covid-19 cases and deaths and shows that a change in policies explains a large fraction of observed changes in social distancing behavior. Our main counterfactual experiments suggest that nationally mandating face masks for employees early in the pandemic could have reduced the weekly growth rate of cases and deaths by more than 10 percentage points in late April and could have led to as much as 19 to 47 percent less deaths nationally by the end of May, which roughly translates into 19 to 47 thousand saved lives. We also find that, without stay-at-home orders, cases would have been larger by 6 to 63 percent and without business closures, cases would have been larger by 17 to 78 percent. We find considerable uncertainty over the effects of school closures due to lack of cross-sectional variation; we could not robustly rule out either large or small effects. Overall, substantial declines in growth rates are attributable to private behavioral response, but policies played an important role as well. We also carry out sensitivity analyses to find neighborhoods of the models under which the results hold robustly: the results on mask policies appear to be much more robust than the results on business closures and stay-at-home orders. Finally, we stress that our study is observational and therefore should be interpreted with great caution. From a completely agnostic point of view, our findings uncover predictive effects (association) of observed policies and behavioral changes on future health outcomes, controlling for informational and other confounding variables.

Publication Type

Journal article.

<93>

Accession Number

20210028689

Author

Lau, A.

Title

New technologies used in COVID-19 for business survival: insights from the hotel sector in China.

Source

Information Technology and Tourism; 2020. 22(4):497-504. 12 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

The tourism industry is in a fight for survival during the coronavirus pandemic. This essay was written based upon several interviews conducted with directors and general managers of nine well-known hotels in China with the aim to investigate what new technologies are used to mitigate the impact of the pandemic. DeLone and McLean's Information System Success Model was applied to examine the adopted digital technologies. Live-stream promotion and live-stream conference are introduced to primarily improve information quality, while 5G technology and Wi-Fi 6 are installed to enhance the system quality. Facial recognition, AI, and Robots are integrated to the daily operations to enhance service quality. Challenges and future directions are discussed.

Publication Type

Journal article.

<94>

Accession Number

20210028623

Author

Knight, D. W.; Xiong LiNa; Lan, W.; Gong Jian

Title

Impact of COVID-19: research note on tourism and hospitality sectors in the epicenter of Wuhan and Hubei Province, China.

Source

International Journal of Contemporary Hospitality Management; 2020. 32(12):3705-3719.

Publisher

Emerald Publishing

Location of Publisher

Bingley

Country of Publication

UK

Abstract

**Purpose:** The purpose of this paper is to present initial findings from a vulnerability assessment based on the perceptions of practitioners working in four tourism and hospitality sectors in Wuhan and Hubei Province, namely, cruise lines, hotels, travel agencies and touristic attractions.

**Design/methodology/approach:** The research note focuses on the coronavirus (COVID-19) outbreak from January to March 2020. Using the destination sustainability framework and an "interpretation" mixed methods research design, the authors analyze phone interviews (n = 151) and subsequent online surveys (n = 370) to assess sector-specific perceptions of exposure, sensitivity and system adaptiveness. **Findings:** Overall, findings paint a grim picture of each sector in the short-term. All respondents reported an immediate economic loss due to COVID-19, as well as recovery concerns and uncertainties. Immediate actions for addressing these issues centered on internal cost control and governmental subsidies, while anticipated next steps focused on product adjustment, a transformation of business structures and seeking governmental guidance and policies in restoring market confidence. Findings also allude to future strategies/directions. **Research limitations/implications:** This study is limited in its focus on practitioner views in the immediate COVID-19 outbreak. Implications highlight a crucial strategic dependence of each sector on effective government/managerial communication and support, with smaller, local businesses needing particular attention in crisis situations. **Originality/value:** To the authors' knowledge, this research note is the first comprehensive study presenting vital information pertaining to the impact of COVID-19 on tourism and hospitality businesses from a large group of business leaders in the site of the initial outbreak (i.e. Wuhan and Hubei Province). With the highly infectious COVID-19 representing an ongoing threat for populations worldwide, this paper hopes this research note provides valuable insights for practitioners in other vulnerable regions, as well as for researchers examining strategies for resilience against this and future disasters.

Publication Type

Journal article.



<95>

Accession Number

20210028577

Author

Denova-Gutierrez, E.; Lopez-Gatell, H.; Alomia-Zegarra, J. L.; Lopez-Ridauro, R.; Zaragoza-Jimenez, C. A.; Dyer-Leal, D. D.; Cortes-Alcala, R.; Villa-Reyes, T.; Gutierrez-Vargas, R.; Rodriguez-Gonzalez, K.; Escondrillas-Maya, C.; Barrientos-Gutierrez, T.; Rivera, J. A.; Barquera, S.

Title

The association of obesity, type 2 diabetes, and hypertension with severe coronavirus disease 2019 on admission among Mexican patients.

Source

Obesity; 2020. 28(10):1826-1832. 30 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Objective: This study's aim was to explore the association of obesity, type 2 diabetes, and hypertension with severe coronavirus disease 2019 (COVID-19) on admission. Methods: In the present study, a total of 23,593 patient samples were evaluated by a laboratory from the Mexican Institute of Epidemiological Diagnosis and Reference. Of these, 18,443 were negative for COVID-19, 3,844 were positive for COVID-19, and 1,306 were positive for other respiratory viruses. Severe types of respiratory disease were defined by the presence of pneumonia and other organ failure that requires intensive care. Multivariable logistic regression models were used to explore factors associated with severe COVID-19 on admission. Results: Patients who tested positive for COVID-19 had a higher proportion of obesity (17.4%), diabetes (14.5%), and hypertension (18.9%) compared with those without a confirmed diagnosis. Compared with patients without obesity, those with obesity showed a 1.43-fold higher odds of developing severe COVID-19 on admission, whereas subjects with diabetes and hypertension showed a 1.87-fold and 1.77-fold higher odds of developing severe COVID-19 on admission, respectively. Conclusions: Obesity, diabetes, and hypertension were significantly associated with severe COVID-19 on admission and the association of obesity was stronger in patients < 50 years of age.

Publication Type

Journal article.

<96>

Accession Number

20210028537

Author

O'Brien, B.; Goodridge, L.; Ronholm, J.; Nasheri, N.

Title

Exploring the potential of foodborne transmission of respiratory viruses.

Source

Food Microbiology; 2021. 95.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The ongoing pandemic involving severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has raised the question whether this virus, which is known to be spread primarily through respiratory droplets, could be spread through the fecal-oral route or via contaminated food. In this article, we present a critical review of the literature exploring the potential foodborne transmission of several respiratory viruses including human coronaviruses, avian influenza virus (AVI), parainfluenza viruses, human respiratory syncytial virus, adenoviruses, rhinoviruses, and Nipah virus. Multiple lines of evidence, including documented expression of receptor proteins on gastrointestinal epithelial cells, in vivo viral replication in gastrointestinal epithelial cell lines, extended fecal shedding of respiratory viruses, and the ability to remain infectious in food environments for extended periods of time raises the theoretical ability of some human respiratory viruses, particularly human coronaviruses and AVI, to spread via food. However, to date, neither epidemiological data nor case reports of clear foodborne transmission of either viruses exist. Thus, foodborne transmission of human respiratory viruses remains only a theoretical possibility.

Publication Type

Journal article.

<97>

Accession Number

20210028455

Author

Zhang Mo; Geng RuoQi; Huang Yuan; Ren ShengCe

Title

Terminator or accelerator? Lessons from the peer-to-peer accommodation hosts in China in responses to COVID-19.

Source

International Journal of Hospitality Management; 2021. 92. 32 ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

This study investigates how peer-to-peer accommodation (P2PA) hosts in China have responded to the COVID-19 pandemic. A multi-case study approach was adopted to depict the decision-making logic of three different types of hosts-speculators, diplomats, and entrepreneurs-based on an awareness-motivation-capability (AMC) framework under COVID-19. The findings highlight the role of owner motivation (profit/sharing/entrepreneurial-driven) and capabilities, such as having a unique value proposition and linkages with other hospitality experience, under COVID-19. Meanwhile, the platform collaboration capability failed to support survival during the pandemic. Moreover, the current study indicated that, after the COVID-19, entrepreneurs will continue to innovate, diplomats' operations will remain unchanged and speculators will quit hosting. Hence, COVID-19 is an accelerator of P2P industry that reserving the hosts who embrace the original features of the P2PA sector, e.g. sharing and a focus on the experience, and eliminating the hosts who have diluted the uniqueness of the sector.

Publication Type

Journal article.

<98>

Accession Number

20210028433

Author

Chadee, D.; Ren Shuang; Tang GuiYao

## Title

Is digital technology the magic bullet for performing work at home? Lessons learned for post COVID-19 recovery in hospitality management.

## Source

International Journal of Hospitality Management; 2021. 92. many ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Amsterdam

## Country of Publication

Netherlands

## Abstract

**Purpose:** The COVID-19 pandemic has suddenly brought about a number of disruptions to when and where work is undertaken for hospitality employees. The rapid spread of COVID-19 forced many hospitality managers to use digital technologies to perform work from home, termed digital work connectivity. Yet little is known about how hospitality employees cope with it. The purpose of this study is to investigate an important yet underspecified issue as to how digital work connectivity can be detrimental for employees' work behavior. **Design/methodology/approach:** We test our hypotheses using multi-wave and multi-source data collected from 467 middle managerial-level hospitality employees in China. **Findings:** The findings show that digital work connectivity can lead to self-control depletion, which in turn is associated with disengagement from work. Further, the findings show that relational energy is an important resource that can buffer the detrimental effects of digital work connectivity on hospitality employees. **Practical implications:** The association of digital work connectivity with employee withdrawal behavior highlights the urgent need for hospitality enterprises to have clear guidelines that regulate technology use at home for work purposes. **Social implications:** Our research shows that the absence of clear guidelines in relation to the use of digital technology for work at home risks producing unintended consequences for both hospitality employees and their enterprises. **Originality/value:** Our research draws from recent advances in resource allocation theories of self-control and adopts a more nuanced approach to uncover a counterintuitive reality that while people use digital technology to remain connected with work, doing so can actually contribute to their withdrawal behavior.

## Publication Type

Journal article.

<99>

## Accession Number

20210028429

## Author

Vikrant Kaushal; Sidharth Srivastava

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Title

Hospitality and tourism industry amid COVID-19 pandemic: perspectives on challenges and learnings from India.

Source

International Journal of Hospitality Management; 2021. 92. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

COVID-19 outbreak has presented unprecedented circumstances before the fragile tourism and hospitality industry. The highly infectious novel coronavirus continues to thwart the sector and raises serious questions about the present and future survival of the sector. The research addresses two important concerns, first, pertains to the major challenges that hospitality and tourism industry faces amid current conditions; and second relates to the vital learnings for the industry. The study draws on the interviews with 15 participants in senior positions in hospitality industry, and tourism and hospitality education services. Responses to the interviews were content analysed, which resulted in 27 sub-themes that were further condensed into 4 major themes. The dominant sub-themes that emerged out of the qualitative enquiry included need of multiskilling and professional development of the employees, increased sense of hygiene, sanitation and related SOPs, optimism toward revival of the industry, media roles, and need of better crisis preparedness. Subsequent overarching themes included "Human Resource Management", "Health and Hygiene", "Continuity" and "Concerns". The study critically discusses prominent themes in the light of the existing arguments from the literature and reflects on implications for the decision makers. The major implications of the study are in the form of determined themes adding to the evolving theory on COVID-19 pandemic and tourism & hospitality industry; and managerial recommendations to address host of issues while taking essential learnings stemming from the current circumstances. Limitations and scope of future research are also discussed.

Publication Type

Journal article.

<100>

Accession Number

20210028426

Author

Bucak, T.; Yigit, S.

Title

The future of the chef occupation and the food and beverage sector after the COVID-19 outbreak: opinions of Turkish chefs.

Source

International Journal of Hospitality Management; 2021. 92. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The aim of the present study is to reveal the opinions of the chefs who working as a manager in the kitchen department within the food and beverage sector about what changes might have occurred in their occupation and food and beverage sector after the COVID-19 outbreak. The data were collected through online interview forms and content analysis was used as a data analysis method. The findings reveal three main categories: general opinions after the COVID-19 outbreak, changes that could occur in the food and beverage sector after COVID-19 outbreak, and thoughts for the future of the chef occupation after the COVID-19 outbreak. Since this paper is the first to reveal the opinions of the chefs about what changes might have occurred in their occupation and food and beverage sector after the COVID-19 outbreak, and no similar study could be found in the existing literature, these findings are original.

Publication Type

Journal article.

<101>

Accession Number

20210028412

Author

Im JinYoung; Kim HaeMi; Miao Li

Title

CEO letters: hospitality corporate narratives during the COVID-19 pandemic.

Source

International Journal of Hospitality Management; 2021. 92. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

For hospitality organizations, the need for compelling corporate narratives is particularly acute in dealing with the COVID-19 crisis due to the scope and severity of its threat to employees, customers, the general public, and the fundamental survival of the company itself. Thus, this study aims to identify corporate narrative strategies and examine how hospitality companies deploy such narrative strategies with impression management tactics during the COVID-19 pandemic. Anchored in the Aristotelian concept of persuasive rhetoric and impression management theory, this study content-analyzed 57 CEO letters published by hospitality companies during the COVID-19 outbreak and found the prevalent rhetoric appeals and patterns of rhetoric appeals with impression management tactics embedded in the letters.

Publication Type

Journal article.

<102>

Accession Number

20210028405

Author

Hall, A.; Qureshi, I.; Glaser, J.; Auchincloss, P.; Wilson, R.

Title

Cost and benefit of military quarantine policies.

Source

Preventive Medicine; 2021. 143.

Publisher

Elsevier Ltd

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The initial response to COVID-19 included quarantine policies. This study aims to determine the infection containment proportions and cost of two variations of quarantine policies based on geographic travel and close contact with infected individuals within deployed US military populations. Special Operations Command Africa (SOCAF) records of individuals quarantined between March 1, 2020 and June 1, 2020 were examined. The infection containment proportion and cost in containment hours were compared between types of quarantine and between geographic areas. Geographic quarantine contained 2 cases out of 63 quarantined individuals in West Africa (3.2%) compared to 0 out of 221 in East Africa ( $p = 0.0486$ ). Close contact quarantine contained 3 cases out of 31 quarantined individuals in West Africa compared to 4 out of 55 in East Africa (7.3%,  $p = 0.6989$ ). Total confinement was 42,048 h for each contained infection using geographic quarantine compared to 4076 h using close contact quarantine. In the US military population deployed to Africa for COVID-19, quarantining based on geographic movement is an order of magnitude more costly in terms of time for each contained infection than quarantining based on close contact with infected individuals. There is not a statistical difference between East and West Africa. The associated costs of quarantine must be carefully weighed against the risk of disease spread.

#### Publication Type

Journal article.

<103>

#### Accession Number

20210028398

#### Author

Guo YuQi; Qin WeiDi; Wang ZhiYu; Yang Fan

#### Title

Factors influencing social distancing to prevent the community spread of COVID-19 among Chinese adults.

#### Source

Preventive Medicine; 2021. 143. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

The global outbreak of the coronavirus disease 2019 (COVID-19) in 2020 has been an international public health threat. Early strong social distancing efforts is needed to stop transmission of the virus. The purpose of the present study is to identify individual and environmental factors related to individuals' compliance with the recommended social distancing, as well as the moderating role of social media in influencing



individuals' implementation of social distancing. A total of 2130 Chinese adults were surveyed in March 2020 during the COVID-19 pandemic. Logistic regression analyses were performed to ascertain the predictors of social distancing. Overall, the majority of respondents (95.6%) reported compliance with social distancing. Women were more likely to practice social distancing compared to men (odds ratio [OR] = 3.12, 95% confidence interval [CI] = 1.93-5.02). Psychological distress, depressive symptoms, and social media were significant predictors of social distancing after controlling for other individual and environmental factors. Social media moderated the effects of psychological distress on social distancing (OR = 0.96, 95% CI = 0.94-0.99). Findings from the study indicates that mental health status and social media are influential factors of social distancing, which have significant implications in enhancing the effectiveness of prevention strategies to contain the spread of COVID-19.

#### Publication Type

Journal article.

<104>

#### Accession Number

20210028397

#### Author

Wang HsingChun [Wang, H. C. V.]; Pagan, J. A.

#### Title

Views on the need to implement restriction policies to be able to address COVID-19 in the United States.

#### Source

Preventive Medicine; 2021. 143. 21 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

Several restriction policies implemented in many states in the United States have demonstrated their effectiveness in mitigating the spread of the coronavirus disease (COVID-19), but less is known about the differences in views on the restriction policies among different population segments. This study aimed to understand which different population groups of adults in the United States consider several key restriction policies as necessary to combat COVID-19. Survey data from Wave 64 (March 19-24, 2020) of the Pew Research Center's American Trends Panel (n=10,609) and logistic regression were used to evaluate the association between socioeconomic and demographic characteristics, employment status, political party affiliation, news exposure, census region, and opinions about COVID-19 restriction policies. The policies

included restricting international travel, imposing business closures, banning large group gatherings, cancelling entertainment events, closing schools, limiting restaurants to carry-out only, and postponing state primary elections. Most survey respondents viewed COVID-19 restriction policies as necessary. Views on each restriction policy varied substantially across some population segments such as age, race, and ethnicity. Regardless of population segments, those who followed news closely or considered themselves Democrat/lean Democrat were more likely to consider all the policies as necessary than those not following the news closely or those who considered themselves Republican/lean Republican. The effectiveness of key COVID-19 restriction policies is likely to vary substantially across population groups given that views on the need to implement these policies vary widely. Tailored health messages may be needed for some population segments given divergent views on COVID-19 restriction policies.

#### Publication Type

Journal article.

<105>

#### Accession Number

20210028386

#### Author

Calderon-Anyosa, R. J. C.; Kaufman, J. S.

#### Title

Impact of COVID-19 lockdown policy on homicide, suicide, and motor vehicle deaths in Peru.

#### Source

Preventive Medicine; 2021. 143. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

Although lockdown measures to stop COVID-19 have direct effects on disease transmission, their impact on violent and accidental deaths remains unknown. Our study aims to assess the early impact of COVID-19 lockdown on violent and accidental deaths in Peru. Based on data from the Peruvian National Death Information System, an interrupted time series analysis was performed to assess the immediate impact and change in the trend of COVID-19 lockdown on external causes of death including homicide, suicide, and traffic accidents. The analysis was stratified by sex and the time unit was every 15 days. All forms of deaths examined presented a sudden drop after the lockdown. The biggest drop was in deaths related to traffic accidents, with a reduction of 12.22 deaths per million men per month (95% CI: -14.45, -9.98) and 3.55

deaths per million women per month (95% CI:-4.81, -2.30). Homicide and suicide presented similar level drop in women, while the homicide reduction was 2.5 the size of the suicide reduction in men. The slope in homicide in men during the lock-down period increased by 6.66 deaths per million men per year (95% CI:3.18, 10.15). External deaths presented a sudden drop after the lockdown was implemented and an increase in homicide in men was observed. Falls in mobility have a natural impact on traffic accidents, however, the patterns for suicide and homicide are less intuitive and reveal important characteristics of these events, although we expect all of these changes to be transient.

#### Publication Type

Journal article.

<106>

#### Accession Number

20210028310

#### Author

Miyaoka, Y.; Kabir, M. H.; Hasan, M. A.; Yamaguchi, M.; Shoham, D.; Murakami, H.; Takehara, K.

#### Title

Establishment and utilization of an evaluation system for virucidal activity of disinfectants against a coronavirus with apparent applicability to SARS-CoV-2.

#### Source

Journal of Veterinary Medical Science; 2021. 83(1):48-52. 23 ref.

#### Publisher

Japanese Society of Veterinary Science

#### Location of Publisher

Tokyo

#### Country of Publication

Japan

#### Abstract

Decontamination of pathogens on surfaces of substances is very important for controlling infectious diseases. In the present experiments, we tested various disinfectants in aqueous phase as well as on plastic surface carrying a viral inoculum, through dropping and wiping decontamination techniques, comparatively, so as to evaluate virucidal efficacies of those disinfectants toward an avian coronavirus (infectious bronchitis virus: IBV). We regard this evaluation system applicable to SARS-CoV-2. The disinfectants evaluated were 0.17% food additive grade calcium hydroxide (FdCa(OH)<sub>2</sub>) solution, sodium hypochlorite at 500 or 1,000 ppm of total chlorine (NaClO-500 or NaClO-1,000, respectively), NaClO at 500 ppm of total chlorine in 0.17% FdCa(OH)<sub>2</sub> (Mix-500) and quaternary ammonium compound (QAC) diluted 500-fold in water (QAC-500). In the suspension test, all solutions inactivated IBV inoculum that contained 5% fetal bovine serum (FBS) under detectable level within 30 sec. In the carrier test, all solutions, except

NaClO-500, could inactivate IBV with 0.5% FBS on a carrier to undetectable level in the wiping-sheets and wiped-carriers. We thus conclude that suspension and carrier tests should be introduced to evaluate disinfectants for the field usage, and that this evaluation system is important and workable for resultful selection of the tested disinfectants against avian coronavirus and SARS-CoV-2 on surfaces, particularly on plastic fomite.

#### Publication Type

Journal article.

<107>

#### Accession Number

20210028225

#### Author

Rajter, J. C.; Sherman, M. S.; Fatteh, N.; Vogel, F.; Sacks, J.; Rajter, J. J.

#### Title

Use of ivermectin is associated with lower mortality in hospitalized patients with coronavirus disease 2019: the ivermectin in COVID nineteen study.

#### Source

Chest; 2021. 159(1):85-92. 11 ref.

#### Publisher

American College of Chest Physicians

#### Location of Publisher

Northbrook

#### Country of Publication

USA

#### Abstract

Background: Ivermectin was shown to inhibit severe acute respiratory syndrome coronavirus 2 replication in vitro, which has led to off-label use, but clinical efficacy has not been described previously. Research Question: Does ivermectin benefit hospitalized coronavirus disease 2019 (COVID-19) patients? Study Design and Methods: Charts of consecutive patients hospitalized at four Broward Health hospitals in Florida with confirmed COVID-19 between March 15 and May 11, 2020, treated with or without ivermectin were reviewed. Hospital ivermectin dosing guidelines were provided, but treatment decisions were at the treating physician's discretion. The primary outcome was all-cause in-hospital mortality. Secondary outcomes included mortality in patients with severe pulmonary involvement, extubation rates for mechanically ventilated patients, and length of stay. Severe pulmonary involvement was defined as need for Fio2 50%, noninvasive ventilation, or invasive ventilation at study entry. Logistic regression and propensity score matching were used to adjust for confounders. Results: Two hundred eighty patients, 173 treated with ivermectin and 107 without ivermectin, were reviewed. Most patients in both groups also

received hydroxychloroquine, azithromycin, or both. Univariate analysis showed lower mortality in the ivermectin group (15.0% vs 25.2%; OR, 0.52; 95% CI, 0.29-0.96; P = .03). Mortality also was lower among ivermectin-treated patients with severe pulmonary involvement (38.8% vs 80.7%; OR, 0.15; 95% CI, 0.05-0.47; P = .001). No significant differences were found in extubation rates (36.1% vs 15.4%; OR, 3.11; 95% CI, 0.88-11.00; P = .07) or length of stay. After multivariate adjustment for confounders and mortality risks, the mortality difference remained significant (OR, 0.27; 95% CI, 0.09-0.80; P = .03). One hundred ninety-six patients were included in the propensity-matched cohort. Mortality was significantly lower in the ivermectin group (13.3% vs 24.5%; OR, 0.47; 95% CI, 0.22-0.99; P < .05), an 11.2% (95% CI, 0.38%-22.1%) absolute risk reduction, with a number needed to treat of 8.9 (95% CI, 4.5-263). Interpretation: Ivermectin treatment was associated with lower mortality during treatment of COVID-19, especially in patients with severe pulmonary involvement. Randomized controlled trials are needed to confirm these findings.

#### Publication Type

Journal article.

<108>

#### Accession Number

20210028224

#### Author

Hariri, L. P.; North, C. M.; Shih, A. R.; Hardin, C. C.; Stone, J. R.; Mino-Kenudson, M.

#### Title

Lung histopathology in coronavirus disease 2019 as compared with severe acute respiratory syndrome and H1N1 influenza: a systematic review.

#### Source

Chest; 2020. 159(1):73-84. 78 ref.

#### Publisher

American College of Chest Physicians

#### Location of Publisher

Northbrook

#### Country of Publication

USA

#### Abstract

**Background:** Patients with severe coronavirus disease 2019 (COVID-19) have respiratory failure with hypoxemia and acute bilateral pulmonary infiltrates, consistent with ARDS. Respiratory failure in COVID-19 might represent a novel pathologic entity. **Research Question:** How does the lung histopathology described in COVID-19 compare with the lung histopathology described in SARS and H1N1 influenza? **Study Design and Methods:** We conducted a systematic review to characterize the lung histopathologic features of COVID-19 and compare them against findings of other recent viral pandemics, H1N1 influenza and SARS.

We systematically searched MEDLINE and PubMed for studies published up to June 24, 2020, using search terms for COVID-19, H1N1 influenza, and SARS with keywords for pathology, biopsy, and autopsy. Using PRISMA-Individual Participant Data guidelines, our systematic review analysis included 26 articles representing 171 COVID-19 patients; 20 articles representing 287 H1N1 patients; and eight articles representing 64 SARS patients. Results: In COVID-19, acute-phase diffuse alveolar damage (DAD) was reported in 88% of patients, which was similar to the proportion of cases with DAD in both H1N1 (90%) and SARS (98%). Pulmonary microthrombi were reported in 57% of COVID-19 and 58% of SARS patients, as compared with 24% of H1N1 influenza patients. Interpretation: DAD, the histologic correlate of ARDS, is the predominant histopathologic pattern identified in lung pathology from patients with COVID-19, H1N1 influenza, and SARS. Microthrombi were reported more frequently in both patients with COVID-19 and SARS as compared with H1N1 influenza. Future work is needed to validate this histopathologic finding and, if confirmed, elucidate the mechanistic underpinnings and characterize any associations with clinically important outcomes.

#### Publication Type

Journal article.

<109>

#### Accession Number

20210028206

#### Author

Raheel Yasin; Junaimah Jauhar; Noor Fareen, A. R.; Namoco, S.; Mohammad Saleh, E. B.

#### Title

COVID-19 and religious tourism: an overview of impacts and implications. (Special Issue: The impact of COVID-19 on religious tourism and pilgrimage.)

#### Source

International Journal of Religious Tourism and Pilgrimage; 2020. 8(7):155-162. many ref.

#### Publisher

Dublin Institute of Technology

#### Location of Publisher

Dublin

#### Country of Publication

Irish Republic

#### Abstract

Tourism and its allied industries (airline and hospitality) have been hit hard by the Novel Coronavirus (COVID-19) globally. This paper specifically explores the effects of the COVID-19 outbreak on religious tourism and aims to enhance the literature; it also aims to provide a path for future research work, in particular empirical research or future research that covers the effects of this pandemic on destinations.

This paper is built on the fusion of news published by different news agencies to support an overview of related literature on religious tourism and tourism management. This paper confirms that COVID-19 has affected religious travellers worldwide. The rapid spread of the virus and international travel restrictions by many countries are important factors. To drive future tourism activities, new forms of tourism like smart tourism need to be introduced. These changes will force businesses to reevaluate service design and distribution channels. Industry professionals and policymakers should concentrate on tailoring travel plans to the experiences of tourists. The recommendations can help to relieve outbreak-related tension, deliver newly elevated experiences to tourists, and partially mitigate the impact of COVID-19 on the religious tourism industry. These recommendations can also apply to the global tourism industry more broadly. Tourism scholars and practitioners should give proper consideration to this tragedy and how it might inform industry and social practices. This and other public health crises provide sterling opportunities for the industry to observe its effects on the environment, climate, and travellers themselves in a holistic way. This paper probably represents a frontier review, analysing critically the likely effects of COVID-19 on religious tourism practices in the coming future. Along with this it also represents the effect of COVID-19 on other industries e.g. hotel and airline, which are the supporting hand of the tourism industry.

#### Publication Type

Journal article.

<110>

#### Accession Number

20210028200

#### Author

Zammit, V.

#### Title

The effects of COVID-19 on religious activity in Malta. (Special Issue: The impact of COVID-19 on religious tourism and pilgrimage.)

#### Source

International Journal of Religious Tourism and Pilgrimage; 2020. 8(7):85-92. 15 ref.

#### Publisher

Dublin Institute of Technology

#### Location of Publisher

Dublin

#### Country of Publication

Irish Republic

#### Abstract

The unexpected COVID-19 pandemic that struck the world has negatively affected all kinds of everyday activities. Besides the effects that this pandemic has had on the economy, social life and political scene, it

has affected religion in various ways. The effects on religion are manifold. The immediate regulations issued by the local government for social distancing, the prohibition of mass gatherings, and the closure of all religious places has disrupted all aspects of everyday religious life. Meanwhile, tourism has suffered immensely, and this has also negatively impacted the international aspect of religious tourism. The negative impact on religion is wide ranging - from all churches being closed, all religious services being suspended, to no baptisms, holy communion or confirmation, weddings or funerals being held. The drastic decision of suspending all popular parish feasts this year has also been taken. The disruption that has come, practically unexpectedly, to the communities has led to innovative activities being organised by individuals, street communities and even the church itself. In this paper I aim to look at some of the changes that have affected Malta and its local communities regarding religious aspects due to the COVID-19 pandemic.

#### Publication Type

Journal article.

<111>

#### Accession Number

20210028186

#### Author

Warsi, M. K.; Kamal, M. A.; Baeshen, M. N.; Izhari, M. A.; Ahmad Firoz; Mohammad Mobashir

#### Title

Comparative study of gene expression profiling unravels functions associated with pathogenesis of dengue infection. (Special Issue: Viral diseases and natural products: prospects in COVID-19 treatment (part-I).)

#### Source

Current Pharmaceutical Design; 2020. 26(41):5293-5299.

#### Publisher

Bentham Science Publishers

#### Location of Publisher

Sharjah

#### Country of Publication

United Arab Emirates

#### Abstract

Background: Dengue virus is a potential source of propagating dengue hemorrhagic fever. This virus leads to dengue hemorrhagic fever/dengue shock syndrome, benign syndrome, and severe syndrome and due to its infection, there occurs alterations at multiple levels such as gene expression and pathway levels. So, it is critical to understand the pathogenesis of dengue infection in terms of gene expression and the associated functions. Methods: For this purpose, here, we have analyzed the temporal gene expression profiling for the dengue hemorrhagic fever dataset at 12, 24, and 48 hours. Results: The outcome appears that the dengue hemorrhagic fever evolves differently at different time periods or stages. Conclusion: The change in



the gene expression pattern increases exponentially from 12 hours to 48 hours and the number of altered functions (pathways) also increases. Wnt, apoptosis, and transcription signaling are among the critical pathways which are dominantly altered. In the initial phase (first 12 hours), only two pathways are altered due to dengue infection, while in the next 12 hours, eight pathways are altered, and finally, in the next 24 hours, 11 pathways are altered and most of these 11 pathways are very critical in terms of biological pathways and functions.

#### Publication Type

Journal article.

<112>

#### Accession Number

20210028185

#### Author

Sohrab, S. S.; Suhail, M.; Kamal, M. A.; Ahmad, F.; Azhar, E. I.

#### Title

The emergence of human pathogenic coronaviruses: lectins as antivirals for SARS-CoV-2. (Special Issue: Viral diseases and natural products: prospects in COVID-19 treatment (part-I).)

#### Source

Current Pharmaceutical Design; 2020. 26(41):5286-5292.

#### Publisher

Bentham Science Publishers

#### Location of Publisher

Sharjah

#### Country of Publication

United Arab Emirates

#### Abstract

Background: Human coronaviruses (HCoV) are common viruses and known to be associated with respiratory diseases, including pneumonia. Currently, seven human coronaviruses have been identified and known to cause upper and lower respiratory infections as well as nosocomial viral infections in humans. The bats, palm civets, and camels are identified as the reservoir of human coronaviruses. In 2002-2003, the emergence of SARS-CoV resulted in an outbreak and led towards the more awareness and importance of scientific research and medical urgency. Methods: The recently identified SARS-CoV-2 was identified from the seafood market of the city Wuhan, China, in December 2019 and caused a global pandemic. This virus has now spread to more than 213 countries. This is the third highly pathogenic human coronavirus after SARS and MERS-CoV. The coronaviruses have RNA as genetic material and are known to have frequent recombination and mutations in their genome, which lead to the emergence and re-emergence of new virus strains and isolates with novel properties and extended hosts. The genetic mutations and suitable

environmental conditions result in the emergence and re-emergence of pathogenic coronaviruses and cause a serious issue to human health and the economy globally. Lectins are the ubiquitous group of proteins that bind to glycosylated molecules. Conclusion: The plant lectins are known to have significant antiviral activities against coronaviruses. Additionally, the plant lectins can be used as potential therapeutics against bacteria, fungus, yeast, and protozoa. In this review, we have discussed the current status of human pathogenic coronavirus emergence and the use of plant lectins as antivirals against SARS-CoV-2.

#### Publication Type

Journal article.

<113>

#### Accession Number

20210028184

#### Author

Pamuru, R. R.; Naveen Ponneri; Damu, A. G.; Ramakrishna Vadde

#### Title

Targeting natural products for the treatment of COVID-19 - an updated review. (Special Issue: Viral diseases and natural products: prospects in COVID-19 treatment (part-I).)

#### Source

Current Pharmaceutical Design; 2020. 26(41):5278-5285.

#### Publisher

Bentham Science Publishers

#### Location of Publisher

Sharjah

#### Country of Publication

United Arab Emirates

#### Abstract

Background: Coronavirus disease 2019 (COVID-19) is an ongoing, rapidly spreading pandemic caused by Severe Acute Respiratory Syndrome Coronavirus2 (SARS-CoV2). Among all the infected countries around the globe as of now (June 15, 2020), the total confirmed positive cases reported are 7,805,148, with the death of 431,192. At present, no specialized treatments evolved to cure COVID-19. Its treatment is symptomatic. Though huge efforts are being made to produce potential therapies to scuffle COVID-19, no drug has been discovered so far. Background: Natural products have been playing a significant role in disease control since ancient days. These products serve as templates for designing new anti-microbial agents with a different mechanism of action and also open a door for investigation of effective anti-viral drugs to combat COVID-19. By focusing on this, the authors have narrated the basic structure, infection, and pathogenesis of SARS-CoV2 virus in humans and also reported various natural products or plant-based

extracts/bioactive compounds tested against coronaviruses like SARS and MERS, as these viruses are structurally similar to SARS-CoV2 and can be used in designing novel drug against this virus. Conclusion: The natural products having the potential to combat SARS, MERS, and other viruses reviewed in this review article might have anti-viral activities against the SARS-CoV2 virus and can be used directly for further preclinical studies. Therefore, all efforts should be focused on overcoming this serious problem to save many people's lives all over the world.

#### Publication Type

Journal article.

<114>

#### Accession Number

20210028183

#### Author

Wilkin, P. J.; Al-Yozbaki, M.; George, A.; Gupta, G. K.; Wilson, C. M.

#### Title

The undiscovered potential of essential oils for treating SARS-CoV-2 (COVID-19). (Special Issue: Viral diseases and natural products: prospects in COVID-19 treatment (part-I).)

#### Source

Current Pharmaceutical Design; 2020. 26(41):5261-5277.

#### Publisher

Bentham Science Publishers

#### Location of Publisher

Sharjah

#### Country of Publication

United Arab Emirates

#### Abstract

On 11th March 2020, the World Health Organisation (WHO) announced a pandemic caused by a novel beta-coronavirus SARS-CoV-2, designated COVID-19. The virus emerged in December 2019 in Wuhan, China, has spread across the world as a global pandemic. The traditional use of medicines from plants can be traced back to 60,000 years. Global interest in the development of drugs from natural products has increased greatly during the last few decades. Essential oils (EOs) have been studied through the centuries and are known to possess various pharmaceutical properties. In the present review, we have highlighted the current biology, epidemiology, various clinical aspects, different diagnostic techniques, clinical symptoms, and management of COVID-19. An overview of the antiviral action of EOs, along with their proposed mechanism of action and in silico studies conducted, is described. The reported studies of EOs' antiviral activity highlight the baseline data about the additive and/or synergistic effects among primary or secondary phytoconstituents found in individual oils, combinations or blends of oils and between EOs and

antiviral drugs. It is hoped that further research will provide better insights into EOs' potential to limit viral infection and aid in providing solutions through natural, therapeutically active agents.

Publication Type

Journal article.

<115>

Accession Number

20210028036

Author

Farkhad, B. F.; Albarracin, D.

Title

Insights on the implications of COVID-19 mitigation measures for mental health.

Source

Economics and Human Biology; 2021. 40.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Given the unprecedented level and duration of mitigation policies during the 2020 COVID-19 pandemic, it is not surprising that the public and the media have raised important questions about the potential for negative mental health consequences of the measures. To answer them, natural variability in policy implementation across US states and over time was analyzed to determine if mitigation policies correlated with Google searches for terms associated with symptoms of depression and anxiety. Findings indicated that restaurant/bar limits and stay-at-home orders correlated with immediate increases in searches for isolation and worry but the effects tapered off two to four weeks after their respective peaks. Moreover, the policies correlated with a reduction in searches for antidepressants and suicide, thus revealing no evidence of increases in severe symptomatology. The policy implications of these findings are discussed.

Publication Type

Journal article.

<116>

Accession Number

20210027933

Author

Narison, S.; Maltezos, S.

Title

Scrutinizing the spread of COVID-19 in Madagascar.

Source

Infection, Genetics and Evolution; 2021. 87.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

We scrutinize the evolution of COVID-19 in Madagascar by comparing results from three approaches (cubic polynomial, semi-gaussian and gaussian-like models) which we use to provide an analytical form of the spread of the pandemic. In so doing, we introduce (for the first time) the ratio  $R_I/T_{c,d}$  of the cumulative and daily numbers of infected persons over the corresponding one of tests which are expected to be less sensitive to the number of the tests because the credibility of the results based only on the absolute numbers often raises some criticisms. We also give and compare the effective reproduction number  $R_{eff}$  from different approaches and with the ones of some European countries with a small number of population (Greece, Switzerland) and some other African countries. Finally, we show and comment the evolution of the total number of deaths and of the per cent number of cured persons and discuss the performance of the medical care.

Publication Type

Journal article.

<117>

Accession Number

20210027932

Author

Rasel Ahmed; Rajnee Hasan; Siddiki, A. M. A. M. Z.; Md. Shahidul Islam

Title

Host range projection of SARS-CoV-2: south Asia perspective.

Source

Infection, Genetics and Evolution; 2021. 87. 34 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the causing agent of Coronavirus Disease-2019 (COVID-19), is likely to be originated from bat and transmitted through intermediate hosts. However, the immediate source species of SARS-CoV-2 have not yet been confirmed. Here, we used diversity analysis of the angiotensin I converting enzyme 2 (ACE2) that serves as cellular receptor for SARS-CoV-2 and transmembrane protease serine 2 (TMPRSS2), which has been proved to be utilized by SARS-CoV-2 for spike protein priming. We also simulated the structure of receptor-binding domain of SARS-CoV-2 spike protein (SARS-CoV-2S RBD) with the ACE2s to investigate their binding affinity to determine the potential intermediate animal hosts that could spread the SARS-CoV-2 to humans in South Asia. We identified cow, buffalo, goat and sheep, which are predominant species in the household farming system in South Asia that can potentially be infected by SARS-CoV-2. All the bird species studied along with rat and mouse were considered less potential to interact with SARS-CoV-2. The interaction interfaces of SARS-CoV-2S RBD and ACE2 protein complex suggests pangolin as a potential intermediate host in SARS-CoV-2. Our results provide a valuable resource for the identification of potential hosts for SARS-CoV-2 in South Asia and henceforth reduce the opportunity for a future outbreak of COVID-19.

Publication Type

Journal article.

<118>

Accession Number

20210027696

Author

Ip, A.; Ahn, J.; Zhou YiZhao; Goy, A. H.; Hansen, E.; Pecora, A. L.; Sinclair, B. A.; Bednarz, U.; Marafelias, M.; Sawczuk, I. S.; Iii, J. P. U.; Walker, D. M.; Prasad, R.; Sweeney, R. L.; Ponce, M. G.; Capra, S. Ia; Cunningham, F. J.; Calise, A. G.; Pulver, B. L.; Ruocco, D.; Mojares, G. E.; Eagan, M. P.; Ziontz, K. L.; Mastrokyriakos, P.; Goldberg, S. L.

#### Title

Hydroxychloroquine in the treatment of outpatients with mildly symptomatic COVID-19: a multi-center observational study.

#### Source

BMC Infectious Diseases; 2021. 21(72). 38 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** Hydroxychloroquine has not been associated with improved survival among hospitalized COVID-19 patients in the majority of observational studies and similarly was not identified as an effective prophylaxis following exposure in a prospective randomized trial. We aimed to explore the role of hydroxychloroquine therapy in mildly symptomatic patients diagnosed in the outpatient setting. **Methods:** We examined the association between outpatient hydroxychloroquine exposure and the subsequent progression of disease among mildly symptomatic non-hospitalized patients with documented SARS-CoV-2 infection. The primary outcome assessed was requirement of hospitalization. Data was obtained from a retrospective review of electronic health records within a New Jersey USA multi-hospital network. We compared outcomes in patients who received hydroxychloroquine with those who did not applying a multivariable logistic model with propensity matching. **Results:** Among 1274 outpatients with documented SARS-CoV-2 infection 7.6% were prescribed hydroxychloroquine. In a 1067 patient propensity matched cohort, 21.6% with outpatient exposure to hydroxychloroquine were hospitalized, and 31.4% without exposure were hospitalized. In the primary multivariable logistic regression analysis with propensity matching there was an association between exposure to hydroxychloroquine and a decreased rate of hospitalization from COVID-19 (OR 0.53; 95% CI, 0.29, 0.95). Sensitivity analyses revealed similar associations. QTc prolongation events occurred in 2% of patients prescribed hydroxychloroquine with no reported arrhythmia events among those with data available. **Conclusions:** In this retrospective observational study of SARS-CoV-2 infected non-hospitalized patients hydroxychloroquine exposure was associated with a decreased rate of subsequent hospitalization. Additional exploration of hydroxychloroquine in this mildly symptomatic outpatient population is warranted.

#### Publication Type

Journal article.

<119>

Accession Number

20210027573

Author

Kato, F.; Matsuyama, S.; Kawase, M.; Hishiki, T.; Katoh, H.; Takeda, M.

Title

Antiviral activities of mycophenolic acid and IMD-0354 against SARS-CoV-2.

Source

Microbiology and Immunology; 2020. 64(9):635-639. 20 ref.

Publisher

Wiley

Location of Publisher

Tokyo

Country of Publication

Japan

Abstract

In this study, the anti-severe acute respiratory syndrome coronavirus-2 (anti-SARS-CoV-2) activity of mycophenolic acid (MPA) and IMD-0354 was analyzed. These compounds were chosen based on their antiviral activities against other coronaviruses. Because they also inhibit dengue virus (DENV) infection, other anti-DENV compounds/drugs were also assessed. On SARS-CoV-2-infected VeroE6/TMPRSS2 monolayers, both MPA and IMD-0354, but not other anti-DENV compounds/drugs, showed significant anti-SARS-CoV-2 activity. Although MPA reduced the viral RNA level by only approximately 100-fold, its half maximal effective concentration was as low as 0.87 micro m, which is easily achievable at therapeutic doses of mycophenolate mofetil. MPA targets the coronaviral papain-like protease and an in-depth study on its mechanism of action would be useful in the development of novel anti-SARS-CoV-2 drugs.

Publication Type

Journal article.

<120>

Accession Number

20210027506

Author

Fong, R.; Tsai ChunFung; Yiu OiYan

Title



The implementation of telepractice in speech language pathology in Hong Kong during the COVID-19 pandemic.

Source

Telemedicine and e-health; 2021. 27(1):30-38. 28 ref.

Publisher

Mary Ann Liebert, Inc.

Location of Publisher

New Rochelle

Country of Publication

USA

Abstract

**Introduction:** The aim of this study was to investigate the accelerated emergence of telepractice in speech language pathology during the coronavirus disease 2019 (COVID-19) pandemic in Hong Kong-a small city with limited accessibility concern that telepractice has not been widely implemented. **Method:** An online survey of speech therapists in Hong Kong was conducted between February and March in 2020. The survey comprised up to 15 questions to assess participants' demographics, existing service delivery in telepractice, perception, and their training and knowledge on telepractice. **Results:** One hundred thirty-five speech (n = 135) speech language pathologists responded to the survey. About one-third (34.8%; n = 47) of participants reported having provided services through telepractice, whereas 72.3% of them started in < 3 months and half of them considered it was less effective than face-to-face service. Among the other participants (n = 88), 83% of them indicated that unsuitable patient type and age as the main reason for not providing telepractice. The majority of participants had no prior training for delivering telepractice, and focused on technology when asked about their desired training. Knowledge of participants on telepractice was found only to align fairly with international guidelines. **Discussions:** The survey findings suggested that telepractice provision in Hong Kong was different from that of other countries where telepractice has been well established, due to the accelerated emergence by the COVID-19 pandemic. **Conclusions:** The study showed how the development of telepractice would be like in a short time frame, and findings on perception and desired training could be a reference for a better establishment of this model of service.

Publication Type

Journal article.

<121>

Accession Number

20210027335

Author

Tang XiaoYan; Liu RenQiang; Shan Dan; Pan Dan; Wang XiJun; Ge JinYing; Wen ZhiYuan; Bu ZhiGao

Title

Construction and immunogenicity evaluation of a recombinant newcastle disease virus expressing SARS-CoV spike protein. [Chinese]

Source

Zhongguo Yufang Shouyi Xuebao / Chinese Journal of Preventive Veterinary Medicine; 2020. 42(11):1145-1151. 20 ref.

Publisher

Chinese Journal of Preventive Veterinary Medicine

Location of Publisher

Harbin

Country of Publication

China

Abstract

Severe Acute Respiratory Syndrome (SARS) is a zoonotic disease that is acute, feverish and accompanied by respiratory system and even multiple organ infections. Although no SARS infection cases have been reported since 2004, the outbreak of new coronavirus pneumonia (COVID-19) in Wuhan, Hubei Province, my country in December 2019 indicates that SARS coronavirus (SARS-CoV) or SARS-like coronavirus (SARSL-CoV) is highly likely to become widespread in the population again. In this study, a full-length cDNA clone pBRN-FL-SARS-CoV-S expressing the SARS-CoV spike protein (S protein) was first constructed, and the Newcastle Disease Virus (NDV) LaSota vaccine strain reverse genetic operating system was used to rescue The recombinant virus rLa-SARS-CoV-S expressing SARS-CoV S protein was identified. After rLa-SARS-CoV-S was infected with BHK-21 cells at a dose of MOI 0.01 for 36 hours, the SARS-CoV S protein was detected by western blot and laser confocal test. The results showed that the S protein was correct in the infected cells. Expressed and accurately located on the cell membrane. After inoculating 10-day-old SPF chicken embryos with rLa-SARS-CoV-S at a dose of  $1 \times 10^4$  EID<sub>50</sub>, allantoic fluid was collected at different time points and the EID<sub>50</sub> was determined. The growth kinetic curve of the virus showed that rLa-SARSCoV-S could The chicken embryo grows at high titer, consistent with the parental virus. Dilute the rLa-SARS-CoV-S and parent virus by 10-fold ratio and inoculate 10-day-old SPF chicken embryos and record the death time of each chicken embryo. Calculate the average chicken embryo death time according to the highest dilution of the virus. Lethal time (MDT), the results showed that the MDT of rLa-SARS-CoV-S was 112.8 h and the MDT of NDV LaSota was 96 h, indicating that the recombinant virus still maintains the low pathogenicity characteristics of the NDV LaSota vaccine strain. RLa-SARS-CoV-S and NDV LaSota were injected intramuscularly with 6-week-old BALB/c mice at a dose of  $5 \times 10^6$  EID<sub>50</sub> and boosted on the 21st day. At the same time, a PBS control group was set up. The results of the mouse safety test showed that all the mice vaccinated with rLa-SARS-CoV-S survived without any clinical symptoms, and the weight gain was consistent with that of the NDV LaSota group and the control group; the mice were treated on 21 d and 42 d after immunization Blood was collected to prepare serum, and the level of IgG antibodies against SARS-CoV S protein in mice was detected by ELISA. The results showed that the recombinant protein can induce mice to produce higher levels of specific IgG antibodies after initial immunization and booster immunization. The level can be maintained for a longer period of time. The results of this study indicate that rLa-SARS-CoV-S has potential value as a SARS-CoV vaccine candidate, and at the same time provides ideas for the development of SARS-CoV-2 vaccines.

Publication Type

Journal article.

<122>

Accession Number

20210027112

Author

Sousa, A. F. L. de; Queiroz, A. A. F. L. N.; Lima, S. V. M. A.; Almeida, P. D.; Oliveira, L. B. de; Chone, J. S.; Araujo, T. M. E.; Brignol, S. M. S.; Sousa, A. R. de; Mendes, I. A. C.; Dias, S.; Fronteira, I.

Title

Chemsex practice among men who have sex with men (MSM) during social isolation from COVID-19: multicentric online survey.

Source

Cadernos de Saude Publica; 2020. 36(12). 31 ref.

Publisher

Escola Nacional de Saude Publica

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

The aim of this study was to investigate factors associated with sex practice under the effect of drugs (chemsex) among men who have sex with men (MSM) during the period of social isolation in the context of the COVID-19 pandemic. A multicenter online survey was applied to Brazil and Portugal in April 2020 when the two countries were under restrictive health measures due to the pandemic. Participants were recruited with an adaptation of the respondent driven sampling (RDS) method in the online environment. Data were collected using social networks and dating apps for MSM. We used bivariate and multivariate logistic regression to produce crude (OR) and adjusted odds ratios (aOR). In a universe of 2,361 subjects, 920 (38.9%) reported engaging in chemsex practice, which involved casual partners in 95% of the cases. Higher OR of engaging in chemsex were associated with Brazil (aOR = 15.4; 95%CI: 10.7-22.1), not being in social isolation (aOR = 4.9; 95%CI: 2.2-10.9), engaging in casual sex during social distancing (aOR = 52.4; 95%CI: 33.8-81.4), group sex (aOR = 2.9; 95%CI: 2.0-4.4), not presenting any symptom of COVID-19 (aOR = 1.3; 95%CI: 1.1-1.8), not living with the sex partner (aOR = 1.8; 95%CI: 1.2-2.6), and using pre-exposure prophylaxis (aOR = 2.6; 95%CI: 1.8-3.7). The occurrence of chemsex was high, especially in Brazil, where the proposed social distancing did not gain adherence by MSM.

Publication Type

Journal article.

<123>

Accession Number

20210027109

Author

Albuquerque, M. V. de; Ribeiro, L. H. L.

Title

Inequality, geographic situation, and meanings of action in the COVID-19 pandemic in Brazil.

Source

Cadernos de Saude Publica; 2020. 36(12). 81 ref.

Publisher

Escola Nacional de Saude Publica

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

This Essay reflects on how socio-spatial inequalities and geographic situations condition the COVID-19 pandemic in Brazil, as well as actions to deal with the pandemic, with arguments backed by the literature. Socio-spatial inequality is defined as a process and structural condition of a territory marked by inherited and updated vulnerabilities, resulting from a relationship of exploitation, spoliation, and oppression in the current period of globalization. The authors argue that the COVID-19 pandemic can have more serious repercussions in contexts of greater socio-spatial inequality, with systemic and chronic deepening of the economic and social crises in places. Still, actions matter, including collaboration between different groups, institutions, and sectors. The analysis of geographic situation contributes to understanding the inherited territory and different experiences with COVID-19, inextricably linked to the conditions and meanings of action in the face of the pandemic in each place. Geographic situation expresses the tension between freedom and the condition for action. The crisis is not only a health crisis, but a manifestation of the current time, and inequality proves to be the most serious emergency of the 21st century.

Publication Type

Journal article.

<124>

Accession Number

20210027108

Author

Alvarenga, A. A.; Rocha, E. M. S.; Filippon, J.; Andrade, M. A. C.

Title

Challenges for the Brazilian State from the COVID-19 pandemic: the case of paradiplomacy in the state of Maranhao.

Source

Cadernos de Saude Publica; 2020. 36(12). 56 ref.

Publisher

Escola Nacional de Saude Publica

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

As the COVID-19 pandemic has spread worldwide in 2020, populations, authorities, and local and global health governance institutions have been affected differently. Global Health Diplomacy and "paradiplomacy" have become relevant instruments and arenas for the challenges raised by the pandemic, especially for non-State or subnational actors. This Essay analyzes the case of the Brazilian state of Maranhao during the pandemic, which used a "wartime operation" to purchase more than a hundred mechanical ventilators on the international market, over the Federal Government's head, at a moment of fierce international competition for medical supplies and equipment. The Essay examines the principal aspects, contexts, reasons, factors, actors, and actions that contextualize the operation conducted by the state of Maranhao as an activity in paradiplomacy and Global Health Diplomacy by a subnational government in Brazil. We analyzed these concepts in light of the literature on the topic and studied the action by Maranhao based on cross-analysis of data from documents, statements, and news coverage. We conclude that the case of Maranhao illustrates the capacity of subnational bodies to respond to global emergencies, mainly in contexts of inefficacy or absence of the Federal executive, legitimizing independent action aimed at saving lives.

Publication Type

Journal article.

<125>

Accession Number

20210027105

Author

Santos, K. O. B.; Fernandes, R. de C. P.; Almeida, M. M. C. de; Miranda, S. S.; Mise, Y. F.; Lima, M. A. G. de

Title

Labor, health and vulnerability in the COVID-19 pandemic.

Source

Cadernos de Saude Publica; 2020. 36(12). 51 ref.

Publisher

Escola Nacional de Saude Publica

Location of Publisher

Rio de Janeiro

Country of Publication

Brazil

Abstract

This essay discusses the repercussions of the COVID-19 pandemic on the relation between labor and health, from the perspective of the workers' risk and vulnerability. The pandemic has represented a humanitarian crisis, since both the disease and the measures to contain it lead to persistent socioeconomic effects. In this context, the labor category has an important role, either because of the feasibility of maintaining the social distancing and living conditions allowed by the employment relationship, or because of the impossibility of adopting protection strategies due to job insecurity. The essay was initially built on the basis of a literature review on the interface between COVID-19 and workers' health, carried out from December 2019 to April 2020, on the PubMed, BIREME, Cochrane Library, medRxiv and LitCovid bases, as well as using gray literature. Health professionals are more affected, but they also have greater access to diagnosis; however, data are still scarce on other professional categories, as well as on the social determinants that lead to greater labor-related vulnerability. In Brazil, the pandemic coincides with a situation in which workers accumulate significant losses of labor and social security rights, in addition to pre-existing social inequalities, such as precarious housing, with greater exposure and risk. Although the pandemic is still evolving, social inequalities are expected to intensify, with the deep retraction of the economy, and workers must be a priority target of attention in the control and spread of the disease, in addition to being the axis for planning public social and health protection policies.

Publication Type

Journal article.

<126>

Accession Number

20210027016

Author

Alsiri, N. F.; Alhadhoud, M. A.; Palmer, S.

Title

The impact of the COVID-19 on research.

Source

Journal of Clinical Epidemiology; 2021. 129:124-125.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Publication Type

Correspondence.

<127>

Accession Number

20210026996

Author

Crits-Christoph, A.; Kantor, R. S.; Olm, M. R.; Whitney, O. N.; Al-Shayeb, B.; Lou, Y. C.; Flamholz, A.; Kennedy, L. C.; Greenwald, H.; Hinkle, A.; Hetzel, J.; Spitzer, S.; Koble, J.; Tan, A.; Hyde, F.; Schroth, G.; Kuersten, S.; Banfield, J. F.; Nelson, K. L.

Title

Genome sequencing of sewage detects regionally prevalent SARS-CoV-2 variants.

Source

mBio; 2021. 12(1). 37 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

Viral genome sequencing has guided our understanding of the spread and extent of genetic diversity of SARS-CoV-2 during the COVID-19 pandemic. SARS-CoV-2 viral genomes are usually sequenced from

nasopharyngeal swabs of individual patients to track viral spread. Recently, RT-qPCR of municipal wastewater has been used to quantify the abundance of SARS-CoV-2 in several regions globally. However, metatranscriptomic sequencing of wastewater can be used to profile the viral genetic diversity across infected communities. Here, we sequenced RNA directly from sewage collected by municipal utility districts in the San Francisco Bay Area to generate complete and nearly complete SARS-CoV-2 genomes. The major consensus SARS-CoV-2 genotypes detected in the sewage were identical to clinical genomes from the region. Using a pipeline for single nucleotide variant calling in a metagenomic context, we characterized minor SARS-CoV-2 alleles in the wastewater and detected viral genotypes which were also found within clinical genomes throughout California. Observed wastewater variants were more similar to local California patient-derived genotypes than they were to those from other regions within the United States or globally. Additional variants detected in wastewater have only been identified in genomes from patients sampled outside California, indicating that wastewater sequencing can provide evidence for recent introductions of viral lineages before they are detected by local clinical sequencing. These results demonstrate that epidemiological surveillance through wastewater sequencing can aid in tracking exact viral strains in an epidemic context.

#### Publication Type

Journal article.

<128>

#### Accession Number

20210026777

#### Author

Bellanti, J. A.

#### Title

The role of the allergist/immunologist in the COVID-19 pandemic: a Janus-faced presentation.

#### Source

Allergy and Asthma Proceedings; 2020. 41(6):397-412. 42 ref.

#### Publisher

OceanSide Publications, Inc.

#### Location of Publisher

Providence

#### Country of Publication

USA

#### Abstract

Background: Following its initial description in December 2019 in Wuhan, China, coronavirus-2 (COVID-19) has rapidly progressed into a worldwide pandemic, affecting millions of lives. Although every specialty of medicine has been affected, the field of allergy/immunology holds a special place in the battle against this



modern-day plague. Because of the specialized training in allergy and clinical immunology, and the familiarity with comorbid contributing conditions, the allergist/immunologist is uniquely poised to play a major role both in the delivery of specialized therapeutic procedures and practices that can improve the health of patients with COVID-19 as well as in the use of forthcoming vaccines for the prevention of its spread. Background: The purpose of this report is to examine the current body of evidence supporting the two phases of infection and inflammation that influence the pathogenesis of COVID-19 and to provide a classification of COVID-19 disease presentations and potential therapeutic targets with which the allergist/immunologist has particular expertise. Methods: This article was based on a literature review of articles published in PubMed related to COVID-19 and the immune response, and the author's own research and clinical experiences in the field of immunology. Results: Currently, the management of COVID-19 disease is being directed by a preventive strategy based on social distancing, quarantine, and facemasks to reduce the spread of the virus. Numerous clinical trials are being initiated to identify effective treatments for COVID-19 and are directed toward treatment of the two phases of infection and inflammation that influence the pathogenesis of COVID-19. An important resource for the allergist/immunologist is the COVID-19 Treatment Guidelines Panel (COVID-19 TGP), a National Institutes of Health sponsored panel of U.S. physicians, statisticians, and other experts, which has developed a set of continuously updated treatment guidelines intended for clinicians caring for patients during the rapidly evolving COVID-19 pandemic. Conclusion: COVID-19 is unique among other infectious diseases because, in many cases, the host immune inflammatory response can cause greater harm to the individual who is infected than the pathogen itself. In this report, the pathogenesis of COVID-19 and the influence it has on COVID-19 presentations is reviewed, together with recommended potential therapeutic targets and treatment recommendations.

Publication Type

Journal article.

<129>

Accession Number

20210026670

Author

Smith, A.; Polcari, I.; Maguiness, S.; Boull, C.

Title

An outbreak of acute hemorrhagic papules on the posterior neck in children during the COVID-19 pandemic.

Source

Pediatric Dermatology; 2020. 37(6):1193-1194. 5 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Within a two-week timespan in April 2020, multiple children presented with hemorrhagic macules, papules, and erosions localized to the posterior neck and occipital scalp. All of these patients were children of health care workers, with at least one confirmed COVID-19 exposure. The unique lesional morphology and the timing of onset led to SARS-CoV-2 antibody testing for all and biopsy of one child. Biopsy ultimately confirmed these lesions were consistent with arthropod bites, which coincided with an unprecedented surge in local populations of *Simulium tuberosum*, a biting gnat.

Publication Type

Journal article.

<130>

Accession Number

20210026651

Author

Son KyungBok; Lee TaeJin; Hwang SeungSik

Title

Disease severity classification and COVID-19 outcomes, Republic of Korea.

Source

Bulletin of the World Health Organization; 2021. 99(1):62-66. 12 ref.

Publisher

World Health Organization

Location of Publisher

Geneva

Country of Publication

Switzerland

Abstract

**Problem:** The surge in coronavirus disease 2019 (COVID-19) cases overwhelmed the health system in the Republic of Korea. **Approach:** To help health-care workers prioritize treatment for patients with more severe disease and to decrease the burden on health systems caused by COVID-19, the government established a system to classify disease severity. Health-care staff in city- and provincial-level patient management teams classified the patients into the different categories according to the patients' pulse, systolic blood pressure, respiratory rate, body temperature and level of consciousness. Patients categorized as having moderate, severe and very severe disease were promptly assigned to beds or negative-pressure

isolation rooms for hospital treatment, while patients with mild symptoms were monitored in 16 designated facilities across the country. Local setting: The case fatality rate was higher in the city of Daegu and the Gyeongsangbuk-do province (1.6%; 124/7756) than the rest of the country (0.5%; 7/1485). Relevant changes: From 25 February to 26 March 2020, the ratio of negative-pressure isolation rooms per COVID-19 patient was below 0.15 in the city of Daegu and the Gyeongsangbuk-do province. In the rest of the country, this ratio decreased from 5.56 to 0.63 during the same period. Before the classification system was in place, eight (15.7%) out of the 51 deaths occurred at home or during transfer from home to health-care institutions. Lessons learnt: Categorizing patients according to their disease severity should be a prioritized measure to ease the burden on health systems and reduce the case fatality rate.

#### Publication Type

Journal article.

<131>

#### Accession Number

20210026617

#### Author

Martey, E.; Goldsmith, P.; Etwire, P. M.

#### Title

Farmers' response to COVID-19 disruptions in the food systems in Ghana: the case of cropland allocation decision.

#### Source

AgriRxiv; 2021. 48 pp. 48 ref.

#### Publisher

CABI

#### Location of Publisher

Wallingford

#### Country of Publication

UK

#### Abstract

The COVID-19 pandemic is a global health issue with disruption effects in the agricultural food systems especially in Sub-Saharan Africa (SSA) where most of the population is engaged in the agricultural sector. While prices of food commodities continue to increase, farmers are likely to be food insecure or market-oriented by allocating land resources between commercial and staple crops. This study provides new evidence on the determining factors of cropland allocation decisions within the context of the COVID-19 pandemic. The study employs the probit and seemingly unrelated regression (SUR) models on 309 farm households. The results reveal that socio-economic, production, institutional, and political factors significantly influence the choice of cropland allocation decisions and the size of cropland allocated to

legumes and cereals. Beyond these factors, we find that COVID-19 education increases land area allocated to staples while farmers' perception that COVID-19 will impact negatively on agricultural production leads to an increase in the area under commercial crop (soybean) production. The result suggests that promoting farmer education on the disruptive effects of the COVID-19 pandemic and understanding farmer perceptions of the disruptive effects of the COVID-19 will guide future adaptation and mitigation strategies as well as determining the "best" possible cropland allocation decision.

#### Publication Type

Preprint.

<132>

#### Accession Number

20210026476

#### Author

McQuoid-Mason, D. J.

#### Title

Do COVID-19 patients needing extended care in an intensive care unit fall under the 'emergency medical treatment' provisions of the South African Constitution?

#### Source

SAMJ - South African Medical Journal; 2020. 111(1):23-25. 11 ref.

#### Publisher

Health and Medical Publishing Group

#### Location of Publisher

Cape Town

#### Country of Publication

South Africa

#### Abstract

Whether COVID-19 patients in need of extended care in an intensive care unit qualify for 'emergency medical treatment' is answered by considering the Constitution, the meaning of emergency medical treatment, and whether such patients are in an incurable chronic condition. Considering ethical guidelines for the withholding and withdrawal of treatment may assist a court in determining whether a healthcare practitioner has acted with the degree of skill and care required of a reasonably competent practitioner in his or her branch of the profession.

#### Publication Type

Journal article.

<133>

Accession Number

20210026475

Author

Solanki, G. C.; Wilkinson, T.; Daviaud, E.; Besada, D.; Tchuem, C. R. T.; Docrat, S.; Cleary, S. M.

Title

Managing the healthcare demand-supply gap during and after COVID-19: the need to review the approach to healthcare priority-setting in South Africa.

Source

SAMJ - South African Medical Journal; 2020. 111(1):20-22. 29 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Healthcare demands are rising globally, and regardless of the approach to financing and delivering healthcare services, no country can meet all the healthcare demands of its population. The demand-supply gap for healthcare services in South Africa (SA) is large, particularly for the public sector. The objectives of this article are to examine some of the underlying factors contributing to this gap, and how the COVID- 19 pandemic is likely to impact on them, and to describe why SA needs to adopt an explicit and equity-informed approach to healthcare priority-setting to assist in managing the gap.

Publication Type

Journal article.

<134>

Accession Number

20210026473

Author

Raman, J.; Barnes, K. I.; Baker, L.; Blaylock, M.; Blumberg, L.; Freaan, J.; Misiani, E.; Ukpe, I. S.

Title

Maintaining focus on administering effective malaria treatment during the COVID-19 pandemic.

Source

SAMJ - South African Medical Journal; 2020. 111(1):13-16. 42 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

As September marks the start of the malaria season in South Africa (SA), it is essential that healthcare professionals consider both COVID-19 and malaria when a patient who lives in or has recently travelled to a malaria area presents with acute febrile illness. Early diagnosis of malaria by either a rapid diagnostic test or microscopy enables prompt treatment with the effective antimalarial, artemether-lumefantrine, preventing progression to severe disease and death. Intravenous artesunate is the preferred treatment for severe malaria in both children and adults. Adding single low-dose primaquine to standard treatment is recommended in endemic areas to block onward transmission. Use of the highly effective artemisinin-based therapies should be limited to the treatment of confirmed malaria infections, as there is no clinical evidence that these antimalarials can prevent or treat COVID-19. Routine malaria case management services must be sustained, in spite of COVID-19, to treat malaria effectively and support SA's malaria elimination efforts.

Publication Type

Journal article.

<135>

Accession Number

20210026472

Author

Mendelson, M.; Nel, J.; Blumberg, L.; Madhi, S. A.; Dryden, M.; Stevens, W.; Venter, F. W. D.

Title

Long-COVID: an evolving problem with an extensive impact.

Source

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Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

Persistence of symptoms or development of new symptoms relating to SARS-CoV-2 infection late in the course of COVID-19 is an increasingly recognised problem facing the globally infected population and its health systems. 'Long-COVID' or 'COVID long-haulers' generally describes those persons with COVID-19 who experience symptoms for >28 days after diagnosis, whether laboratory confirmed or clinical. Symptoms are as markedly heterogeneous as seen in acute COVID-19 and may be constant, fluctuate, or appear and be replaced by symptoms relating to other systems with varying frequency. Such multisystem involvement requires a holistic approach to management of long-COVID, and descriptions of cohorts from low- and middle-income countries are eagerly awaited. Although many persons with long-COVID will be managed in primary care, others will require greater input from rehabilitation medicine experts. For both eventualities, planning is urgently required to ensure that the South African public health service is ready and able to respond.

Publication Type

Journal article.

<136>

Accession Number

20210025810

Author

Toor, H. G.; Banerjee, D. I.; Lipsa Rath, S.; Darji, S. A.

Title

Computational drug re-purposing targeting the spike glycoprotein of SARS-CoV-2 as an effective strategy to neutralize COVID-19. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890. many ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

COVID-19 has intensified into a global pandemic with over a million deaths worldwide. Experimental research analyses have been implemented and executed with the sole rationale to counteract SARS-CoV-2, which has initiated potent therapeutic strategy development in coherence with computational biology validation focusing on the characterized viral drug targets signified by proteomic and genomic data. Spike glycoprotein is one of such potential drug target that promotes viral attachment to the host cellular membrane by binding to its receptor ACE-2 via its Receptor-Binding Domain (RBD). Multiple Sequence alignment and relative phylogenetic analysis revealed significant sequential disparities of SARS-CoV-2 as compared to previously encountered SARS-CoV and MERS-CoV strains. We implemented a drug re-purposing approach wherein the inhibitory efficacy of a cluster of thirty known drug candidates comprising of antivirals, antibiotics and phytochemicals (selection contingent on their present developmental status in underway clinical trials) was elucidated by subjecting them to molecular docking analyses against the spike protein RBD model (developed using homology modelling and validated using SAVES server 5.0) and the composite trimeric structures of spike glycoprotein of SARS-CoV-2. Our results indicated that Camostat, Favipiravir, Tenofovir, Raltegravir and Stavudine showed significant interactions with spike RBD of SARS-CoV-2. Proficient bioavailability coupled with no predicted in silico toxicity rendered them as prospective alternatives for designing and development of novel combinatorial therapy formulations for improving existing treatment regimes to combat COVID-19.

Publication Type

Journal article.

<137>

Accession Number

20210025809

Author

Harmanjit Singh; Perna Chauhan; Kakkar, A. K.

Title

Hydroxychloroquine for the treatment and prophylaxis of COVID-19: the journey so far and the road ahead. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890. many ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher



Amsterdam

Country of Publication

Netherlands

Abstract

As mortality and morbidity from novel coronavirus disease (COVID-19) continue to mount worldwide, the scientific community as well as public health systems are under immense pressure to contain the pandemic as well as to develop effective medical countermeasures. Meanwhile, desperation has driven prescribers, researchers as well as administrators to recommend and try therapies supported by little or no reliable evidence. Recently, hydroxychloroquine-sulfate (HCQS) has got significant media and political attention for the treatment as well as prophylaxis of COVID-19 despite the lack of convincing and unequivocal data supporting its efficacy and safety in these patients. This has unfortunately, yet foreseeably led to several controversies and confusion among the medical fraternity, the patient community as well as the general public. Based on the available studies, many with high risk of bias, relatively small sample sizes, and abbreviated follow-ups, HCQS is unlikely to be of dramatic benefit in COVID-19 patients and yet has the potential to cause harm, particularly when used in combination with azithromycin or other medications in high risk individuals with comorbidities. Although definitive data from larger well-controlled randomized trials will be forthcoming in the future, and we may be able to identify specific patient subpopulations likely to benefit from hydroxychloroquine, till that time it will be prudent to prescribe it within investigational trial settings with close safety monitoring. Here we review the current evidence and developments related to the use of HCQS in COVID-19 patients and highlight the importance of risk-benefit assessment and rational use of HCQS during this devastating pandemic.

Publication Type

Journal article.

<138>

Accession Number

20210025804

Author

Shahzaib Ahamad; Hema Kanipakam; Shweta Birla; Ali, M. S.; Dinesh Gupta

Title

Screening malaria-box compounds to identify potential inhibitors against SARS-CoV-2 mpro, using molecular docking and dynamics simulation studies. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Amsterdam

Country of Publication

Netherlands

Abstract

Severe Acute Respiratory Syndrome CoronaVirus 2 (SARS-CoV-2) Main protease (Mpro) is one of the vital drug targets amongst all the coronaviruses, as the protein is indispensable for virus replication. The study aimed to identify promising lead molecules against Mpro enzyme through virtual screening of Malaria Venture (MMV) Malaria Box (MB) comprising of 400 experimentally proven compounds. The binding affinities were studied using virtual screening based molecular docking, which revealed five molecules having the highest affinity scores compared to the reference molecules. Utilizing the established 3D structure of Mpro the binding affinity conformations of the docked complexes were studied by Molecular Dynamics (MD) simulations. The MD simulation trajectories were analysed to monitor protein deviation, relative fluctuation, atomic gyration, compactness covariance, residue-residue map and free energy landscapes. Based on the present study outcome, we propose three Malaria\_box (MB) compounds, namely, MB\_241, MB\_250 and MB\_266 to be the best lead compounds against Mpro activity. The compounds may be evaluated for their inhibitory activities using experimental techniques.

Publication Type

Journal article.

<139>

Accession Number

20210025758

Author

Deilamazade, A.; Moghanibashi-Mansourieh, A.

Title

Challenges of providing COVID-19 prevention services to homeless people who use drugs in Iran.

Source

International Journal of Drug Policy; 2020. 83.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Publication Type

<140>

Accession Number

20210025059

Author

Doyno, C.; Sobieraj, D. M.; Baker, W. L.

Title

Toxicity of chloroquine and hydroxychloroquine following therapeutic use or overdose.

Source

Clinical Toxicology; 2021. 59(1):12-23. 173 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Introduction: While chloroquine, a derivative of quinine, has been used as an antimalarial for 70 years, hydroxychloroquine is now used to treat conditions such as rheumatoid arthritis and systemic lupus erythematosus. In 2020, hydroxychloroquine (and to a lesser extent chloroquine) also received attention as a possible treatment for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). During investigation for treating coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2, concerns for serious adverse events arose. Background: We review the toxicity associated with hydroxychloroquine and chloroquine use both short-term and long-term and in overdose. Methods: Medline (via OVID) was searched from its inception through June 7 2020 using the following as either MeSH or keyword terms: ("Chloroquine/" or "Hydroxychloroquine/") AND ("Adverse Drug Event/" or "Toxicities, Drug/" or "Toxic.mp." or "Toxicity.mp." or "Overdose.mp."). We limited resultant articles to those published in English and reporting on Human subjects. This search yielded 330 articles, of which 57 were included. Articles were excluded due to lack of relevance, not reporting desired outcomes, or being duplicative in their content. Twenty-five additional articles were identified through screening references of included articles. To identify toxicities in individuals treated with hydroxychloroquine or chloroquine with COVID-19, we searched PubMed on June 10th, 2020: ("Chloroquine" or "Hydroxychloroquine") AND ("Coronavirus" or "COVID-19" or "SARS-CoV-2"). This search resulted in 638 articles. We reviewed articles for reporting of adverse events or toxicities. Most citations were excluded because they did not include original investigations or extrapolated data from subjects that did not have COVID-19; 34 citations were relevant. For the drug-interactions section, relevant classes and agents were identified through a screen of the <https://www.covid19-druginteractions.org/website>. We then conducted targeted searches of PubMed up

to June 7th 2020 combining "chloroquine" and "hydroxychloroquine" with terms for specific drug classes and drugs identified from the drug-interaction site as potentially relevant. We found 29 relevant articles.

**Toxicity with short-term use:** Gastrointestinal: Gastrointestinal toxicities are the most common to occur following initiation of chloroquine or hydroxychloroquine. Nausea, vomiting, and diarrhea account for most reported intolerances. Glucose abnormalities: Alterations in blood glucose concentrations may occur with hydroxychloroquine but are rare with standard therapeutic use. Cardiotoxicity: Short-term use can produce conduction abnormalities. Evidence from COVID-19 treatment suggests QT/QTc prolongation is of concern, particularly when used in combination with azithromycin, although disagreement exists across studies. Dermatologic: Drug eruptions or rashes, followed by cutaneous hyperpigmentation, pruritis, Stevens-Johnson syndrome, and toxic epidermal necrolysis, may occur within days to weeks of exposure but usually resolve with the discontinuation of therapy. Neuropsychiatric: Reported symptoms include confusion, disorientation, and hallucination within 24-48 h of drug initiation. Other toxicities: Hemolysis and anemia may occur in patients with glucose-6-phosphate dehydrogenase. Chloroquine treatment of COVID-19 was associated with elevation in creatine kinase and creatine kinase-MB activities with more events in the higher-dose group.

**Toxicity with long-term use:** Retinopathy: Retinopathy is the major dose-limiting toxicity associated with long-term use; the risk is higher with increasing age, dose, and duration of usage. Cardiotoxicity: Long-term use has been associated with conduction abnormalities, cardiomyopathy, and valvular disorders. Neurotoxicity: Rarely myositis and muscle weakness, extremity weakness, and pseudoparkinsonism have been reported. Toxicity in overdose: Symptoms in overdose manifest rapidly (minutes to hours) and cardiotoxicity such as cardiovascular shock and collapse are most prominent. Neurotoxic effects such as psychosis and seizure may also occur.

**Conclusions:** Hydroxychloroquine is a generally well-tolerated medication. Short-term (days to weeks) toxicity includes gastrointestinal effects and rarely glucose abnormalities, dermatologic reactions, and neuropsychiatric events. Cardiotoxicity became of increased concern with its use in COVID-19 patients. Long-term (years) toxicities include retinopathy, neuromyotoxicity, and cardiotoxicity (conduction abnormalities, cardiomyopathy). Deaths from overdoses most often result from cardiovascular collapse.

#### Publication Type

Journal article.

<141>

#### Accession Number

20210025050

#### Author

Morgello, S.

#### Title

Coronaviruses and the central nervous system.

#### Source

Journal of Neurovirology; 2020. 26(4):459-473. many ref.

#### Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

Seven coronavirus (CoV) species are known human pathogens: the epidemic viruses SARS-CoV, SARS-CoV-2, and MERS-CoV and those continuously circulating in human populations since initial isolation: HCoV-OC43, HCoV-229E, HCoV-HKU1, and HCoV-NL63. All have associations with human central nervous system (CNS) dysfunction. In infants and young children, the most common CNS phenomena are febrile seizures; in adults, non-focal abnormalities that may be either neurologic or constitutional. Neurotropism and neurovirulence are dependent in part on CNS expression of cell surface receptors mediating viral entry, and host immune response. In adults, CNS receptors for epidemic viruses are largely expressed on brain vasculature, whereas receptors for less pathogenic viruses are present in vasculature, brain parenchyma, and olfactory neuroepithelium, dependent upon viral species. Human coronaviruses can infect circulating mononuclear cells, but meningoencephalitis is rare. Well-documented human neuropathologies are infrequent and, for SARS, MERS, and COVID-19, can entail cerebrovascular accidents originating extrinsically to brain. There is evidence of neuronal infection in the absence of inflammatory infiltrates with SARS-CoV, and CSF studies of rare patients with seizures have demonstrated virus but no pleocytosis. In contrast to human disease, animal models of neuropathogenesis are well developed, and pathologies including demyelination, neuronal necrosis, and meningoencephalitis are seen with both native CoVs as well as human CoVs inoculated into nasal cavities or brain. This review covers basic CoV biology pertinent to CNS disease; the spectrum of clinical abnormalities encountered in infants, children, and adults; and the evidence for CoV infection of human brain, with reference to pertinent animal models of neuropathogenesis.

Publication Type

Journal article.

<142>

Accession Number

20210024798

Author

Kiani, M. A.; Toosi, S. M. H. B.; Aval, S. B.; Gholian-Avval, M.; Zakerian, M.; Hoseini, S. J.; Peyman, N.; Saberi, M. R.; Saeidi, M.

Title

Is home care a successful strategy in COVID-19? A valuable experience from Iran.

Source

International Journal of Pediatrics; 2021. 9(1):12843-12854. 32 ref.

Publisher

Mashhad University of Medical Sciences

Location of Publisher

Mashhad

Country of Publication

Iran

Abstract

Background: Coronavirus Disease-2019 (COVID-19) is a recently evolving public health problem. This study aimed to establish home care system for patients with acute respiratory infections in treatment centers and hospitals covered by Mashhad University of Medical Sciences, Mashhad, Iran. Materials and Methods: In this pilot study, which was done as cross-sectional design from February 29, 2020 until May 4, 2020, all the patients with acute respiratory infections suspected of corona and referred to centers of health comprehensive services and outpatient clinics of Mashhad, Iran (referral level 1), were assessed based on protocol developed by Ministry of Health. Then, patients who do not need hospitalization services based on diagnosis of specialized health care team were referred home by prescription of medication and self-care training (home quarantine). Afterward, the required information based on care need, improving and thoroughly improved along with patient home visit and follow-up calling were implemented by physician. In the last phase, patients' and their families' satisfaction regarding health care team was assessed by a researcher-made questionnaire. Results: In this pilot study, 200 patients (men: 62.9%) with Covid-19 underwent home quarantine and care and treatment by a specialized treatment team comprised of physician, nurses, and psychologist and health experts. The findings showed that 84.5% of patients and family had partial satisfaction regarding the way of treatment of the health care team. Satisfaction on explanations provided regarding disease, diagnosis, and treatment method in 68% of patients was full satisfaction. Conclusion: Home quarantine decreases stress and fear in patients and their family and prevents social labelling for these individuals. Patients were highly satisfied regarding being cared for in their home and by family members.

Publication Type

Journal article.

<143>

Accession Number

20210024662

Author

Shi KuangWei; Huang YenHsiang; Quon, H.; Ou-Yang ZiLu; Wang ChengWen; Jiang, S. C.

Title

Quantifying the risk of indoor drainage system in multi-unit apartment building as a transmission route of SARS-CoV-2.

Source

Science of the Total Environment; 2021. 762.

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Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The COVID-19 pandemic has had a profound impact on human society. The isolation of SARS-CoV-2 from patients' feces on human cell line raised concerns of possible transmission through human feces including exposure to aerosols generated by toilet flushing and through the indoor drainage system. Currently, routes of transmission, other than the close contact droplet transmission, are still not well understood. A quantitative microbial risk assessment was conducted to estimate the health risks associated with two aerosol exposure scenarios: (1) toilet flushing, and (2) faulty connection of a floor drain with the building's main sewer pipe. SARS-CoV-2 data were collected from the emerging literature. The infectivity of the virus in feces was estimated based on a range of assumption between viral genome equivalence and infectious unit. The human exposure dose was calculated using Monte Carlo simulation of viral concentrations in aerosols under each scenario and human breathing rates. The probability of COVID-19 illness was generated using the dose-response model for SARS-CoV-1, a close relative of SARS-CoV-2, that was responsible for the SARS outbreak in 2003. The results indicate the median risks of developing COVID-19 for a single day exposure is  $1.11 \times 10^{-10}$  and  $3.52 \times 10^{-11}$  for toilet flushing and faulty drain scenario, respectively. The worst case scenario predicted the high end of COVID-19 risk for the toilet flushing scenario was  $5.78 \times 10^{-4}$  (at 95th percentile). The infectious viral loads in human feces are the most sensitive input parameter and contribute significantly to model uncertainty.

Publication Type

Journal article.

<144>

Accession Number

20210024658

Author

Antwi, S. H.; Getty, D.; Linnane, S.; Rolston, A.

Title

COVID-19 water sector responses in Europe: a scoping review of preliminary governmental interventions.

Source

Science of the Total Environment; 2021. 762. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The unprecedented scale and impact of COVID-19 pandemic, and the accompanying lockdown implemented across many countries, has exacerbated water scarcity and security globally. Many European governments have introduced policy interventions to mitigate and protect their economies. Yet, water resources, which are a potential enabler in revitalising Europe's economy, have received few of such policy interventions since the World Health Organization declared the COVID-19 outbreak as a public health emergency only in January 2020. Our scoping review of preliminary government responses of 27 European countries revealed that only 11 (40.7%) of these countries implemented at least one policy intervention that considered the water sector. These interventions were typically short-term measures involving either full cost absorption or deferment of water bills. Much attention on water governance and management processes, policies and financial investments required to augment the resilience of the water sector amid a growing scarcity of freshwater, triggered by extreme climate variation and also by COVID-19 pandemic should therefore be central to post COVID-19 recovery efforts in Europe. This paper also proposes future research directions, including a study that will harmonise water demand and consumption trends during the pandemic in Europe and an assessment on how the water sector can withstand possible external shocks in future.

Publication Type

Journal article.

<145>

Accession Number

20210024637

Author

Cuevas-Ferrando, E.; Perez-Cataluna, A.; Allende, A.; Guix, S.; Randazzo, W.; Sanchez, G.

Title

Recovering coronavirus from large volumes of water.

Source

Science of the Total Environment; 2021. 762.

Publisher

Elsevier Ltd

Location of Publisher

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Oxford

Country of Publication

UK

Abstract

The need for monitoring tools to better control the ongoing coronavirus disease (COVID-19) pandemic is extremely urgent and the contamination of water resources by excreted viral particles poses alarming questions to be answered. As a first step to overcome technical limitations in monitoring SARS-CoV-2 along the water cycle, we assessed the analytical performance of a dead end hollow fiber ultrafiltration coupled to different options for secondary concentrations to concentrate viral particles from large volume of spiked tap water, seawater and surface water together with two quantitative RT-qPCR detection kits. Spiking the porcine epidemic diarrhea virus (PEDV), an enveloped virus surrogate for SARS-CoV-2, together with the mengovirus, we demonstrated that PEG-precipitation and SENS-kit better recovered PEDV (13.10 ± 0.66%) from tap water, while centrifugal filtration resulted the best option to recover mengovirus regardless of the detection kit used. No statistical significant differences were found when comparing high (10,000 xg) and low (3500 xg) centrifugation speeds for the secondary PEG- based concentration of spiked seawater, while considerable inhibition was observed for both viruses detected by NoInh-kit assay. Similarly, the co-concentration of PCR inhibitors and viral particles was observed in surface waters detected with either SENS-kit or NoInh-kit and RNA dilution was needed to achieve acceptable recoveries at the expenses of the overall sensitivity of the method. These methodologies represent suitable options to investigate SARS-CoV-2 occurrence in different water resources and allow to conduct on site sampling of large volume of water.

Publication Type

Journal article.

<146>

Accession Number

20210024486

Author

Lim JinLee; Ong ChongYau; Xie BeiQi; Low LianLeng

Title

Estimating information seeking-behaviour of public in Malaysia during COVID-19 by using Google trends.

Source

MJMS - The Malaysian Journal of Medical Sciences; 2020. 27(5):202-204. 6 ref.

Publisher

School of Medical Sciences

Location of Publisher

Pulau Pinang

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Country of Publication

Malaysia

Abstract

The public was reported to be anxious and concerned during the pandemic. It is unknown whether these reactions had a relationship with the statistics of coronavirus disease 2019 (COVID-19) in Malaysia. We used Google Trends (GT) to understand whether the publics' inquisitiveness towards COVID-19 and its recommended precautionary measures had increased during the initial duration of the pandemic in Malaysia.

Publication Type

Journal article.

<147>

Accession Number

20210022753

Author

Hossain, M. S.; Sulaiman Ahmed; Uddin, M. J.

Title

Impact of weather on COVID-19 transmission in south Asian countries: an application of the ARIMAX model.

Source

Science of the Total Environment; 2021. 761. 49 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

We aimed to examine the impact of weather on COVID-19 confirmed cases in South Asian countries, namely, Afghanistan, Bangladesh, India, Pakistan, and Sri Lanka. Data on daily confirmed cases, together with weather parameters, were collected from the first day of COVID confirmed cases in each country to 31 August 2020. The weather parameters were Rainfall (mm), relative humidity (%), maximum and minimum temperature (degrees C), surface pressure (kPa), maximum air pollutants matter PM 2.5 (g/m3) and maximum wind speed (m/s). Data were analyzed for each investigated countries separately by using the Autoregressive Integrated Moving Average with Explanatory Variables (ARIMAX) model. We found that

maximum wind speed had significant negative impact on COVID-19 transmission in India (-209.45, 95% confidence interval (CI): -369.13, -49.77) and Sri Lanka (-2.77, 95% CI: -4.77, -0.77). Apart from India, temperature had mixed effects (i.e., positive or negative) in four countries in South Asia. For example, maximum temperature had negative impact (-30.52, 95% CI: -60.24, -0.78) in Bangladesh and positive impact (5.10, 95% CI: 0.06, 10.14) in Afghanistan. Whereas rainfall had negative effects (-48.64, 95% CI: -80.17, -17.09) in India and mixed effects in Pakistan. Besides, maximum air pollutants matter PM 2.5 was negatively associated with the confirmed cases of COVID-19. In conclusion, maximum wind speed, rainfall, air pollutants (maximum PM 2.5) and temperature are four variables that could play a vital role in the transmission of COVID-19. Although there is a mixed conclusion regarding weather parameters and COVID-19 transmission, we recommend developing environmental policies regarding the transmission of COVID-19 in South Asian countries.

#### Publication Type

Journal article.

<148>

#### Accession Number

20210022742

#### Author

Peralta, O.; Ortinez-Alvarez, A.; Torres-Jardon, R.; Suarez-Lastra, M.; Castro, T.; Ruiz-Suarez, L. G.

#### Title

Ozone over Mexico City during the COVID-19 pandemic.

#### Source

Science of the Total Environment; 2021. 761.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

During the COVID-19 pandemic lockdown, emissions of primary criteria pollutants in the Mexico City Metropolitan Area (MCMA) were substantially reduced, as in many other cities in the world. Unexpectedly, the daily average ozone concentration profile was practically indistinguishable from that of the past two years for the same time span in the calendar. So, we compared surface meteorology data, CO, NO<sub>x</sub> and O<sub>3</sub> hourly concentrations in the MCMA from the ozone season (from March 1 to May 31) for the years 2018, 2019, and 2020. Also, TROPOMI satellite data on column count of CO, NO<sub>2</sub> and HCHO, above a sparse grid of surface points in the MCMA, were also compared for March, April, and May 2020 with those from 2019.

Population density used as a background variable to increase understanding of the observed differences allowed us to propose that reductions in NO<sub>x</sub> were so drastic that ozone formation moved rapidly from a VOC sensitive region towards a NO<sub>x</sub> sensitive region. The relevance of that unplanned policy provides impacts of contingent short-term emissions control actions during very high pollution episodes. Further analysis of these and other related data concerning VOC speciation and emissions patterns during the coronavirus lockdown may provide guidelines to enhance emission control policies in the post-COVID-19 times to come.

#### Publication Type

Journal article.

<149>

#### Accession Number

20210022660

#### Author

Ficetola, G. F.; Rubolini, D.

#### Title

Containment measures limit environmental effects on COVID-19 early outbreak dynamics.

#### Source

Science of the Total Environment; 2021. 761. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Environmental factors are well known to affect spatio-temporal patterns of infectious disease outbreaks, but whether the rapid spread of COVID-19 across the globe is related to local environmental conditions is highly debated. We assessed the impact of environmental factors (temperature, humidity and air pollution) on the global patterns of COVID-19 early outbreak dynamics during January-May 2020, controlling for several key socio-economic factors and airport connections. We showed that during the earliest phase of the global outbreak (January-March), COVID-19 growth rates were non-linearly related to climate, with fastest spread in regions with a mean temperature of ca. 5 degrees C, and in the most polluted regions. However, environmental effects faded almost completely when considering later outbreaks, in keeping with the progressive enforcement of containment actions. Accordingly, COVID-19 growth rates consistently decreased with stringent containment actions during both early and late outbreaks. Our findings indicate that environmental drivers may have played a role in explaining the early variation among regions in

disease spread. With limited policy interventions, seasonal patterns of disease spread might emerge, with temperate regions of both hemispheres being most at risk of severe outbreaks during colder months. Nevertheless, containment measures play a much stronger role and overwhelm impacts of environmental variation, highlighting the key role for policy interventions in curbing COVID-19 diffusion within a given region. If the disease will become seasonal in the next years, information on environmental drivers of COVID-19 can be integrated with epidemiological models to inform forecasting of future outbreak risks and improve management plans.

#### Publication Type

Journal article.

<150>

#### Accession Number

20210022656

#### Author

Zhang HongSheng; Lin YinYi; Wei Shan; Loo, B. P. Y.; Lai, P. C.; Lam YunFat; Wan LuoMa; Li Yu

#### Title

Global association between satellite-derived nitrogen dioxide (NO<sub>2</sub>) and lockdown policies under the COVID-19 pandemic.

#### Source

Science of the Total Environment; 2021. 761. 33 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The COVID-19 pandemic has severely affected various aspects of life, at different levels and in different countries on almost every continent. In response, many countries have closed their borders and imposed lockdown policies, possibly bringing benefits to people's health with significantly less emission from air pollutants. Currently, most studies or reports are based on local observations at the city or country level. There remains a lack of systematic understanding of the impacts of different lockdown policies on the air quality from a global perspective. This study investigates the impacts of COVID-19 pandemic towards global air quality through examining global nitrogen dioxide (NO<sub>2</sub>) dynamics from satellite observations between 1 January and 30 April 2020. We used the Apriori algorithm, an unsupervised machine learning method, to investigate the association among confirmed cases of COVID-19, NO<sub>2</sub> column density, and the lockdown policies in 187 countries. The findings based on weekly data revealed that countries with new cases

adopted various lockdown policies to stop or prevent the virus from spreading whereas those without tended to adopt a wait-and-see attitude without enforcing lockdown policies. Interestingly, decreasing NO<sub>2</sub> concentration due to lockdown was associated with international travel controls but not with public transport closure. Increasing NO<sub>2</sub> concentration was associated with the "business as usual" strategy as evident from North America and Europe during the early days of COVID-19 outbreak (late January to early February 2020), as well as in recent days (in late April) after many countries have started to resume economic activities. This study enriches our understanding of the heterogeneous patterns of global associations among the COVID-19 spreading, lockdown policies and their environmental impacts on NO<sub>2</sub> dynamics.

#### Publication Type

Journal article.

<151>

#### Accession Number

20210022259

#### Author

Pichaphop, C.; Chaichotjinda, K.; Tansuriyawong, P.; Kasemsinsup, N.; Saenghiran, B.; Sukyotin, S.; Junsawat, P.; Jirawong, J.; Kunapramote, N.; Kuptanon, T.; Wongsinin, T.; Sungkanuparph, S.

#### Title

When pediatricians have to care for adult patients with COVID-19: experiences and lessons learned.

#### Source

Journal of Infectious Diseases and Antimicrobial Agents; 2020. 37(3):179-182. 6 ref.

#### Publisher

Infectious Disease Association of Thailand

#### Location of Publisher

Bangkok

#### Country of Publication

Thailand

#### Abstract

In March 2020, a group of six pediatricians from Bangkok were assigned to work for a week in a COVID-19 treatment center outside of town. Although there was some anxiety among team members about their own personal safety, as well as doubts surrounding their professional ability to care adult patients, it was, at the end, an incredible experience. A number of factors contributed to this successful pediatrician reallocation task for the COVID-19 treatment center, namely; (1) the detailed, clear and safe treatment protocol for patient care (in particular, the use of video calls with patients), (2) the multidisciplinary approach and the culture of teamwork, (3) the presence of a strong and compassionate leading physician, and (4) the emotional support from the general public segments.

Publication Type

Journal article.

<152>

Accession Number

20210022220

Author

Meyer, T.; Mack, D.; Donde, K.; Harzer, O.; Krutsch, W.; Rossler, A.; Kimpel, J.; Laer, D. von; Gartner, B. C.

Title

Successful return to professional men's football (soccer) competition after the COVID-19 shutdown: a cohort study in the German Bundesliga.

Source

British Journal of Sports Medicine; 2021. 55(1):62-66. 16 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** To evaluate the restart of the German Bundesliga (football (soccer)) during the COVID-19 pandemic from a medical perspective. **Methods** Participants were male professional football players from the two highest German leagues and the officials working closely with them. Our report covers nine match days spread over 9 weeks (May to July 2020). Daily symptom monitoring, PCR testing for SARS-CoV-2 RNA twice weekly, and antibody tests (on two occasions - early during the phase in May 2020 and in the week of the last match) were conducted. Target variables were: (1) onset of typical COVID-19 symptoms, (2) positive PCR results, and (3) IgG seroconversion against SARS-CoV-2. All detected seroconversions were controlled by neutralisation tests. **Findings:** Suspicious symptoms were reported for one player; an immediate additional PCR test as well as all subsequent diagnostic and antibody tests proved negative for coronavirus. Of 1702 regularly tested individuals (1079 players, 623 officials members), 8 players and 4 officials tested positive during one of the first rounds of PCR testing prior to the onset of team training, 2 players during the third round. No further positive results occurred during the remainder of the season. 694 players and 291 officials provided two serum samples for antibody testing. Nine players converted from negative/borderline to positive (without symptoms); two players who initially tested positive tested negative at the end of the season. 22 players remained seropositive throughout the season. None of the seroconversions was confirmed in the neutralisation test. **Conclusion:** Professional football training and matches can be carried out safely during the COVID-19 pandemic. This requires strict hygiene measures including regular PCR testing.

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Publication Type

Journal article.

<153>

Accession Number

20210021829

Author

Al-Mandhari, A. S.; Brennan, R. J.; Abubakar, A.; Hajjeh, R.

Title

Tackling COVID-19 in the Eastern Mediterranean Region.

Source

Lancet (British edition); 2020. 396(10265):1786-1788. 27 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The main challenges to the COVID-19 response in the EMR include information sharing, expanding public health measures, protecting health workers, achieving behaviour change, ensuring continuity of essential health services, and establishing reliable supply chains. Although the effectiveness of country-specific COVID-19 responses varies, certain best practices in the region have been important. Decisive leadership and whole-of-government and whole-of-society approaches are central to an effective response. Nine pillars comprise the WHO COVID-19 Strategic Preparedness and Response Plan: (1) Country-level coordination, planning, and monitoring, (2) Risk communication and community engagement, (3) Surveillance, rapid response teams, and case investigation, (4) Points of entry, international travel, and transport, (5) National laboratories, (6) Infection prevention and control, (7) Case management, (8) Operational support and logistics, and (9) Maintaining essential health services and systems. The most pressing challenges remain balancing the easing of COVID-19 control measures while maintaining suppression of SARS-CoV-2 transmission, scaling up public health measures, tackling COVID-19 fatigue, and establishing a platform for distribution of eventual COVID-19 vaccines. Countries in the EMR must heed the advice of the independent Global Preparedness Monitoring Board: show responsible leadership, engage citizens, build strong systems for health security, and ensure sustained investment and strong governance of preparedness for health emergencies.

Publication Type



Journal article.

<154>

Accession Number

20210021646

Author

Okat, C.; Bahceci, V.; Ocak, E.

Title

Evaluating impacts of COVID-19 (new coronavirus) pandemic crisis on food & beverage enterprises.  
[Turkish]

Source

International Journal of Contemporary Tourism Research; 2020. 4(2):201-218. 34 ref.

Publisher

Izmir Katip Celebi University, Faculty of Tourism

Location of Publisher

Izmir

Country of Publication

Turkey

Abstract

Due to the Covid-19 pandemic, food and beverage enterprises, like all businesses operating under the tourism industry, were negatively affected and faced with a major crisis. Therefore, the decisions that the food and beverage enterprises take in this crisis period will become vital for the futures. In this context, the main purpose of this study is to determine the impacts of the Covid-19 pandemic on food and beverage enterprises, what measures they will take in this crisis period and what kind of crisis management they will apply. Findings show that the biggest concerns of the enterprises are their own sustainability. While, it is seen that enterprises are not well-prepared for possible crises in general, it also has been determined that large and corporate type enterprises work on crisis scenarios are better prepared for crises comparing to smaller enterprises.

Publication Type

Journal article.

<155>

Accession Number

20210020998

Author

Sabateeshan Mathavarajah; Stoddart, A. K.; Gagnon, G. A.; Dellaire, G.

Title

Pandemic danger to the deep: the risk of marine mammals contracting SARS-CoV-2 from wastewater.

Source

Science of the Total Environment; 2021. 760. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

We are in unprecedented times with the ongoing COVID-19 pandemic. The pandemic has impacted public health, the economy and our society on a global scale. In addition, the impacts of COVID-19 permeate into our environment and wildlife as well. Here, we discuss the essential role of wastewater treatment and management during these times. A consequence of poor wastewater management is the discharge of untreated wastewater carrying infectious SARS-CoV-2 into natural water systems that are home to marine mammals. Here, we predict the susceptibility of marine mammal species using a modelling approach. We identified that many species of whale, dolphin and seal, as well as otters, are predicted to be highly susceptible to infection by the SARS-CoV-2 virus. In addition, geo-mapping highlights how current wastewater management in Alaska may lead to susceptible marine mammal populations being exposed to the virus. Localities such as Cold Bay, Naknek, Dillingham and Palmer may require additional treatment of their wastewater to prevent virus spillover through sewage. Since over half of these susceptibility species are already at risk worldwide, the release of the virus via untreated wastewater could have devastating consequences for their already declining populations. For these reasons, we discuss approaches that can be taken by the public, policymakers and wastewater treatment facilities to reduce the risk of virus spillover in our natural water systems. Thus, we indicate the potential for reverse zoonotic transmission of COVID-19 and its impact on marine wildlife; impacts that can be mitigated with appropriate action to prevent further damage to these vulnerable populations.

Publication Type

Journal article.

<156>

Accession Number

20210020972

Author

Baldovin, T.; Amoruso, I.; Fonzo, M.; Buja, A.; Baldo, V.; Cocchio, S.; Bertoncetto, C.

Title

SARS-CoV-2 RNA detection and persistence in wastewater samples: an experimental network for COVID-19 environmental surveillance in Padua, Veneto Region (NE Italy).

Source

Science of the Total Environment; 2021. 760. 36 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Clinical detection of SARS-CoV-2 RNA in stools supports the idea of wastewater-based epidemiology (WBE) as a precious tool for COVID-19 environmental surveillance. Successful detection of SARS-CoV-2 RNA in untreated wastewaters has been reported in several countries. This study investigated the presence and persistence of viral RNA in treated and untreated wastewaters in Padua, Italy. An urban experimental network of sampling sites was tested for prospective surveillance activities. Methods: Seven sampling sites (i.e. wastewater pumping stations, plant inlets and outlets) were selected from the two main municipal wastewater treatment plant systems. Eleven grab samples (9 untreated, 2 treated wastewaters) were collected on 2 dates. All samples were tested at t0 for SARS-CoV-2 RNA and t1 = 24 h to investigate its persistence, at room temperature and under refrigerated conditions. Overall, 33 sub-samples were concentrated by ultrafiltration and tested for molecular detection of viral RNA with two RT-qPCR assays. Results: At t0, positivity for at least one RT-qPCR assay was achieved by 4/9 untreated wastewater samples and 2/2 tertiary treated samples. A minimum SARS-CoV-2 titer of 4.8-4.9 log<sub>10</sub> gc/L was estimated. At t1, three refrigerated subsamples were positive as well. The two RT-qPCR assays showed differential sensitivity, with the N assay detecting 90% of successful amplifications. Conclusions: SARS-CoV-2 RNA was detected in untreated and treated wastewaters. Its persistence after 24 h was demonstrated in subsamples kept at 4 degrees C. Hospitalization data suggested an approximate WBE detection power of 1 COVID-19 case per 531 inhabitants. The possible role of WBE in COVID-19 environmental surveillance is strongly supported by our findings. WBE can also provide precious support in the decision-making process of restriction policies during the epidemic remission phase. Optimization and standardization of laboratory methods should be sought in the short term, so that results from different studies can be compared with reliability.

Publication Type

Journal article.

<157>

Accession Number

20210020961

Author

Abdulla Albastaki; Mohammed Najji; Reem Lootah; Reem Almeheiri; Hanan Almulla; Iman Almarri; Afra Alreyami; Ahmed Aden; Rashed Alghafri

Title

First confirmed detection of SARS-CoV-2 in untreated municipal and aircraft wastewater in Dubai, UAE: the use of wastewater based epidemiology as an early warning tool to monitor the prevalence of COVID-19.

Source

Science of the Total Environment; 2021. 760.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Severe Acute Respiratory Syndrome - Coronavirus 2 (SARS-CoV-2) emerged in Wuhan, China and spread to more than 114 countries resulting in a pandemic, which was declared by the WHO in March 2020. Tracking the spread of the virus raised a main concern in every country. Many researches proved the presence of SARS-CoV-2 in stool samples of patients, where the genes of this virus gave a positive signal several days prior to the occurrence of symptoms. The fact of viral shedding in stools provides an advantage in utilizing wastewater systems as a tool to monitor the viral prevalence. We tested more than 2900 municipal wastewater samples coming from 49 distinctive area in Dubai, where 28.6% showed positive results. We also looked into the wastewater samples from 198 commercial aircrafts arriving at Dubai Airport, giving a positive result percentage of 13.6%. The presence of SARS-CoV-2 genes was confirmed using TaqPath™ Covid-19 RT-PCR kit, which targets ORF1ab, N gene and S gene. This project shows the significance of utilizing wastewater-based epidemiology (WBE) in monitoring the prevalence of various infectious diseases such as SARS-CoV-2, which can assist the decision makers to determine the level of precautionary measures according to the areas of the outbreak. With this in mind, pricewise, WBE is considered cost-effective when comparing to clinical nasal swabs.

Publication Type

Journal article.

<158>

Accession Number

20210020905

Author

Espinosa, M. F.; Verbyla, M. E.; Vassalle, L.; Rosa-Machado, A. T.; Zhao Fei; Gaunin, A.; Mota, C. R.

Title

Reduction and partitioning of viral and bacterial indicators in a UASB reactor followed by high rate algal ponds treating domestic sewage.

Source

Science of the Total Environment; 2021. 760.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Human enteric pathogens are a major global concern, as they are responsible for thousands of preventable deaths every year. New pathogens in wastewater are constantly emerging. For example, SARS-CoV-2 has been recently detected in domestic sewage and primary sludge. Knowledge about the reduction of viruses in wastewater treatment and their partitioning between the treated liquid effluent versus the sludge or biosolids is still very scarce, especially in countries with emerging economies and tropical climates. Upflow anaerobic sludge blanket (UASB) reactors are among the top three most commonly used technologies for the treatment of sewage in Latin America and the Caribbean, and their use has become increasingly common in many other low- and middle-income countries. High-rate algal ponds (HRAP) are regarded as a sustainable technology for the post-treatment of UASB effluent. This study evaluated the overall reduction and the liquid-solid partitioning of somatic coliphages, F-specific coliphages, and *E. coli* in a pilot-scale system comprised of a UASB reactor followed by HRAPs treating real wastewater. Average log removal for somatic and F-specific coliphages were 0.40 and 0.56 for the UASB reactor, and 1.15 and 1.70 for HRAPs, respectively. The overall removal of both phages in the system was 2.06-log. Removal of *E. coli* was consistently higher. The number of viruses leaving the system in the UASB solids and algal biomass was less than 10% of the number leaving in the clarified liquid effluent. The number of *E. coli* leaving the system in solids residuals was estimated to be approximately one order of magnitude higher than the number of *E. coli* leaving in the liquid effluent. Results from this study demonstrate the suitability of UASB-HRAP systems to reduce viral and bacterial indicators from domestic sewage and the importance of adequately treating sludge for pathogen reduction before they are used as biosolids.

Publication Type

Journal article.

<159>

Accession Number

20210013890

Author

Ianioglo, A.; Rissanen, M.

Title

Global trends and tourism development in peripheral areas.

Source

Scandinavian Journal of Hospitality and Tourism; 2020. 20(5):520-539. 38 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The article reveals main tourism trends after the pandemic and analyses the potential for tourism development on the example of the city of Kemi, located in Finnish Lapland. In current conditions of unprecedented health and economic crisis caused by the COVID-19 pandemic, fast developing technology, shift in customer preferences and climate change, it is important to quickly adjust and respond to the new realities in order to ensure a sustainable development at the regional level. This is especially relevant in Lapland, where tourism is a strategically important sector of the economy. The article aims at identifying main tourism trends in post-lockdown era caused by COVID-19 pandemic and determining the potential for regional tourism development of peripheral areas on the example of the city of Kemi. Based on the conducted analysis of recent literature; analysis of statistical data; qualitative sociological study, three priority groups of actions were recommended: enhancing visibility in the market, strengthening image of the city, and developing facilities in the city. Besides the fact that achieved results are important for further research, developed priorities can lead to the development of tourism in the city, attraction of new investments, creation of new jobs and thus development of the economy.

Publication Type

Journal article.

<160>

Accession Number

20210009236

Author

Jayanta Sarkar; Rajdeep Guha

Title

Infectivity, virulence, pathogenicity, host-pathogen interactions of SARS and SARS-CoV-2 in experimental animals: a systematic review.

Source

Veterinary Research Communications; 2020. 44(3/4):101-110. 29 ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

The outbreak of the SARS-CoV-2 in mainland China with subsequent human to human transmission worldwide had taken up the shape of a devastating pandemic. The ability of the virus to infect multiple species other than humans has currently been reported in experimental conditions. Non-human primates, felines, ferrets, rodents and host of other animals could previously be infected in experimental conditions with SARS-CoV and recently with SARS-CoV-2, both virus using Angiotensin-converting-enzyme 2 receptor for cellular entry. The variations in sequence homology of ACE2 receptor across species is identified as one of the factors determining virulence and pathogenicity in animals. The infection in experimental animals with SARS-CoV or SARS-CoV-2 on most occasions are asymptomatic, however, the virus could multiply within the respiratory tract and extra-pulmonary organs in most of the species. Here, we discuss about the pathogenicity, transmission, variations in angiotensin-converting-enzyme 2 receptor-binding across species and host pathogen interactions of SARS and SARS-CoV-2 in laboratory animals used in research.

Publication Type

Journal article.

<161>

Accession Number

20210009041

Author

Mair, T. S.; Mountford, D. R.; Radley, R.; Lockett, E.; Parkin, T. D.

Title

Mental wellbeing of equine veterinary surgeons, veterinary nurses and veterinary students during the COVID-19 pandemic.

Source

Equine Veterinary Education; 2020. 33(1):15-23. 22 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Summary:** The rapid global spread of COVID-19 necessitated changes to national behavioural patterns and working practices, including self-isolating, maintenance of social distancing and lockdowns. These steps are likely to have had consequences for mental health and wellbeing. **Objectives:** To assess the mental wellbeing of equine veterinary surgeons, equine veterinary nurses and veterinary students during the COVID-19 pandemic and the associated lockdown in the UK in June 2020. **Study design:** Electronic survey. **Methods:** The survey was run between 6 June 2020 and 14 June 2020, and consisted of 22 closed and open questions, including the 14-item scale Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS). The questionnaire was distributed through email via the British Equine Veterinary Association (BEVA) membership database. **Results:** A total of 451 responses were received. The mean scores for the WEMWBS for veterinary surgeons, veterinary nurses and veterinary students were 47.17, 39.53 and 44.29 respectively. These compare to 48.08 and 46.38 for equine veterinary surgeons and nurses respectively in the 2019 RCVS survey of the profession. The WEMWBS results indicated lower levels of mental wellbeing in equine veterinary nurses/student veterinary nurses and veterinary students, compared to equine veterinary surgeons, as well as in furloughed equine veterinary surgeons compared to working equine veterinary surgeons. **Main limitations:** Risk of self-selection bias and reporting bias. Low numbers of veterinary nurse respondents. **Conclusions:** There were lower levels of mental wellbeing among equine veterinary surgeons and equine veterinary nurses during the COVID-19 pandemic compared to the situation prior to the COVID-19 pandemic. Equine veterinary nurses appeared to be more likely to report lower mental wellbeing than veterinary surgeons, and furloughed veterinary surgeons reported lower levels of mental wellbeing than veterinary surgeons that continued working during the lockdown.

Publication Type

Journal article.

<162>

Accession Number

20210008673



Author

Kemkaran-Thompson, L.

Title

How will the psychological impact of COVID-19 affect different personality types?

Source

In Practice; 2020. 42(6):361-364. 8 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Covid-19 has had an impact on everyone in extremely different ways; understanding this, and subsequently approaching everyone's challenges individually, is the starting point to getting your team back on track.

Publication Type

Journal article.

<163>

Accession Number

20210008183

Author

Berber, E.; Sumbria, D.; Singla, L. D.; Canakoglu, N.

Title

Comprehensive appraisal of COVID-19 infection and interaction with domesticated and wild faunae.

Source

Indian Journal of Veterinary Sciences and Biotechnology; 2020. 16(2/3/4):1-6. 40 ref.

Publisher

Indian Journal of Field Veterinarians, Academia Publishers

Location of Publisher

Indore

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Country of Publication

India

Abstract

Corona virus has a wide host range in animal kingdom including humans. Till 2002, the information related to human lethality due to corona virus infection was very scanty and signs were uncommon. But early in 2002, appearance of a syndrome associated with severe acute respiratory syndrome (SARS) has changed the whole scenario in relation to mortality in homo sapiens, and this SARS outbreaks was followed by Middle East respiratory syndrome (MERS) in 2012 and currently in 2019-2020 we are dealing with corona virus disease 2019 (COVID-19) pandemic, caused by corona virus 2 (SARS-CoV-2) which is genetically closely related to SARS-CoV. SARS-CoV-2 spike (S) protein interact with human angiotensin-converting enzyme 2 (ACE2) protein and gain excess to human cells for replication and this action lead to devastating outcome in humans they infect along with excessive cytokine storm. In this current review we have tried to give some update related to COVID-19 infection, major risk factor analysis playing an imperative role in changing the outcome of disease. Further we have detailed the COVID-19 status in domestic and wild animals and how we can deal with understanding the pathogenicity of COVID-19 by using various animal model.

Publication Type

Journal article.

<164>

Accession Number

20210007659

Author

Koshak, A. E.; Koshak, E. A.

Title

*Nigella sativa* L as a potential phytotherapy for coronavirus disease 2019: a mini review of in silico studies.

Source

Current Therapeutic Research; 2020. 93. 30 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Coronaviruses are responsible for several human diseases, such as the infectious novel coronavirus disease 2019 (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). *Nigella sativa* is a natural food supplement with a known safety profile that may provide a wealth of documented antiviral compounds. Background: To explore the studies supporting the *N sativa* potential for hitting SARS-CoV-2 targets. Methods: A literature search for published or preprint in silico studies between 1990 and 2020 in electronic databases (PubMed, Science Direct, Scopus, and Google Scholar) was performed for the terms *Nigella sativa*, black seed, coronavirus, SARS-CoV-2, and COVID-19. Results: At least 8 in silico studies have shown that some compounds of *N sativa*, including nigelledine, a-hederin, hederagenin, thymohydroquinone, and thymoquinone, had high to moderate affinity with SARS-CoV-2 enzymes and proteins. These compounds may potentially inhibit SARS-CoV-2 replication and attachment to host cell receptors. Conclusions: These preliminary data of in silico studies propose *N sativa* as a potential phytotherapy candidate for COVID-19. Further preclinical experimental evidence is required followed by a Phase I clinical trial.

#### Publication Type

Journal article.

<165>

#### Accession Number

20210006216

#### Author

Andrade-Sifuentes, A.; Fortis-Hernandez, M.; Preciado-Rangel, P.; Orozco-Vidal, J. A.; Yescas-Coronado, P.; Rueda-Puente, E. O.

#### Title

Azospirillum brasilense and solarized manure on the production and phytochemical quality of tomato fruits (*Solanum lycopersicum* L.).

#### Source

Agronomy; 2020. 10(12). 71 ref.

#### Publisher

MDPI Publishing

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Tomato is a vegetable crop with probiotic interest. Currently subject to a global biosecurity emergency due to the epidemic caused by COVID-19, humanity is seeking to maintain its health and become stronger by eating vegetables that have probiotic properties. Considering the request of tomato farmers in the

Comarca Lagunera (CL) region, the objective of this work consisted of determining the impact of bioinoculation with *Azospirillum brasilense* (Ab) and solarized manure (M) on the yield and phytochemical quality of tomato fruits produced in shade mesh. Seeds of the saladette variety TOP 2299 were inoculated with Ab at  $1 \times 10^8$  CFU.mL. Before 46 days after being sowed, seedlings were transplanted in soil enriched with manure solarized at a rate of 0, 40, 80, 120 and 160 t ha<sup>-1</sup>; a chemical fertilization (CHF) treatment was also adopted (366-95-635). Emergence, growth, root length, bromatological studies (protein and lipids in plant), yield and organoleptic (Vit C, phenols, flavonoids and lycopene) variables were considered. The results show that biofertilization based on Ab + M40 can be an alternative to produce tomato in shade-house conditions in the CL compared with non-inoculated and CHF treatments.

#### Publication Type

Journal article.

<166>

#### Accession Number

20210004580

#### Author

Song JunKe; Zhang Li; Xu YanFeng; Yang DeZhi; Yang ShiYing; Zhang Wen; Wang JinHua; Tian Shuo; Yang ShengQian; Yuan TianYi; Liu AiLin; Lv Qi; Li FengDi; Liu HongQi; Hou BiYu; Peng XiaoZhong; Lu Yang; Du GuanHua

#### Title

The comprehensive study on the therapeutic effects of baicalein for the treatment of COVID-19 in vivo and in vitro.

#### Source

Biochemical Pharmacology; 2021. 183. 46 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Baicalein is the main active compound of *Scutellaria baicalensis* Georgi, a medicinal herb with multiple pharmacological activities, including the broad anti-virus effects. In this paper, the preclinical study of baicalein on the treatment of COVID-19 was performed. Results showed that baicalein inhibited cell damage induced by SARS-CoV-2 and improved the morphology of Vero E6 cells at a concentration of 0.1 M and above. The effective concentration could be reached after oral administration of 200 mg/kg crystal form beta of baicalein in rats. Furthermore, baicalein significantly inhibited the body weight loss, the

replication of the virus, and relieved the lesions of lung tissue in hACE2 transgenic mice infected with SARS-CoV-2. In LPS-induced acute lung injury of mice, baicalein improved the respiratory function, inhibited inflammatory cell infiltration in the lung, and decreased the levels of IL-1beta and TNF-a in serum. In conclusion, oral administration of crystal form beta of baicalein could reach its effective concentration against SARS-CoV-2. Baicalein could inhibit SARS-CoV-2-induced injury both in vitro and in vivo. Therefore, baicalein might be a promising therapeutic drug for the treatment of COVID-19.

#### Publication Type

Journal article.

<167>

#### Accession Number

20203597796

#### Author

Sabato, L. de; Bartolo, I. di; Marco, M. A. de; Moreno, A.; Lelli, D.; Cotti, C.; Delogu, M.; Vaccari, G.

#### Title

Can coronaviruses steal genes from the host as evidenced in western European Hedgehogs by EriCoV genetic characterization?

#### Source

Viruses; 2020. 12(12). 46 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Due to their need for living cells, viruses have developed adaptive evolutionary strategies to survive and perpetuate in reservoir hosts that play a crucial role in the ecology of emerging pathogens. Pathogenic and potentially pandemic betacoronaviruses arose in humans in 2002 (SARS-CoV, disappeared in July 2003), 2012 (MERS-CoV, still circulating in Middle East areas), and 2019 (SARS-CoV-2, causing the current global pandemic). As universally recognized, bats host ancestors of the above-mentioned zoonotic viruses. However, hedgehogs have been recently identified in Europe and Asia as possible reservoirs of MERS-CoV-like strains classified as *Erinaceus coronavirus* (EriCoV). To elucidate the evolution and genetics of EriCoVs, NGS (next generation sequencing) and Sanger sequencing were used to examine fecal samples collected in Northern Italy in 2018/2019 from 12 hedgehogs previously found EriCoV-positive by RT-PCR. By sequence analysis, eight complete EriCoV genomes, obtained by NGS, showed a high phylogenetic correlation with EriCoV strains previously reported in Eurasia. Interestingly, eight viral strains presented an additional ORF

encoding for the CD200 ortholog located between the genes encoding for the Spike and the ORF3a proteins. The CD200 ortholog sequences were closely similar to the host CD200 protein but varying among EriCoVs. The result, confirmed by Sanger sequencing, demonstrates for the first time that CoVs can acquire host genes potentially involved in the immune-modulatory cascade and possibly enabling the virus to escape the host defence.

#### Publication Type

Journal article.

<168>

#### Accession Number

20203596671

#### Author

Gaudencio, S. P.; Pereira, F.

#### Title

A computer-aided drug design approach to predict marine drug-like leads for SARS-CoV-2 main protease inhibition.

#### Source

Marine Drugs; 2020. 18(12). 41 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The investigation of marine natural products (MNPs) as key resources for the discovery of drugs to mitigate the COVID-19 pandemic is a developing field. In this work, computer-aided drug design (CADD) approaches comprising ligand- and structure-based methods were explored for predicting SARS-CoV-2 main protease (Mpro) inhibitors. The CADD ligand-based method used a quantitative structure-activity relationship (QSAR) classification model that was built using 5276 organic molecules extracted from the ChEMBL database with SARS-CoV-2 screening data. The best model achieved an overall predictive accuracy of up to 67% for an external and internal validation using test and training sets. Moreover, based on the best QSAR model, a virtual screening campaign was carried out using 11,162 MNPs retrieved from the ReaxysR database, 7 in-house MNPs obtained from marine-derived actinomycetes by the team, and 14 MNPs that are currently in the clinical pipeline. All the MNPs from the virtual screening libraries that were predicted as belonging to class A were selected for the CADD structure-based method. In the CADD structure-based approach, the 494 MNPs selected by the QSAR approach were screened by molecular

docking against Mpro enzyme. A list of virtual screening hits comprising fifteen MNPs was assented by establishing several limits in this CADD approach, and five MNPs were proposed as the most promising marine drug-like leads as SARS-CoV-2 Mpro inhibitors, a benzo[f]pyrano[4,3-b]chromene, notoamide I, emindole SB beta-mannoside, and two bromoindole derivatives.

Publication Type

Journal article.

<169>

Accession Number

20203595130

Author

Murakami, S.; Kitamura, T.; Suzuki, J.; Sato, R.; Aoi, T.; Fujii, M.; Matsugo, H.; Kamiki, H.; Ishida, H.; Takenaka-Uema, A.; Shimojima, M.; Horimoto, T.

Title

Detection and characterization of bat sarbecovirus phylogenetically related to SARS-CoV-2, Japan.

Source

Emerging Infectious Diseases; 2020. 26(12):3025-3029. 15 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

Epidemiology of bat Betacoronavirus, subgenus Sarbecovirus is largely unknown, especially outside China. We detected a sarbecovirus phylogenetically related to severe acute respiratory syndrome coronavirus 2 from *Rhinolophus cornutus* bats in Japan. The sarbecovirus' spike protein specifically recognizes angiotensin-converting enzyme 2 of *R. cornutus*, but not humans, as an entry receptor.

Publication Type

Journal article.

<170>

Accession Number

20203595100

Author

Totura, A.; Livingston, V.; Frick, O.; Dyer, D.; Nichols, D.; Nalca, A.

Title

Small particle aerosol exposure of African green monkeys to MERS-CoV as a model for highly pathogenic coronavirus infection.

Source

Emerging Infectious Diseases; 2020. 26(12):2835-2843. 36 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

Emerging coronaviruses are a global public health threat because of the potential for person-to-person transmission and high mortality rates. Middle East respiratory syndrome coronavirus (MERS-CoV) emerged in 2012, causing lethal respiratory disease in right-pointing-double-angle 35% of cases. Primate models of coronavirus disease are needed to support development of therapeutics, but few models exist that recapitulate severe disease. For initial development of a MERS-CoV primate model, 12 African green monkeys were exposed to 103, 104, or 105 PFU target doses of aerosolized MERS-CoV. We observed a dose-dependent increase of respiratory disease signs, although all 12 monkeys survived for the 28-day duration of the study. This study describes dose-dependent effects of MERS-CoV infection of primates and uses a route of infection with potential relevance to MERS-CoV transmission. Aerosol exposure of African green monkeys might provide a platform approach for the development of primate models of novel coronavirus diseases.

Publication Type

Journal article.

<171>

Accession Number



20203588326

Author

Fritz, M.; Rosolen Beatrice; Krafft, E.; Becquart, P.; Elguero, E.; Vratskikh, O.; Denolly, S.; Boson, B.; Vanhomwegen, J.; Gouilh, M. A.; Kodjo, A.; Chirouze Catherine; Rosolen, S. G.; Legros, V.; Leroy, E. M.

Title

High prevalence of SARS-CoV-2 antibodies in pets from COVID-19+ households.

Source

One Health; 2020. 11. 17 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In a survey of household cats and dogs of laboratory-confirmed COVID-19 patients, we found a high seroprevalence of SARS-CoV-2 antibodies, ranging from 21% to 53%, depending on the positivity criteria chosen. Seropositivity was significantly greater among pets from COVID-19+ households compared to those with owners of unknown status. Our results highlight the potential role of pets in the spread of the epidemic.

Publication Type

Journal article.

<172>

Accession Number

20203580522

Author

Nair, B. B.; Satyajit Sinha

Title

COVID-19 and future travel perspectives: an empirical study on travel history and travel decision choices.

Source

Enlightening Tourism: A Pathmaking Journal (ET); 2020. 10(2):306-322. 29 ref.

Publisher

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University of Huelva

Location of Publisher

Huelva

Country of Publication

Spain

Abstract

COVID-19 has heavily influenced people all around the world and forced us to acclimatise to a New Normal. Post-COVID-19 scenarios are predicted that impose specific criteria on travel choices that could change the present tourism equilibrium. Addressing these impulses is crucial for travel destinations for their resilience and recovery. This paper presents preliminary insights into present travel decisions and speculates about potential future, post-COVID-19 choices. An online survey of 449 participants used to investigate the underlying dimensions of destination selection motivations, and to explore the significant differences between the characteristics of travellers in destination-choice-based motivators (DCBMs) for destination selections post-COVID-19. Three motivators for the choice of destinations were derived: accessibility and discounting, health and hygiene, and the history of low incidences of COVID-19. Results also identified interrelationships between travel history and destination selection motivators: participants who had undergone a prolonged quarantine period were highly motivated by 'accessibility and discounting' and 'health and hygiene' factors. In contrast, people with no international travel experience were more concerned with low COVID-19 incidences in the destination(s).

Publication Type

Journal article.

<173>

Accession Number

20203580097

Author

Biesen, S. van; Kwa, D.; Bosman, R. J.; Juffermans, N. P.

Title

Detection of invasive pulmonary aspergillosis in COVID-19 with nondirected BAL.

Source

American Journal of Respiratory and Critical Care Medicine; 2020. 202(8):1171-1173.

Publisher

American Thoracic Society

Location of Publisher

New York

Country of Publication

USA

Abstract

Invasive pulmonary aspergillosis (IPA) can complicate influenza pneumonia in critically ill patients owing to viral destruction of bronchial mucosa, facilitating invasion of *Aspergillus* species, and compromised host defenses to *Aspergillus*. Using this nondirected BAL technique as a standard approach, this study aimed to determine the proportion of patients with IPA in a cohort of patients with COVID-19 (PCR confirmed) requiring mechanical ventilation who were consecutively admitted to the ICU of our teaching hospital during a 3-week time frame in April 2020. Of 53 included patients, 2 patients died within 24 hours after admission and 9 patients were transferred to another hospital for logistical reasons shortly after admission. The remaining 42 patients underwent a nondirected BAL. A classical IPA risk factor was present in only one patient, who received immunosuppressive medication in the context of a renal transplant. None of the other patients received corticosteroid treatment before or during ICU admission. Patients with IPA more often had chronic obstructive pulmonary disease or asthma compared with those without IPA, which may suggest a role for impaired ciliary clearance. Early detection and treatment of IPA improves outcome compared with delayed diagnosis. Therefore, the study opted to treat all nine patients who were deemed to have putative IPA with antifungal therapy (with an empirical regimen consisting of amphotericin B and voriconazole). The study noted a longer ICU length of stay for patients who developed IPA, although ICU mortality did not differ between groups. The incidence of putative IPA may be high in patients with COVID-19 and that chronic obstructive pulmonary disease may be a particular risk factor. Implementation of surveillance of mechanically ventilated patients with COVID-19 using the nondirected BAL technique is feasible. As COVID-19-associated IPA appears to resemble influenza-associated IPA in many ways, and ICU length of stay was longer in those with IPA versus those without, it is our opinion that active surveillance and treatment may be beneficial in patients with COVID-19.

Publication Type

Correspondence.

<174>

Accession Number

20203578793

Author

Kim, A. W.

Title

Promoting mental health in community and research settings during COVID-19: perspectives and experiences from Soweto, South Africa. (Special Issue: Human biologists Confront the COVID-19 Pandemic.)

Source

American Journal of Human Biology; 2020. 32(5). 29 ref.

Publisher

Wiley

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Location of Publisher

Hoboken

Country of Publication

USA

Abstract

This commentary describes the potential mental health consequences of the ongoing COVID-19 pandemic in Soweto, South Africa, and offers potential strategies for promoting mental health in research and community settings during the pandemic. It provides ethnographic accounts of COVID-19 through the lens of a fieldwork on trauma and mental health, and discusses new steps put in place to safeguard the mental health of research staff, study participants and their communities. It offers these reflections not as a prescriptive model for researchers but to create a space to share effective strategies, discuss problems, and initiate a broader dialogue on this underappreciated aspect of fieldwork.

Publication Type

Correspondence.

<175>

Accession Number

20203576860

Author

Omaswa, F.

Title

African countries should use COVID-19 as an opportunity to make health development happen in communities.

Source

Africa Health; 2020. 42(4):7-7.

Publisher

FSG Communications Ltd

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

In the first week of October, a team from ACHEST and the Ministry of Health visited a Community Health initiative in the Ngora district of Eastern Uganda where ACHEST is implementing a pilot on inter-sectoral

collaboration for health in five villages. Village Health Teams (VHTs) working under the oversight of the village administrator have mapped and numbered all households. They visit five to ten households each day, maintain a Village Health Register containing a record of the health status of members of households, share information with the families and advocate health-seeking behaviour, home cleanliness and hygiene. VHTs are facilitated with bicycles and cell phones and receive the equivalent of \$50 each month as compensation. The overall goal is that all people in Uganda are aware, empowered and are participating actively in the prevention and control of COVID-19 as both a duty and a right, using existing structures, systems and resources as much as possible. This is underpinned by the principle that individuals have the primary responsibility for maintaining their own health and that of their families and communities. They are supported, where necessary, by skills, knowledge and technology of the professionals. Expected outcomes from the Uganda CES are that: (1) Communities are mobilised, aware, trusting and taking ownership of personal and community responsibility for health and wellbeing, (2) Communities are actively implementing COVID-19 SOPs and the pandemic is suppressed and mitigated, (3) Uganda's health system is strengthened and better prepared to achieve SDGs and UHC long after COVID-19, and that (4) Inter-sectoral collaboration and the Whole-of-Society approach for health is institutionalised in Uganda.

#### Publication Type

Correspondence.

<176>

#### Accession Number

20203573203

#### Author

Morales Perez, M.; Garcia Mesa, M. T.; Acosta Luz, L. L. de la; Vega Jimenez, J.; Cespedes, I.; Perdomo Delgado, J.

#### Title

A natural alternative for the treatment of COVID-19. [Spanish]

#### Source

Revista Cubana de Plantas Medicinales; 2020. 25(1). 59 ref.

#### Publisher

Editorial Ciencias Medicas

#### Location of Publisher

Havana

#### Country of Publication

Cuba

#### Abstract

Introduction: COVID-19, the disease caused by the novel coronavirus SARS-CoV2, has affected humankind since the end of last year. In few months the disease has reached the category of pandemic. Background:

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Identify the potential of the Basic Chart of Cuban Natural Products as a natural alternative for the treatment of COVID-19. Method: A qualitative study was conducted through a literature and document review in wide scope digital data sources (Google, SciELO, DOAJ, Latindex, Scopus). Quality and topicality were taken into account. Discussion: This virus acts upon the human organism in a number of different manners. It most commonly affects the respiratory, immune and cardiovascular systems, and oxidative stress. The Basic Chart of Cuban Natural Products includes several natural products with therapeutic potential substantiated by scientific evidence contributed by non-clinical or clinical pharmacological research. Products were found which have a bronchodilating and anti-inflammatory effect at pulmonary level, such as those contained in aloe, majagua and sweet orange, and those which stimulate the immune system and improve oxidative stress, such as beehive-derived products. Conclusions: Phytotherapy is a valid alternative for preventive and symptomatic treatment of COVID-19. According to its efficacy and proven pharmacological effects, Asmacan is the natural product with the best projection, but selection of one or another product could depend on whether the purpose is preventive or curative, and in the latter case the disease stage. Its association with sweet orange may enhance the benefits. Consumption of natural products in combination with conventional treatments should be evaluated to prevent possible adverse reactions associated to drug interactions.

#### Publication Type

Journal article.

<177>

#### Accession Number

20203570883

#### Author

Muhammad Mumtaz Khan; Akram, M. T.; Rhonda Janke; Qadri, R. W. K.; Abdullah Mohammed Al-Sadi; Farooque, A. A.

#### Title

Urban horticulture for food secure cities through and beyond COVID-19.

#### Source

Sustainability; 2020. 12(22). 135 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Sufficient production, consistent food supply, and environmental protection in urban +settings are major global concerns for future sustainable cities. Currently, sustainable food supply is under intense pressure due to exponential population growth, expanding urban dwellings, climate change, and limited natural resources. The recent novel coronavirus 2019 (COVID-19) pandemic crisis has impacted sustainable fresh food supply, and has disrupted the food supply chain and prices significantly. Under these circumstances, urban horticulture and crop cultivation have emerged as potential ways to expand to new locations through urban green infrastructure. Therefore, the objective of this study is to review the salient features of contemporary urban horticulture, in addition to illustrating traditional and innovative developments occurring in urban environments. Current urban cropping systems, such as home gardening, community gardens, edible landscape, and indoor planting systems, can be enhanced with new techniques, such as vertical gardening, hydroponics, aeroponics, aquaponics, and rooftop gardening. These modern techniques are ecofriendly, energy- saving, and promise food security through steady supplies of fresh fruits and vegetables to urban neighborhoods. There is a need, in this modern era, to integrate information technology tools in urban horticulture, which could help in maintaining consistent food supply during (and after) a pandemic, as well as make agriculture more sustainable.

#### Publication Type

Journal article.

<178>

#### Accession Number

20203569774

#### Author

Barroso, B.; Valverde-Monge, M.; Canas, J. A.; Rodrigo-Munoz, J. M.; Gonzalez-Cano, B.; Villalobos-Violan, V.; Betancor, D.; Gomez-Cardenosa, A.; Vallejo-Chamorro, G.; Baptista-Serna, L.; Villalobos-Vilda, C.; Ortega-Martin, L.; Gomez-Lopez, A.; Sanchez-Pernaute, O.; Romero-Bueno, F.; Rodriguez-Nieto, M. J.; Pozo, V. del; Sastre, J.

#### Title

Prevalence, characteristics, and outcome of asthmatic patients with type 2 diseases in hospitalized patients with COVID-19 in Madrid, Spain.

#### Source

Journal of Investigational Allergology and Clinical Immunology; 2020. 30(5):382-384. 12 ref.

#### Publisher

Esmon Publicidad, S.A.

#### Location of Publisher

Barcelona

#### Country of Publication

Spain

#### Abstract

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The prevalence of asthma and type 2 diseases was determined in 189 adult patients hospitalized with COVID-19 at Fundacion Jimenez Diaz University Hospital, Madrid, Spain, between 1 and 21 March 2020. The electronic medical records of the patients were retrospectively reviewed and their demographic and clinical characteristics were analysed. Of the 189 patients, 44 (23.28%) had a type 2 disease, with drug allergy (13.70%) being the most frequent, followed by allergic rhinitis (7.40%) and asthma (11 patients, 5.80%). Four patients had food allergy, 2 had chronic urticaria, and one each had nasal polyps and atopic dermatitis. 20 patients had aeroallergen sensitization, primarily to pollens (n=13) and dust mites (n=5). Of the 11 asthmatic patients, 6 had allergic asthma (2 sensitized to pollens and pet dander, 3 to pollen only, and one self-reported). Six had intermittent asthma and were taking short-acting ss2-agonists as needed, and 5 had moderate asthma and were taking long-acting ss2-agonists combined with inhaled corticosteroids (LABA/ICS). Two patients were taking low-dose LABA/ICS (one with prednisone 5 mg/d for rheumatoid arthritis) and the other 3 with medium-dose LABA/ICS (one with montelukast 10 mg/d). 10 of the 11 patients had well-controlled asthma, and one had partially controlled asthma (medium-dose LABA/ICS and montelukast). Only one of the 5 patients with moderate asthma adhered well to treatment. Two patients had an asthma exacerbation on admission for COVID-19. One died in the intensive care unit owing to complications of orotracheal intubation. Two asthmatics were admitted to the intensive care unit, and 2 asthmatic patients died during admission. All patients received medication according to an evolving COVID-19 protocol. Comparison of the asthmatic and non-asthmatic groups revealed that asthmatic patients were predominantly female. There were no significant differences in age, body mass index, smoking habit or non-type 2 comorbidities. The association with allergic rhinitis was significantly stronger in asthmatic patients. No statistical differences were found between the groups for chest x-ray findings, COVID-19 symptoms, hospital stay, ICU admissions or deaths. However, the non-asthmatic group had higher D-dimer on admission (4 times higher); the differences with the asthmatic group were not significant. No significant differences were found between the groups for other laboratory findings (leukocytes, eosinophils, lymphocytes, C-reactive protein, D-dimer, ferritin) on admission or at discharge. In this study, the prevalence of asthma agrees with most published data in Europe and is similar to that of the general population in Spain.

#### Publication Type

Journal article.

<179>

#### Accession Number

20203557535

#### Author

Otekunrin, O. A.; Otekunrin, O. A.; Fasina, F. O.; Omotayo, A. O.; Akram, M.

#### Title

Assessing the zero hunger target readiness in Africa in the face of COVID-19 pandemic.

#### Source

Caraka Tani: Journal of Sustainable Agriculture; 2020. 35(2):213-227. many ref.

#### Publisher

Universitas Sebelas Maret

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Location of Publisher

Surakarta

Country of Publication

Indonesia

Abstract

Sustainable Development Goal 2 (SDG 2) is hinged on achieving zero hunger target globally by 2030. Many developing countries, especially African countries, are challenged with extreme hunger that are often caused or compounded by bad governance, conflicts and climate change. In this paper, we assess Africa's readiness towards attaining the zero hunger target by 2030 in the face of COVID-19 pandemic. Patterns of Global Hunger Index (GHI) and each of its indicators across Africa are compared before the pandemic (2000-2019). The effect of the pandemic on the hunger situation in Africa is discussed by highlighting the mitigating measures put in place by selected African governments. We have found that most African countries have recorded steady reduction in their child mortality rates but high prevalence of undernourishment, stunting and child wasting indicates significant challenges hampering the achievement of the zero hunger target. The study recommends that African governments should prioritize sustainable agricultural practices and give serious attention to the formulation and implementation of policies that reduce hunger against the COVID-19 pandemic.

Publication Type

Journal article.

<180>

Accession Number

20203555609

Author

Nwanaji-Enwerem, J. C.; Allen, J. G.; Beamer, P. I.

Title

Another invisible enemy indoors: COVID-19, human health, the home, and United States indoor air policy.

Source

Journal of Exposure Science and Environmental Epidemiology; 2020. 30(5):773-775. 20 ref.

Publisher

Nature Publishing Group

Location of Publisher

New York

Country of Publication

USA

## Abstract

This article aims to describe common sources of indoor air pollution, the health impacts of indoor pollutants, and populations disparately impacted by COVID-19 and poor indoor air quality. Furthermore, this details the need for better legislation that promotes the integrity of the indoor air environment, and what individuals can do to personally protect themselves as we await more comprehensive indoor air legislation. Following the emergence of the novel respiratory virus SARS-CoV-2 (COVID-19), many environmental health experts quickly identified the potentially disastrous public health ramifications of concurrent infectious and air pollution-mediated disease. However, much of this discussion has focused on the outdoors. Annually, 3.8 million people worldwide prematurely die from illnesses attributable to household air pollution. One common misconception is that the indoor air environment is simply a reflection of the outdoor milieu; however, this is not always the case. Outdoor air pollution penetrates indoors, and because Americans spend a majority of their times indoors (>90%), the majority of exposure to outdoor air pollution occurs indoors. Nevertheless, there are distinct, important sources of indoor air pollution. Fireplaces, kitchens, furniture, wall insulation, and personal care products, are just some noteworthy sources of indoor pollutants. In contrast to the outdoors where federal mandates like the Clean Air Act of 1970 have been passed to maintain air quality, direct top-level legislation for indoor air quality has been lacking. The Environmental Protection Agency (EPA) Indoor Air Quality program was slated to be cut in the 2019 federal budget, and at present the EPA does not regulate indoor air. Some may point to the U.S. Housing Act (1937), the Safe Water Drinking Act (1974), the Residential Lead Hazard Reduction Act (1992), and the updated Toxic Substances Control Act (TSCA) (2016) as examples of legislation addressing the indoor environment. The existing discrepancy in the frameworks for regulating outdoor and indoor air can be partially explained by the perception of outdoor air as a shared public good, but indoor air as a discrete personal resource with non-communal impacts. Yet, COVID-19 demonstrates how this logic easily falls apart. The main premise for social distancing and stay-at-home orders is to safeguard the individual and society at-large from peaks in infection that would overwhelm the nation's healthcare system.

## Publication Type

Correspondence.

<181>

## Accession Number

20203533818

## Author

Yi ChangHua; Yi YongXiang; Li JunWei

## Title

mRNA vaccines: possible tools to combat SARS-CoV-2. (Special Issue: SARS-CoV-2 and COVID-19.)

## Source

Virologica Sinica; 2020. 35(3):259-262. 20 ref.

## Publisher

Springer Singapore

Location of Publisher

Singapore

Country of Publication

Singapore

Abstract

Among these SARS-CoV-2 vaccine candidates, mRNA vaccines are quite remarkable. What is mRNA vaccine? Unlike traditional vaccines, an mRNA vaccine consists of an mRNA sequence encoding a disease-specific antigen. Once delivered into target cells, the antigen is expressed, processed, presented and recognized by the immune system, and a strong humoral and T cell immune response will be instigated. Compared to vaccine production of whole microbes, live attenuated and subunit vaccines, mRNA vaccines are believed to be faster and less expensive to produce, and they do not involve in any living stage of the pathogenic virus or bacteria. This manufacturing process makes mRNA vaccines a promising bioproduct and potentially fills the gap between the desperate demand for vaccines to control disease outbreaks and epidemics, with the potential to scale and standardize the vaccine manufacturing process. Currently, most of the components needed for mRNA vaccine production are available at the Good Manufacturing Practices (GMP) grade to satisfy commercialization. In the last two decades, mRNA vaccines have been investigated extensively for infectious disease prevention and cancer immunotherapy. Several mRNA vaccines against infectious disease have showed a promising future, such as mRNA vaccines against influenza viruses, rabies virus, HIV, Ebola virus, and Zika virus. The growing body of preclinical and clinical results demonstrates that prophylaxis and therapy with mRNA promises to be useful for the prevention of infectious disease and that mRNA vaccines are safe and tolerated in animal models and humans. Despite the great challenges in the creation of new processes to generate mRNA vaccines, such as delivery and translation efficiency, these processes hopefully will be streamlined to establish large-scale production. It is just a matter of time for mRNA vaccines to be used in humans and animals.

Publication Type

Journal article.

<182>

Accession Number

20203526534

Author

Silva, C. M. da; Arbilla, G.

Title

COVID-19: challenges for a new epoch.

Source

Revista da Sociedade Brasileira de Medicina Tropical; 2020. 53. 12 ref.

Publisher

Sociedade Brasileira de Medicina Tropical

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Location of Publisher

Uberaba

Country of Publication

Brazil

Abstract

The arrival of Europeans in America was considered as the first globalization event where the two civilizations met on unequal terms after 12,000 years of separation. Smallpox emerged in January 1519 and spread rapidly to the mainland of Central America. Native Americans had no immunity to the infections brought in by the Europeans. Smallpox, influenza, measles, typhus, pneumonia, scarlet fever, malaria, and yellow fever emerged subsequently and affected millions. Approximately 90% of the estimated 50-80 million Native American population died of these diseases, which suggests approximately 10% of mankind died during 1493-1650. This event initiated the globalization and homogenization of the world's species and disease. All these factors, in addition to political destabilization and civil and international wars, led to poverty, increase in maternal and child death, and spread of diseases. NTDs along with other infections such as leishmaniasis, schistosomiasis, and Middle East Respiratory Syndrome (MERS) coronavirus infection, measles, and polio spread in the Middle East and North Africa. During 2014-2015, the Western African Ebola virus epidemic decimated numerous families and caused a socioeconomic disruption in Guinea, Liberia, and Sierra Leone. Preparedness is crucial to reduce the health, economic, and social impacts of a future epidemic, it is also the only way to avoid the spread of other diseases. Pandemics are not aleatory events but are the consequence of human interactions with the environment and could be avoided or reduced through science and investments in health, education and transportation and improved through better conditions of living. This is an opportunity for the global community to take advantage of the spirit of cooperation, embrace diversity and arrive at a necessary common global agreement to manage the future of Earth collectively.

Publication Type

Correspondence.

<183>

Accession Number

20203524944

Author

Karl, M.; Muskat, B.; Ritchie, B. W.

Title

Which travel risks are more salient for destination choice? An examination of the tourist's decision-making process.

Source

Journal of Destination Marketing & Management; 2020. 18. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The paper examines which travel risks are more salient for tourists' destination choice. An integrated travel-decision risk typology with survey data from 835 potential tourists is developed and tested. Specifically, this paper explores the interplay of risk types, tourist attributes and destination characteristics. It examines if travel risks linked to nature, health, terrorism, criminality, political instability are more salient for tourists' destination choice, and how risk perceptions influence tourists in the key stages of the decision-making process. Results offer an important baseline for future studies in the post-COVID-19 phase. First, the integrated travel-decision risk typology distinguishes between sociodemographic, psychological and travel-related factors. It shows that past travel experience shapes risk perceptions and impacts tourists' future destination choice. Second, the study reveals that natural hazards are not the key barrier in the early decision-making stage of the destination choice process. Third, tourist segments that are resilient to certain risks are identified. This paper concludes with implications for the tourism practice with recommendations on how to manage travel risk and decision-making behaviours in the post-COVID-19 phase.

Publication Type

Journal article.

<184>

Accession Number

20203520046

Author

Apaijitt, P.; Viroj Wiwanitkit

Title

Knowledge of coronavirus disease 2019 (COVID-19) by medical personnel in a rural area of Thailand.

Source

Infection Control and Hospital Epidemiology; 2020. 41(10):1243-1244. 3 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

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UK

Abstract

The knowledge about coronavirus disease 2019 (COVID-19) of 124 medical personnel (42 men and 82 women; average age, 36.7+or-7.9 years) working in rural Nang Rong district, Buriram Province, Thailand was investigated. The medical personnel included 5 physicians, 81 nurses, 20 nurse assistants, 12 public health workers and 6 other medical workers who were administered a 10-item questionnaire. Results revealed that the average total knowledge score of the medical personnel was 6.26 +or-1.42. There was no association between the total knowledge score and sex or age, but there was a significant association between total knowledge score and type of medical personnel. Many medical personnel still have a low level of overall knowledge about COVID-19, despite the emergence of the disease in the country and after several public health policies counteracting the outbreak have been implemented. Some physicians have a lower knowledge score than non-physicians. These data indicate the necessity to improve education about the new disease among medical personnel.

Publication Type

Correspondence.

<185>

Accession Number

20203505787

Author

Goren, A.; McCoy, J.; Wambier, C. G.; Vano-Galvan, S.; Shapiro, J.; Dhurat, R.; Washenik, K.; Lotti, T.

Title

What does androgenetic alopecia have to do with COVID-19? An insight into a potential new therapy.

Source

Dermatologic Therapy; 2020. 33(4). 17 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

In late 2019, a novel coronavirus, subsequently named SARS-CoV-2 (COVID-19), was first reported in Hubei province in China. Since it was first reported, a worldwide pandemic has ensued affecting more than 450,000 individuals as of March 2020. In the midst of the pandemic, epidemiological reports unveiled a disproportionate low rate of severe cases among adult females compared to adult males, 42% and 58%,

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respectively. In newborns, it has long been recognized that male infants are more susceptible to respiratory distress syndrome and less likely to respond to prenatal glucocorticoid therapy to protect against respiratory distress. Respiratory distress is intimately tied to the production of pulmonary surfactant, for example, pulmonary surfactant proteins have been demonstrated to protect against influenza A. Additional evidence to the possible implication of androgens in COVID-19 infection severity is found in the molecular mechanism required for SARS-CoV-2 infectivity. SARS-CoV-2 is part of the coronavirus family of viruses including SARS-CoV-1 and MERS-CoV. To test this hypothesis, it would be informative to study the epidemiology of COVID-19 patients that are predisposed to either lower or higher AR expression, such as, males suffering from androgenetic alopecia, benign prostatic hyperplasia, or women suffering from polycystic ovary syndrome. In addition, analyzing ethnic variation in AR expression may predict COVID-19 ethnic mortality differences. Other potential drugs that could be studied include: cyproterone acetate, megestrol acetate, chlormadinone acetate, spironolactone, medrogestone, oxendolone, osaterone, bifluranol acetate, flutamide, bicalutamide, nilutamide, topilutamide, enzalutamide, apalutamide, dienogest, drospirenone, medrogestone, norgestrel acetate, promegestone, trimegestone, ketoconazole, abiraterone acetate, seviteronel, aminoglutethimide, dutasteride, epristeride, alfaestradiol, and isotretinoin. Taken together, the evidence warrants further studies to elucidate the role (if any) of the AR on the severity of COVID-19 infection.

#### Publication Type

Journal article.

<186>

#### Accession Number

20203490664

#### Author

Coche, R.; Lynn, B. J.

#### Title

Behind the scenes: COVID-19 consequences on broadcast sports production. (Special Issue: Sport and the coronavirus crisis.)

#### Source

International Journal of Sport Communication; 2020. 13(3):484-493. 17 ref.

#### Publisher

Human Kinetics

#### Location of Publisher

Leeds

#### Country of Publication

UK

#### Abstract

Live events are central to television production. Live sporting events, in particular, reliably draw big audiences, even though more consumers unsubscribe from cable to stream content on-demand. Traditionally, the mediated production of these sporting events have used technical and production crews working together on-site at the event. But technological advances have created a new production model, allowing the production crew to cover the event from a broadcast production hub, miles away, while the technical crew still works from the event itself. These remote integration model productions have been implemented around the world and across all forms of sports broadcasting, following a push for economic efficiency - fundamental in a capitalist system. This manuscript is a commentary on the effects of the COVID-19 global crisis on sports productions, with a focus on remote integration model productions. More specifically, the authors argue that the number of remote sports productions will grow exponentially faster, due to the pandemic, than they would have under normal economic circumstances. The consequences on sport media education and research are further discussed, and a call for much needed practice-based sports production research is made.

#### Publication Type

Journal article.

<187>

#### Accession Number

20203485854

#### Author

Yuan Shu; Jiang SiCong; Li ZiLin

#### Title

Analysis of possible intermediate hosts of the new coronavirus SARS-CoV-2.

#### Source

Frontiers in Veterinary Science; 2020. 6(June). 38 ref.

#### Publisher

Frontiers Media S.A.

#### Location of Publisher

Lausanne

#### Country of Publication

Switzerland

#### Abstract

In this paper the authors shared their opinions on the possible sources and complete route of transmission of Coronavirus SARS-CoV-2. Among the animals that were discussed as possible sources of Sars-COV-2 were bats, snakes, birds, rodents, palm civet, and other carnivorous animals.

#### Publication Type



Journal article.

<188>

Accession Number

20203433235

Author

Modak, T. S.; Sandipan Baksi; Deepak Johnson

Title

Impact of COVID-19 on Indian villages. (Special Issue: The impact of the COVID-19 pandemic.)

Source

Review of Agrarian Studies; 2020. 10(1):181-203. 5 ref.

Publisher

Foundation for Agrarian Studies

Location of Publisher

Kolkata

Country of Publication

India

Abstract

This note analyses the impact of the COVID-19 lockdown (which brought almost all economic and public activity in India to a halt) on a select group of villages based on a rapid assessment survey conducted by the Foundation for Agrarian Studies in April 2020. The evidence presented here strongly suggests that the lockdown has affected every aspect of the rural economy, including agriculture and allied activities, employment opportunities, and household incomes and consumption. However, the impact is differential across socio-economic classes and regions of the country.

Publication Type

Journal article.

<189>

Accession Number

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20210026642

Author

Hassert, M.; Geerling, E.; Stone, E. T.; Steffen, T. L.; Feldman, M. S.; Dickson, A. L.; Class, J.; Richner, J. M.; Brien, J. D.; Pinto, A. K.

Title

mRNA induced expression of human angiotensin-converting enzyme 2 in mice for the study of the adaptive immune response to severe acute respiratory syndrome coronavirus 2.

Source

PLoS Pathogens; 2020. 16(12). 60 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

The novel human coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused a pandemic. Critical to the rapid evaluation of vaccines and antivirals against SARS-CoV-2 is the development of tractable animal models to understand the adaptive immune response to the virus. To this end, the use of common laboratory strains of mice is hindered by significant divergence of the angiotensin-converting enzyme 2 (ACE2), which is the receptor required for entry of SARS-CoV-2. In the current study, we designed and utilized an mRNA-based transfection system to induce expression of the hACE2 receptor in order to confer entry of SARS-CoV-2 in otherwise non-permissive cells. By employing this expression system in an in vivo setting, we were able to interrogate the adaptive immune response to SARS-CoV-2 in type 1 interferon receptor deficient mice. In doing so, we showed that the T cell response to SARS-CoV-2 is enhanced when hACE2 is expressed during infection. Moreover, we demonstrated that these responses are preserved in memory and are boosted upon secondary infection. Importantly, using this system, we functionally identified the CD4+ and CD8+ structural peptide epitopes targeted during SARS-CoV-2 infection in H2b restricted mice and confirmed their existence in an established model of SARS-CoV-2 pathogenesis. We demonstrated that, identical to what has been seen in humans, the antigen-specific CD8+ T cells in mice primarily target peptides of the spike and membrane proteins, while the antigen-specific CD4+ T cells target peptides of the nucleocapsid, membrane, and spike proteins. As the focus of the immune response in mice is highly similar to that of the humans, the identification of functional murine SARS-CoV-2-specific T cell epitopes provided in this study will be critical for evaluation of vaccine efficacy in murine models of SARS-CoV-2 infection.

Publication Type

Journal article.

<190>

Accession Number

20210026450

Author

Shakir Ahamad; Branch, S.; Harrelson, S.; Hussain, M. K.; Mohammad Saquib; Khan, S.

Title

Primed for global coronavirus pandemic: emerging research and clinical outcome.

Source

European Journal of Medicinal Chemistry; 2021. 209.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

The global effort to combat and contain the coronavirus disease 2019 (COVID-19) caused by the recently discovered severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is now proceeding on a war footing. The world was slow to react to the developing crisis, but once the contours of the impending calamity became evident, the different state and non-state actors have raced to put their act together. The COVID-19 pandemic has blatantly exposed the shortcomings of our healthcare system and the limitations of medical science, despite considerable advances in recent years. To effectively tackle the current pandemic, almost unprecedented in the modern age, there is an urgent need for a concerted, sustained, and coordinated effort towards the development of new diagnostics, therapeutic and vaccines, and the ramping up of the healthcare infrastructure, especially in the poorer underprivileged nations. Towards this end, researchers around the world are working tirelessly to develop new diagnostics, vaccines, and therapeutics. Efforts to develop a vaccine against COVID-19 are presently underway in several countries around the world, but a new vaccine is expected only by the end of the year-at the earliest. New drug development against COVID-19 and its approval may take even longer. Under such circumstances, drug repurposing has emerged as a realistic and effective strategy to counter the current menace, and several antiviral and antimalarial medicines are currently in different stages of clinical trials. Researchers are also experimenting with nutrients, vitamins, monoclonal antibodies, and convalescent plasma as immunity boosters against the SARS-CoV-2. This report presents a critical analysis of the global clinical trial landscape for COVID-19 with an emphasis on the therapeutic agents and vaccines currently being tested at pandemic speed.

Publication Type

Journal article.

<191>

Accession Number

20210025805

Author

Pooja, M.; Reddy, G. J.; Kanipakam Hema; Sujatha Dodoala; Bharathi Koganti

Title

Unravelling high-affinity binding compounds towards transmembrane protease serine 2 enzyme in treating SARS-CoV-2 infection using molecular modelling and docking studies. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890. 33 ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The coronavirus disease-19 (COVID-19) outbreak that is caused by a highly contagious severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has become a zoonotic pandemic, with approximately 24.5 million positive cases and 8.3 lakhs deaths globally. The lack of effective drugs or vaccine provoked the research for drug candidates that can disrupt the spread and progression of the virus. The identification of drug molecules through experimental studies is time-consuming and expensive, so there is a need for developing alternative strategies like in silico approaches which can yield better outcomes in less time. Herein, we selected transmembrane protease serine 2 (TMPRSS2) enzyme, a potential pharmacological target against SARS-CoV-2, involved in the spread and pathogenesis of the virus. Since 3D structure is not available for this protein, the present study aims at homology modelling and validation of TMPRSS2 using Swiss-model server. Validation of the modelled TMPRSS2 using various online tools confirmed model accuracy, topology and stereochemical plausibility. The catalytic triad consisting of Serine-441, Histidine-296 and Aspartic acid-345 was identified as active binding site of TMPRSS2 using existing ligands. Molecular docking studies of various drugs and phytochemicals against the modelled TMPRSS2 were performed using camostat as a standard drug. The results revealed eight potential drug candidates, namely nafamostat, meloxicam, ganodermanontriol, columbin, myricetin, proanthocyanidin A2, jatrorrhizine and baicalein, which were further studied for ADME/T properties. In conclusion, the study unravelled eight high affinity binding compounds, which may serve as potent antagonists against TMPRSS2 to impact COVID-19 drug therapy.

Publication Type

Journal article.

<192>

Accession Number

20210025803

Author

Bhullar, K. S.; Drews, S. J.; Wu JianPing

Title

Translating bioactive peptides for COVID-19 therapy. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

COVID-19 (Coronavirus disease 2019) is a global pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a positive-sense RNA virus. This virus has emerged as a threat to global health, social stability, and the global economy. This pandemic continues to cause rampant mortality worldwide with the dire urgency to develop novel therapeutic agents. To meet this task, this article discusses advances in the research and potential application of bioactive peptides for possible mitigation of infection by SARS-CoV-2. Growing insight into the molecular biology of SARS-CoV-2 has revealed potential druggable targets for bioactive peptides. Bioactive peptides with unique amino acid sequences can mitigate such targets including, type II transmembrane serine proteases (TMPRSS2) inhibition, furin cleavage, and renin-angiotensin-aldosterone system (RAAS) members. Based on current evidence and structure-function analysis, multiple bioactive peptides present potency to neutralize the virus. To date, no SARS-CoV-2-explicit drug has been reported, but we here introduce bioactive peptides in the perspective of their potential activity against SARS-CoV-2 infection.

Publication Type

Journal article.

<193>

Accession Number

20210025800

Author

Srichandan Padhi; Masi, M.; Rounak Chourasia; Yallappa Rajashekar; Rai, A. K.; Evidente, A.

Title

ADMET profile and virtual screening of plant and microbial natural metabolites as SARS-CoV-2 S1 glycoprotein receptor binding domain and main protease inhibitors. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 890.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In an attempt to search for selective inhibitors against the SARS-CoV-2 which caused devastating of lives and livelihoods across the globe, 415 natural metabolites isolated from several plants, fungi and bacteria, belonging to different classes, were investigated. The drug metabolism and safety profiles were computed in silico and the results showed seven compounds namely fusaric acid, jasmonic acid, jasmonic acid methyl ester, putaminoxin, putaminoxin B and D, and stagonolide K were predicted to having considerable absorption, metabolism, distribution and excretion parameters (ADME) and safety indices. Molecular docking against the receptor binding domain (RBD) of spike glycoprotein (S1) and the main protease (Mpro) exposed the compounds having better binding affinity to main protease as compared to the S1 receptor binding domain. The docking results were compared to an antiviral drug penciclovir reportedly of clinical significance in treating the SARS-CoV-2 infected patients. The results demonstrated the test compounds jasmonic acid, putaminoxins B and D bound to the HIS-CYS catalytic dyad as well as to other residues within the MPro active site with much greater affinity than penciclovir. The findings of the study suggest that these compounds could be explored as potential SARS-CoV-2 inhibitors, and could further be combined with the experimental investigations to develop effective therapeutics to deal with the present pandemic.

Publication Type

Journal article.

<194>

Accession Number

20210025756

Author

Arcadepani, F. B.; Tardelli, V. S.; Fidalgo, T. M.

Title

The SARS-CoV-2 threat in Cracolândia, an open-air drug use scene in Brazil.

Source

International Journal of Drug Policy; 2020. 83.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Publication Type

Journal article.

<195>

Accession Number

20210025669

Author

Pan YouDong; Liu LuZheng; Tian Tian; Zhao JingXia; Park ChangOok; Lofftus, S. Y.; Stingley, C. A.; Yan Yu; Mei ShengLin; Liu Xing; Kupper, T. S.

Title

Epicutaneous immunization with Modified Vaccinia Ankara viral vectors generates superior T cell immunity against a respiratory viral challenge.

Source

npj Vaccines; 2021. 6(1). 36 ref.

Publisher

Nature Publishing Group

Location of Publisher

London

Country of Publication

UK

## Abstract

Modified Vaccinia Ankara (MVA) was recently approved as a smallpox vaccine. Variola is transmitted by respiratory droplets and MVA immunization by skin scarification (s.s.) protected mice far more effectively against lethal respiratory challenge with vaccinia virus (VACV) than any other route of delivery, and at lower doses. Comparisons of s.s. with intradermal, subcutaneous, or intramuscular routes showed that MVAOVA s.s.-generated T cells were both more abundant and transcriptionally unique. MVAOVA s.s. produced greater numbers of lung Ova-specific CD8+ TRM and was superior in protecting mice against lethal VACVOVA respiratory challenge. Nearly as many lung TRM were generated with MVAOVA s.s. immunization compared to intra-tracheal immunization with MVAOVA and both routes vaccination protected mice against lethal pulmonary challenge with VACVOVA. Strikingly, MVAOVA s.s.-generated effector T cells exhibited overlapping gene transcriptional profiles to those generated via intra-tracheal immunization. Overall, our data suggest that heterologous MVA vectors immunized via s.s. are uniquely well-suited as vaccine vectors for respiratory pathogens, which may be relevant to COVID-19. In addition, MVA delivered via s.s. could represent a more effective dose-sparing smallpox vaccine.

## Publication Type

Journal article.

<196>

## Accession Number

20210025230

## Author

Martinez-Lopez, A.; Cuenca-Barrales, C.; Montero-Vilchez, T.; Molina-Leyva, A.; Arias-Santiago, S.

## Title

Review of adverse cutaneous reactions of pharmacologic interventions for COVID-19: a guide for the dermatologist.

## Source

Journal of the American Academy of Dermatology; 2020. 83(6):1738-1748. 118 ref.

## Publisher

Elsevier

## Location of Publisher

New York

## Country of Publication

USA

## Abstract

The new coronavirus, severe acute respiratory syndrome coronavirus 2, is associated with a wide variety of cutaneous manifestations. Although new skin manifestations caused by COVID-19 are continuously being



described, other cutaneous entities should also be considered in the differential diagnosis, including adverse cutaneous reactions to drugs used in the treatment of COVID-19 infections. The aim of this review is to provide dermatologists with an overview of the cutaneous adverse effects associated with the most frequently prescribed drugs in patients with COVID-19. The skin reactions of antimalarials (chloroquine and hydroxychloroquine), antivirals (lopinavir/ritonavir, ribavirin with or without interferon, oseltamivir, remdesivir, favipiravir, and darunavir), and treatments for complications (imatinib, tocilizumab, anakinra, immunoglobulins, corticosteroids, colchicine and low molecular weight heparins) are analyzed. Information regarding possible skin reactions, their frequency, management, and key points for differential diagnosis are presented.

#### Publication Type

Journal article.

<197>

#### Accession Number

20210025014

#### Author

Alaluf, M. G.; Pasqualini, A.; Fiszbajn, G.; Botti, G.; Estofan, G.; Ruhlmann, C.; Solari, L.; Bisioli, C.; Pene, A.; Branzini, C.; Retamar, A. Q.; Checkherdemian, V.; Pesce, R.; Serpa, I.; Lorenzo, F.; Avendano, C.; Sedo, C. A.; Lancuba, S.

#### Title

COVID-19 risk assessment and safety management operational guidelines for IVF center reopening.

#### Source

Journal of Assisted Reproduction and Genetics; 2020. 37(11):2669-2686. 27 ref.

#### Publisher

Springer Science + Business Media, Inc (Springer)

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

**Purpose:** To promote nationwide dissemination and implementation of COVID-19 Risk Assessment and Safety Management Operational Guidelines, drawn up by SAMeR Task Force in ART centers in Argentina. Our objective is to prevent and mitigate the transmission of SARS-CoV-2 at an institutional level, while reducing the risk of infection among both physicians and patients in the context of a critical scenario in the local and Latin American healthcare system. **Methods:** SAMeR Executive Committee set up a crisis committee which was made up of specialists in reproductive medicine, embryology, and healthcare management. A critical and updated review of the advances in science, documents, and recommendations

released by other societies (ASRM, ESHRE, IFFS, Red LARA, societies of anesthesiologists, infectious diseases, and Occupational Safety and Health Administration-OSHA) was carried out. Likewise, there were joint meetings with the Ministry of Health of Argentina in order to draw up the guidelines. Simultaneously, ongoing medical training was carried out, thus providing added value to them, including two status surveys of the activities of the monovalent and polyvalent centers according to the country's epidemiological mapping. Four additional recommendations were made, and online training was given to healthcare workers. The aforementioned regulations were first analyzed by the healthcare providers and their practical suggestions were then added to the guidelines. Results: The one-off collaborative work and the actions coordinated with the National ART Program of the Ministry of Health of Argentina resulted in the development and implementation of the present COVID-19 Risk Assessment and Safety Management Operational Guidelines at a national level. SAMeR gave recommendations for the implementation of the Management Guidelines for the center reopening, providing new safety criteria against the threat of viral contagion. A new organizational culture was promoted through the awareness of all the healthcare workers and teaching responsibility. We continue working on the compliance with a new "Code of Conduct and Commitment in Healthcare" and with workplace safety measures. We helped with transforming the theoretical knowledge into practical measures for the healthcare workers in different services, with the aim to prevent, mitigate, and/or handle contingencies at the centers/services and gamete banks, in line with the actions agreed upon with the Ministry of Health. Conclusions: As an extraordinary and uncertain event, the SARS-CoV-2 pandemic helped consolidate a volunteer-based and collaborative panel of SAMeR experts who developed the COVID-19 Risk Assessment and Safety Management Operational Guidelines as a new and readily available tool for physicians, patients, and gamete banks care. Their implementation has provided specific guidelines to minimize risk for professionals in ART clinics, as well as guaranteeing patient safety.

#### Publication Type

Journal article.

<198>

#### Accession Number

20210024871

#### Author

Meini, S.; Giani, T.; Tascini, C.

#### Title

Intussusceptive angiogenesis in COVID-19: hypothesis on the significance and focus on the possible role of FGF2.

#### Source

Molecular Biology Reports; 2020. 47(10):8301-8304. 24 ref.

#### Publisher

Springer

#### Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The interest on the role of angiogenesis in the pathogenesis and progression of human interstitial lung diseases is growing, with conventional sprouting (SA) and non-sprouting intussusceptive angiogenesis (IA) being differently represented in specific pulmonary injury patterns. The role of viruses as key regulators of angiogenesis is known for several years. A significantly enhanced amount of new vessel growth, through a mechanism of IA, has been reported in lungs of patients who died from Covid-19; among the angiogenesis-related genes, fibroblast growth factor 2 (FGF2) was found to be upregulated. These findings are intriguing. FGF2 plays a role in some viral infections: the upregulation is involved in the MERS-CoV-induced strong apoptotic response crucial for its highly lytic replication cycle in lung cells, whereas FGF2 is protective against the acute lung injury induced by H1N1 influenza virus, improving the lung wet-to-dry weight ratio. FGF2 plays a role also in regulating IA, acting on pericytes (crucial for the formation of intraluminal pillars), and endothelium, and FGF2-induced angiogenesis may be promoted by inflammation and hypoxia. IA is a faster and probably more efficient process than SA, able to modulate vascular remodeling through pruning of redundant or inefficient blood vessels. We can speculate that IA might have the function of restoring a functional vascular plexus consequently to extensive endothelialitis and alveolar capillary micro-thrombosis observed in Covid-19. Anti-Vascular endothelial growth factor (anti-VEGF) strategies are currently investigated for treatment of severe and critically ill Covid-19 patients, but also FGF2, and its expression and/or signaling, might represent a promising target.

Publication Type

Journal article.

<199>

Accession Number

20210024484

Author

Raffiq, A.; Seng LiewBoon; San LimSwee; Zakaria, Z.; Yee AngSong; Fitzrol, D. N.; Hassan, W. M. N. W.; Idris, Z.; Ghani, A. R. I.; Rosman, A. K.; Abdullah, J. M.

Title

COVID-19 pandemic and its impact on neurosurgery practice in Malaysia: academic insights, clinical experience and protocols from March till August 2020.

Source

MJMS - The Malaysian Journal of Medical Sciences; 2020. 27(5):141-195. many ref.

Publisher

School of Medical Sciences

Location of Publisher

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Pulau Pinang

Country of Publication

Malaysia

Abstract

COVID-19 Pandemic and Its Impact on Neurosurgery Practice in Malaysia: Academic Insights, Clinical Experience and Protocols from March till August 2020 Azman Raffiq<sup>1</sup>, Liew Boon Seng<sup>2</sup>, Lim Swee San<sup>3</sup>, Zaitun Zakaria<sup>4,5,7</sup>, Ang Song Yee<sup>4,5,7</sup>, Diana Noma Fitzrol<sup>4,5,7</sup>, Wan Mohd Nazaruddin Wan Hassan<sup>6</sup>, Zamzuri Idris<sup>4,5,7</sup>, Abdul Rahman Izaini Ghani<sup>4,5,7</sup>, Azmin Kass Rosman<sup>8</sup>, Jafri Malin Abdullah<sup>4,5,7</sup> 1 Department of Neurosurgery, Penang General Hospital, Pulau Pinang, Malaysia 2 Department of Neurosurgery, Hospital Sungai Buloh, Selangor, Malaysia 3 Department of Neurosurgery, Sarawak General Hospital, Ministry of Health, Kuching, Malaysia 4 Department of Neurosciences, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia 5 Department of Neurosciences, Hospital Universiti Sains Malaysia, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia 6 Department of Anaesthesiology and Intensive Care, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia 7 Brain and Behaviour Cluster, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia 8 National Head and Advisor for Neurosurgical Services, Ministry of Health Malaysia, Head of Department of Neurosurgery, Hospital Sungai Buloh, Sungai Buloh, Selangor, Malaysia The newly discovered coronavirus disease 2019 (COVID-19) is an infectious disease introduced to humans for the first time. Following the pandemic of COVID-19, there is a major shift of practices among surgical departments in response to an unprecedented surge in reducing the transmission of disease. With pooling and outsourcing of more health care workers to emergency rooms, public health care services and medical services, further in-hospital resources are prioritised to those in need. It is imperative to balance the requirements of caring for COVID-19 patients with imminent risk of delay to others who need care. As Malaysia now approaches the recovery phase following the pandemic, the crisis impacted significantly on neurosurgical services throughout the country. Various emergency measures taken at the height of the crisis may remain as the new normal in the provision of neurosurgical services and practices in Malaysia. The crisis has certainly put a strain on the effective delivery of services and as we approach the recovery era, what may have been a strain may prove to be a silver lining in neurosurgical services in Malaysia. The following details are various measures put in place as the new operational protocols for neurosurgical services in Malaysia.

Publication Type

Journal article.

<200>

Accession Number

20210024372

Author

Tan CheeWah; Chia WanNi; Qin XiJian; Liu Pei; Chen, M. I. C.; Tiu, C.; Hu ZhiLiang; Chen ChihWei [Chen, C. W. V.]; Young, B. E.; Sia WanRong; Tan YeeJoo; Foo, R.; Yi YongXiang; Lye, D. C.; Anderson, D. E.; Wang LinFa

Title

A SARS-CoV-2 surrogate virus neutralization test based on antibody-mediated blockage of ACE2-spike protein-protein interaction.

Source

Nature Biotechnology; 2020. 38(9):1073-1078. 30 ref.

Publisher

Nature Publishing Group

Location of Publisher

New York

Country of Publication

USA

Abstract

A robust serological test to detect neutralizing antibodies to SARS-CoV-2 is urgently needed to determine not only the infection rate, herd immunity and predicted humoral protection, but also vaccine efficacy during clinical trials and after large-scale vaccination. The current gold standard is the conventional virus neutralization test requiring live pathogen and a biosafety level 3 laboratory. Here, we report a SARS-CoV-2 surrogate virus neutralization test that detects total immunodominant neutralizing antibodies targeting the viral spike (S) protein receptor-binding domain in an isotype- and species-independent manner. Our simple and rapid test is based on antibody-mediated blockage of the interaction between the angiotensin-converting enzyme 2 (ACE2) receptor protein and the receptor-binding domain. The test, which has been validated with two cohorts of patients with COVID-19 in two different countries, achieves 99.93% specificity and 95-100% sensitivity, and differentiates antibody responses to several human coronaviruses. The surrogate virus neutralization test does not require biosafety level 3 containment, making it broadly accessible to the wider community for both research and clinical applications.

Publication Type

Journal article.

<201>

Accession Number

20210024325

Author

Okoye, J. O.

Title

Differences in vulnerability between health workers and the general population: is volunteer selection required for COVID-19 control in Nigeria?

Source

Annals of Medical Research; 2020. 27(11):3028-3033. 40 ref.

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Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

As of November 8th 2020, the prevalence of the COVID-19 infection in Nigeria is 9.3% while the cumulative fatality rate was 1.8%. Health care workers play important roles in controlling pandemics. However, their health status determines to a great extent the stability or vulnerability of a health system. The stress accruing from high patient flow amidst scarcity of healthcare resources may impact on their health negatively. Stress and lack of a good diet plan may facilitate the development of some diseases such as hypertension (HTN), diabetes mellitus (DM), chronic kidney disease (CKD) and cardiovascular diseases (CVD). These diseases are confirmed correlates of COVID-19 morbidity and fatality. Despite the high awareness of preventive healthcare services among health workers (65%), the prevalence of these diseases are high due to low treatment and control. Although the pooled prevalence of HTN and DM were lower among health workers than the in general population (22.0% vs 37.8% and 6.5% vs 8.1%, respectively), the prevalence of pre-HTN and pre-DM were higher in health workers than in the general population (35.1% vs 22.3% and 19.4% vs 5.9%, respectively). Some of these diseases go undiagnosed until their late stages. Thus, increasing their vulnerability to COVID-19. To prevent controllable fatalities, health workers should be screened before they are engaged in the treatment of COVID-19 patients, irrespective of their previous medical history. Simultaneous testing for comorbidities and COVID-19 should also be carried out in the general population, especially for high-risk groups to prevent future vulnerabilities to communicable diseases.

Publication Type

Journal article.

<202>

Accession Number

20210024309

Author

Caviglia, M.; Buson, R.; Pini, S.; Jambai, A.; Vandy, M. J.; Venturini, F.; Rosi, P.; Barone-Adesi, F.; Corte, F. D.; Ragazzoni, L.; Putoto, G.

Title

The National Emergency Medical Service role during the COVID-19 pandemic in Sierra Leone.

Source

Prehospital and Disaster Medicine; 2020. 35(6):693-697. 9 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

This report describes the main adaptive and transformative changes adopted by the brand-new National Emergency Medical Service (NEMS) to face the novel coronavirus disease 2019 (COVID-19) in Sierra Leone, including ambulance re-distribution, improvements in communication flow, implementation of ad-hoc procedures and trainings, and budget re-allocation. In a time-span of four months, 1,170 COVID-19 cases have been handled by the NEMS through a parallel referral system, while efforts have been made to manage the routine emergencies of the country, causing a substantial intensification of daily activities.

Publication Type

Journal article.

<203>

Accession Number

20210024302

Author

Margus, C.; Sarin, R. R.; Molloy, M.; Ciottone, G. R.

Title

Crisis standards of care implementation at the state level in the United States.

Source

Prehospital and Disaster Medicine; 2020. 35(6):599-603. 33 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Introduction: In 2009, the Institute of Medicine published guidelines for implementation of Crisis Standards of Care (CSC) at the state level in the United States (US). Based in part on the then concern for H1N1 pandemic, there was a recognized need for additional planning at the state level to maintain health system preparedness and conventional care standards when available resources become scarce. Despite the availability of this framework, in the years since and despite repeated large-scale domestic events, implementation remains mixed. Problem: Coronavirus disease 2019 (COVID-19) rejuvenates concern for how health systems can maintain quality care when faced with unrelenting burden. This study seeks to outline which states in the US have developed CSC and which areas of care have thus far been addressed. Methods: An online search was conducted for all 50 states in 2015 and again in 2020. For states without CSC plans online, state officials were contacted by email and phone. Public protocols were reviewed to assess for operational implementation capabilities, specifically highlighting guidance on ventilator use, burn management, sequential organ failure assessment (SOFA) score, pediatric standards, and reliance on influenza planning. Results: Thirty-six states in the US were actively developing (17) or had already developed (19) official CSC guidance. Fourteen states had no publicly acknowledged effort. Eleven of the 17 public plans had updated within five years, with a majority addressing ventilator usage (16/17), influenza planning (14/17), and pediatric care (15/17), but substantially fewer addressing care for burn patients (9/17). Conclusion: Many states lacked publicly available guidance on maintaining standards of care during disasters, and many states with specific care guidelines had not sufficiently addressed the full spectrum of hazard to which their health care systems remain vulnerable.

#### Publication Type

Journal article.

<204>

#### Accession Number

20210024300

#### Author

Caliskan, F.; Midik, O.; Baykan, Z.; Senol, Y.; Tanriverdi, E. C.; Tengiz, F. I.; Gayef, A.

#### Title

The knowledge level and perceptions toward COVID-19 among Turkish final year medical students.

#### Source

Postgraduate Medicine; 2020. 132(8):764-772. 26 ref.

#### Publisher

Taylor & Francis

#### Location of Publisher

Abingdon

#### Country of Publication

UK

#### Abstract

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Background: Coronavirus disease 2019 (COVID-19) has upended medical education as well as the lives of healthcare professionals. Higher education institutions have a crucial role in the solution of public health problems by training young doctor candidates, and it is also essential to increase the knowledge level of physician candidates about the epidemic. So, in this study, we aimed to examine Turkish final year medical students' knowledge level and perceptions toward the COVID-19 pandemic. Methods: The present descriptive multicentered study was conducted with the medical students in the final year of six medical schools located in six geographic regions of Turkey. After ethical approval, data were gathered using an online questionnaire through Google forms between 10 April 2020, and 20 April 2020. Results: In this national survey study, 860 volunteers answered the questions thoroughly. The median age was 24 (22-38) years. A total of 55.3% of the participants were female. The median knowledge level score was 69.0 (0-93.1). The knowledge level was moderate. A total of 34.2% of the participants had a high level of knowledge. A total of 48.7% of participants stated that they felt the most competent about performing CPR. Updates about COVID-19 were followed regularly by 84.5% of the participants. Conclusion: We determined that final year medical students are knowledgeable and aware of this pandemic. We, medical educators, should inculcate relevant knowledge and educate the medical students to improve practices in the current pandemic, as well as for future epidemics. Different learning techniques should be added to the curriculum, especially at the time which widespread panic and uncertainty are prevalent.

#### Publication Type

Journal article.

<205>

#### Accession Number

20210024281

#### Author

Burkle, F. M., Jr.

#### Title

Political intrusions into the International Health Regulations Treaty and its impact on management of rapidly emerging zoonotic pandemics: what history tells us.

#### Source

Prehospital and Disaster Medicine; 2020. 35(4):426-430. 36 ref.

#### Publisher

Cambridge University Press

#### Location of Publisher

Cambridge

#### Country of Publication

UK

#### Abstract

For a large number of health care providers world-wide, the coronavirus disease 2019 (COVID-19) pandemic is their first experience in population-based care. In past decades, lower population densities, infectious disease outbreaks, epidemics, and pandemics were rare and driven almost exclusively by natural disasters, predatory animals, and war. In the early 1900s, Sir William Osler first advanced the knowledge of zoonotic diseases that are spread from reservoir animals to human animals. Once rare, they now make up 71% or more of new diseases. Globally, zoonotic spread occurs for many reasons. Because the human population has grown in numbers and density, the spread of these diseases accelerated through rapid unsustainable urbanization, biodiversity loss, and climate change. Furthermore, they are exacerbated by an increasing number of vulnerable populations suffering from chronic deficiencies in food, water, and energy. The World Health Organization (WHO) and its International Health Regulation (IHR) Treaty, organized to manage population-based diseases such as Influenza, severe acute respiratory syndrome (SARS), H1N1, Middle East respiratory syndrome (MERS), HIV, and Ebola, have failed to meet population-based expectations. In part, this is due to influence from powerful political donors, which has become most evident in the current COVID-19 pandemic. The global community can no longer tolerate an ineffectual and passive international response system, nor tolerate the self-serving political interference that authoritarian regimes and others have exercised over the WHO. In a highly integrated globalized world, both the WHO with its IHR Treaty have the potential to become one of the most effective mechanisms for crisis response and risk reduction world-wide. Practitioners and health decision-makers must break their silence and advocate for a stronger treaty, a return of the WHO's singular global authority, and support highly coordinated population-based management. As Osler recognized, his concept of "one medicine, one health" defines what global public health is today.

#### Publication Type

Journal article.

<206>

#### Accession Number

20210024276

#### Author

Xie YiJing; McNeil, E. B.; Sriplung, H.; Fan YanCun; Zhao XingSheng; Chongsuvivatwong, V.

#### Title

Assessment of adequacy of respiratory infection prevention in hospitals of Inner Mongolia, China: a cross-sectional study using unannounced standardized patients.

#### Source

Postgraduate Medicine; 2020. 132(7):643-649. 32 ref.

#### Publisher

Taylor & Francis

#### Location of Publisher

Abingdon

#### Country of Publication

UK

## Abstract

**Introduction:** Recent respiratory infectious disease (RID) outbreaks of influenza and the novel coronavirus have resulted in global pandemics. RIDs can trigger nosocomial infections if not adequately prevented. **Background:** The objective of this study was to rate the adequacy of healthcare workers (HCWs) and hospital settings on RID prevention using unannounced standardized patients (USP) in clinical settings of hospital gateways. **Methods:** Trained USPs visited 5 clinical settings: information desks, registration desks, two outpatient departments and the emergency departments in 10 hospitals across 3 cities of Inner Mongolia, China. USPs observed the hospital air ventilation and distance from the nearest hand-washing facilities to each clinical setting, then mimicked symptoms of either tuberculosis or influenza before observing the HCW's behavior. A total of 480 clinical-setting assessments were made by 19 USPs. **Results:** The overall adequacy of triage services was 86.7% and for prevention of the spread of airborne droplets was 83.5%. Almost all hospitals offered adequate air ventilation. Compared to the information desk, adequacy of triage and preventing the spread of airborne droplets by physicians in the three clinical departments was less likely to be adequate. Triage services for USPs simulating symptoms of influenza were 2.6 times more likely to be adequate than for those simulating symptoms of tuberculosis but there was no significant difference in the prevention of the spread of airborne droplets. **Conclusions:** There is a need to improve respiratory infectious disease procedures in our study hospitals, especially in outpatient and emergency departments.

## Publication Type

Journal article.

<207>

## Accession Number

20210024274

## Author

Sun JingKang; Chen YuTing; Fan XiuDe; Wang XiaoYun; Han QunYing; Liu ZhengWen

## Title

Advances in the use of chloroquine and hydroxychloroquine for the treatment of COVID-19.

## Source

Postgraduate Medicine; 2020. 132(7):604-613. many ref.

## Publisher

Taylor & Francis

## Location of Publisher

Abingdon

## Country of Publication

UK

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## Abstract

Coronavirus Disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is spreading worldwide. Antiviral therapy is the most important treatment for COVID-19. Among the drugs under investigation, anti-malarials, chloroquine (CQ) and hydroxychloroquine (HCQ), are being repurposed as treatment for COVID-19. CQ/HCQ were shown to prevent receptor recognition by coronaviruses, inhibit endosome acidification, which interferes with membrane fusion, and exhibit immunomodulatory activity. These multiple mechanisms may work together to exert a therapeutic effect on COVID-19. A number of in vitro studies revealed inhibitory effects of CQ/HCQ on various coronaviruses, including SARS-CoV-2 although conflicting results exist. Several clinical studies showed that CQ/HCQ alone or in combination with a macrolide may alleviate the clinical symptoms of COVID-19, promote viral conversion, and delay disease progression, with less serious adverse effects. However, recent studies indicated that the use of CQ/HCQ, alone or in combination with a macrolide, did not show any favorable effect on patients with COVID-19. Adverse effects, including prolonged QT interval after taking CQ/HCQ, may develop in COVID-19 patients. Therefore, current data are not sufficient enough to support the use of CQ/HCQ as therapies for COVID-19 and increasing caution should be taken about the application of CQ/HCQ in COVID-19 before conclusive findings are obtained by well-designed, multi-center, randomized, controlled studies.

## Publication Type

Journal article.

<208>

## Accession Number

20210024187

## Author

Astua, A. J.; Michaels, E. K.; Michaels, A. J.

## Title

Prone during pandemic: development and implementation of a quality-based protocol for proning severe COVID-19 hypoxic lung failure patients in situationally or historically low resource hospitals.

## Source

BMC Pulmonary Medicine; 2021. 21(25). 11 ref.

## Publisher

BioMed Central Ltd

## Location of Publisher

London

## Country of Publication

UK

## Abstract

Background: Intermittent Prone Positioning (IPP) for Acute Respiratory Distress Syndrome (ARDS) decreases mortality. We present a program for IPP using expedient materials for settings of significant limitations in both overwhelmed established ICUs and particularly in low- and middle-income countries (LMICs) treating ARDS due to COVID-19 caused by SARS CoV-2. Methods: The proning program evolved based on the principles of High Reliability Organizations (HROs) and Crew Resource Management (CRM). Patients with severe ARDS [PaO<sub>2</sub>:FiO<sub>2</sub> ratio (PFR) 150 on FiO<sub>2</sub> 0.6 and PEEP 5 cm H<sub>2</sub>O] received IPP. Patients were placed prone 16 h each day. When PFR was 200 for > 8 h supine IPP ceased. IPP used available materials without requiring additional work from the bedside team. Changes in PFR, PaCO<sub>2</sub>, and the SaO<sub>2</sub>:FiO<sub>2</sub> ratio (SaFr) positionally were evaluated using t-statistics and ANOVA with Bonferroni correction ( $p < 0.017$ ). Results: Between 14APR2020 and 09MAY2020, at the peak of deaths in New York, there were 202 IPPs in 29 patients. Patients were 58.5  $\pm$  1.7 years of age (37, 73), 76% male and had a body mass index (BMI) of 27.8  $\pm$  0.8 (21, 38). Pressor agents were used in 76% and 17% received dialysis. The PFR prior to IPP was 107.5  $\pm$  5.6 and 1 h after IPP was 155.7  $\pm$  11.2 ( $p < 0.001$  compared to pre-prone). PFR after the patients were placed supine was 131.5  $\pm$  9.1 ( $p = 0.02$ ). Pre-prone PaCO<sub>2</sub> was 60.0  $\pm$  2.5 and the 1-h post-prone PaCO<sub>2</sub> was 67.2  $\pm$  3.1 ( $p = 0.02$ ). Supine PaCO<sub>2</sub> after IPP was 60.4  $\pm$  3.4 ( $p = 0.90$ ). The SaFr prior to IPP was 121.3  $\pm$  4.2 and the SaFr 1 h after positioning was 131.5  $\pm$  5.1 ( $p = 0.03$ ). The post-IPP supine SaFr was 139.7  $\pm$  5.9 ( $p < 0.001$ ). With ANOVA and Bonferroni correction there were statistically significant changes in PFR ( $p < 0.001$ ) and SaFr ( $p < 0.001$ ) and no significant changes in PaCO<sub>2</sub> over the four time points measured. Using regression coefficients, the SaFr<sub>s</sub> predicted by PFR<sub>s</sub> of 150 and 200 at baseline are 133.2 and 147.3, respectively. Conclusions: An IPP program for patients with COVID-19 ARDS can be instituted rapidly, safely, and effectively during an overwhelming mass casualty scenario. This approach may be equally applicable in both traditionally austere environments in LMICs and in otherwise capable centers facing situational resource limitations.

#### Publication Type

Journal article.

<209>

#### Accession Number

20210024169

#### Author

Kruger, E. C.; Banderker, R.; Erasmus, R. T.; Zemlin, A. E.

#### Title

The impact of COVID-19 on routine patient care from a laboratory perspective.

#### Source

SAMJ - South African Medical Journal; 2020. 110(12):1201-1205. 19 ref.

#### Publisher

Health and Medical Publishing Group

#### Location of Publisher

Cape Town

Country of Publication

South Africa

Abstract

**Background.** Globally, few studies have examined the effect of the COVID-19 pandemic on routine patient care and follow-up. **Objectives.** To evaluate the effect of the COVID-19 response on biochemical test requests received from outpatient departments (OPDs) and peripheral clinics serviced by the National Health Laboratory Service Chemical Pathology Laboratory at Tygerberg Hospital, Cape Town, South Africa (SA). Request volumes were used as a measure of the routine care of patients, as clinical information was not readily available. **Methods.** A retrospective audit was conducted. The numbers of requests received from OPDs and peripheral clinics for creatinine, glycated haemoglobin (HbA1c), lipid profiles, thyroid-stimulating hormone (TSH), free thyroxine, free tri-iodothyronine (fT3), serum and urine protein electrophoresis, serum free light chains and neonatal total serum bilirubin were obtained from 1 March to 30 June for 2017, 2018, 2019 and 2020. **Results.** The biggest impact was seen on lipids, creatinine, HbA1c, TSH and fT3. The percentage reduction between 1 March and 30 June 2019 and between 1 March and 30 June 2020 was 59% for lipids, 64% for creatinine and HbA1c, 80% for TSH and 81% for fT3. There was a noteworthy decrease in overall analyte testing from March to April 2020, coinciding with initiation of level 5 lockdown. Although an increase in testing was observed during June 2020, the number of requests was still lower than in June 2019. **Conclusions.** This study, focusing on the short-term consequences of the SA response to the COVID-19 pandemic, found that routine follow-up of patients with communicable and non-communicable diseases was affected. Future studies are necessary to evaluate the long-term consequences of the pandemic for these patient groups.

Publication Type

Journal article.

<210>

Accession Number

20210024165

Author

Morrow, B. M.; Gopalan, P. D.; Joubert, I.; Paruk, F.; Pope, A.

Title

Critical care triage during the COVID-19 pandemic in South Africa: a constitutional imperative!

Source

SAMJ - South African Medical Journal; 2020. 110(12):1176-1179. 38 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

## Country of Publication

South Africa

## Abstract

Triage and rationing of scarce intensive care unit (ICU) resources are an unavoidable necessity. In routine circumstances, ICU triage is premised on the best interests of an individual patient; however, when increased demand exceeds capacity, as during an infectious disease outbreak, healthcare providers need to make difficult decisions to benefit the broader community while still respecting individual interests. We are currently living through an unprecedented period, with South Africa (SA) facing the challenges of the global COVID-19 pandemic. The Critical Care Society of Southern Africa (CCSSA) expedited the development of a triage guidance document to inform the appropriate and fair use of scarce ICU resources during this pandemic. Triage decision-making is based on the clinical odds of a positive ICU outcome, balanced against the risk of mortality and longer-term morbidity affecting quality of life. Factors such as age and comorbid conditions are considered for their potential impact on clinical outcome, but are never the sole criteria for denying ICU-level care. Arbitrary, unfair discrimination is never condoned. The CCSSA COVID-19 triage guideline is aligned with SA law and international ethical standards, and upholds respect for all persons. The Bill of Rights, however, does not mandate the level of care enshrined in the constitutional right to healthcare. ICU admission is not always appropriate, available or feasible for every person suffering critical illness or injury; however, everyone has the right to receive appropriate healthcare at another level. If ICU resources are used for people who do not stand to benefit, this effectively denies others access to potentially life-saving healthcare. Appropriate triaging can therefore be considered a constitutional imperative.

## Publication Type

Journal article.

<211>

## Accession Number

20210024164

## Author

Erasmus, N.

## Title

Age discrimination in critical care triage in South Africa: the law and the allocation of scarce health resources in the COVID-19 pandemic.

## Source

SAMJ - South African Medical Journal; 2020. 110(12):1172-1175. 74 ref.

## Publisher

Health and Medical Publishing Group

## Location of Publisher

Cape Town

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Country of Publication

South Africa

Abstract

No one may be refused emergency medical treatment in South Africa (SA). Yet score-based categorical exclusions used in critical care triage guidelines disproportionately discriminate against older adults, the cognitively and physically impaired, and the disabled. Adults over the age of 60, who make up 9.1% of the SA population, are most likely to present with disabilities and comorbidities at triage. Score-based models, drawn from international precedents, deny these patients admission to an ICU when resources are constrained, such as during influenza and COVID-19 outbreaks. The Critical Care Society of Southern Africa and the South African Medical Association adopted the Clinical Frailty Scale, which progressively withholds admission to ICUs based on age, frailty and comorbidities in a manner that potentially contravenes constitutional and equality prohibitions against unfair discrimination. The legal implications for healthcare providers are extensive, ranging from personal liability to hate speech and crimes against humanity. COVID-19 guidelines and score-based triage protocols must be revised urgently to eliminate unlawful discrimination against legally protected categories of patients in SA, including the disabled and the elderly. That will ensure legal certainty for health practitioners, and secure the full protections of the law to which the health-vulnerable and those of advanced age are constitutionally entitled.

Publication Type

Journal article.

<212>

Accession Number

20210024162

Author

Loveday, M.; Cox, H.; Evans, D.; Furin, J.; Ndjeka, N.; Osman, M.; Naidoo, K.

Title

Opportunities from a new disease for an old threat: extending COVID-19 efforts to address tuberculosis in South Africa.

Source

SAMJ - South African Medical Journal; 2020. 110(12):1160-1167. 49 ref.

Publisher

Health and Medical Publishing Group

Location of Publisher

Cape Town

Country of Publication

South Africa



## Abstract

The COVID-19 pandemic and phased nationwide lockdown have impacted negatively on individuals with tuberculosis (TB) and routine TB services. Through a literature review and the perspective of members of a national TB Think Tank task team, we describe the impact of the pandemic and lockdown on TB patients and services as well as the potential long-term setback to TB control in South Africa (SA). Strategies to mitigate risk and impact are explored, together with opportunities to leverage synergies from both diseases to the benefit of the National TB Programme (NTP). With the emergence of COVID-19, activities to address this new pandemic have been prioritised across all sectors. Within the health system, the health workforce and resources have been redirected away from routine services towards the new disease priority. The social determinants of health have deteriorated during the lockdown, potentially increasing progression to TB disease and impacting negatively on people with TB and their households, resulting in additional barriers to accessing TB care, with early reports of a decline in TB testing rates. Fewer TB diagnoses, less attention to adherence and support during TB treatment, poorer treatment outcomes and consequent increased transmission will increase the TB burden and TB-related mortality. People with TB or a history of TB are likely to be vulnerable to COVID-19. Modifications to current treatment practices are suggested to reduce visits to health facilities and minimise the risks of COVID-19 exposure. The COVID-19 pandemic has the potential to negatively impact on TB control in TB-endemic settings such as SA. However, there are COVID-19-related health systems-strengthening developments that may help the NTP mitigate the impact of the pandemic on TB control. By integrating TB case finding into the advanced screening, testing, tracing and monitoring systems established for COVID-19, TB case finding and linkage to care could increase, with many more TB patients starting treatment. Similarly, integrating knowledge and awareness of TB into the increased healthcare worker and community education on infectious respiratory diseases, behavioural practices around infection prevention and control, and cough etiquette, including destigmatisation of mask use, may contribute to reducing TB transmission. However, these potential gains could be overwhelmed by the impact of increasing poverty and other social determinants of health on the burden of TB.

## Publication Type

Journal article.

<213>

## Accession Number

20210024135

## Author

Cakir, B.; Okuyan, B.; Sener, G.; Tunali-Akbay, T.

## Title

Investigation of beta-lactoglobulin derived bioactive peptides against SARS-CoV-2 (COVID-19): in silico analysis. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

## Source

European Journal of Pharmacology; 2021. 891. 48 ref.

## Publisher

Elsevier Science Publishers B.V, Biomedical Division

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Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The coronavirus disease of 2019 (COVID-19) outbreak caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which started in late 2019 in Wuhan, China spread to the whole world in a short period of time, and thousands of people have died due to this epidemic. Although scientists have been searching for methods to manage SARS-CoV-2, there is no specific medication against COVID-19 as of yet. Two main approaches should be followed in the treatment of SARS-CoV-2; one of which is to neutralize the virus, and the other is to inhibit the host cell membrane receptors, where SARS-CoV-2 will bind. In this study, peptides derived from beta-lactoglobulin, which inactivates both the virus and its receptors in the host cell, were identified using computer-based in silico analysis. The beta-lactoglobulin derived peptides used in this study were obtained by the treatment of goat milk whey fraction with trypsin. The structure of the peptides was characterized by the liquid chromatography quadrupole time-of-flight mass spectrometry (LC-Q-TOF/MS), and six beta-lactoglobulin derived peptides were selected as candidate peptides. Subsequently, the effects of peptides on SARS-CoV-2 and host cells were identified using virtual screening. According to the results of this in silico analysis, Ala-Leu-Pro-Met-His-Ile-Arg (ALMPHIR) and Ile-Pro-Ala-Val-Phe-Lys (IPAVFK) peptides were evaluated as potential candidates to be used in the treatment of SARS-CoV-2 after the future in vitro and in vivo studies.

Publication Type

Journal article.

<214>

Accession Number

20210024134

Author

Mouffouk, C.; Mouffouk, S.; Mouffouk, S.; Hambaba, L.; Haba, H.

Title

Flavonols as potential antiviral drugs targeting SARS-CoV-2 proteases (3CLpro and PLpro), spike protein, RNA-dependent RNA polymerase (RdRp) and angiotensin-converting enzyme II receptor (ACE2). (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 891. many ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The novel coronavirus outbreak (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) represents the actual greatest global public health crisis. The lack of efficacious drugs and vaccines against this viral infection created a challenge for scientific researchers in order to find effective solutions. One of the promising therapeutic approaches is the search for bioactive molecules with few side effects that display antiviral properties in natural sources like medicinal plants and vegetables. Several computational and experimental studies indicated that flavonoids especially flavonols and their derivatives constitute effective viral enzyme inhibitors and possess interesting antiviral activities. In this context, the present study reviews the efficacy of many dietary flavonols as potential antiviral drugs targeting the SARS-CoV-2 enzymes and proteins including Chymotrypsin-Like Protease (3CLpro), Papain Like protease (PLpro), Spike protein (S protein) and RNA-dependent RNA polymerase (RdRp), and also their ability to interact with the angiotensin-converting enzyme II (ACE2) receptor. The relationship between flavonol structures and their SARS-CoV-2 antiviral effects were discussed. On the other hand, the immunomodulatory, the anti-inflammatory and the antiviral effects of secondary metabolites from this class of flavonoids were reported. Also, their bioavailability limitations and toxicity were predicted.

Publication Type

Journal article.

<215>

Accession Number

20210024133

Author

Lokhande, A. S.; Devarajan, P. V.

Title

A review on possible mechanistic insights of Nitazoxanide for repurposing in COVID-19. (Special section: Therapeutic targets and pharmacological treatment of COVID-19.)

Source

European Journal of Pharmacology; 2021. 891. many ref.

Publisher

Elsevier Science Publishers B.V, Biomedical Division

Location of Publisher

Amsterdam

Country of Publication

Netherlands

## Abstract

The global pandemic of Coronavirus Disease 2019 (COVID-19) has brought the world to a grinding halt. A major cause of concern is the respiratory distress associated mortality attributed to the cytokine storm. Despite myriad rapidly approved clinical trials with repurposed drugs, and time needed to develop a vaccine, accelerated search for repurposed therapeutics is still ongoing. In this review, we present Nitazoxanide a US-FDA approved antiprotozoal drug, as one such promising candidate. Nitazoxanide which is reported to exert broad-spectrum antiviral activity against various viral infections, revealed good in vitro activity against SARS-CoV-2 in cell culture assays, suggesting potential for repurposing in COVID-19. Furthermore, nitazoxanide displays the potential to boost host innate immune responses and thereby tackle the life-threatening cytokine storm. Possibilities of improving lung, as well as multiple organ damage and providing value addition to COVID-19 patients with comorbidities, are other important facets of the drug. The review juxtaposes the role of nitazoxanide in fighting COVID-19 pathogenesis at multiple levels highlighting the great promise the drug exhibits. The in silico data and in vitro efficacy in cell lines confirms the promise of nitazoxanide. Several approved clinical trials world over further substantiate leveraging nitazoxanide for COVID-19 therapy.

## Publication Type

Journal article.

<216>

## Accession Number

20210024132

## Author

Cismaru, C. A.; Cismaru, G. L.; Seyed Nabavi, F.; Seyed Nabavi, M.; Berindan-Neagoe, I.

## Title

COVID-19 and antimalarials. Have we been doing it wrong all along?

## Source

European Journal of Pharmacology; 2021. 891. 21 ref.

## Publisher

Elsevier Science Publishers B.V, Biomedical Division

## Location of Publisher

Amsterdam

## Country of Publication

Netherlands

## Abstract

In the context of the current SARS-CoV-2 pandemic, associations of drugs which interfere with specific steps of the viral infectious cycle are currently being exploited as therapeutic strategies since a specific treatment by vaccination is still unavailable. A widespread association of repurposed agents is the combination of the antimalarial drug Hydroxychloroquine and the macrolide antibiotic Azithromycin in the setting of clinical trials. But a closer analysis of their mechanism of action suggests that their concomitant administration may be impractical, and this is supported by experimental data with other agents of the same classes. However a sequential administration of the lysosomotropic antimalarial with the addition of the macrolide proton pump inhibitor after the first has reached a certain threshold could better exploit their antiviral potential.

#### Publication Type

Journal article.

<217>

#### Accession Number

20210024118

#### Author

Werneck, A. O.; Silva, D. R.; Malta, D. C.; Souza Junior, P. R. B.; Azevedo, L. O.; Barros, M. B. A.; Szwarcwald, C. L.

#### Title

Physical inactivity and elevated TV-viewing reported changes during the COVID-19 pandemic are associated with mental health: a survey with 43,995 Brazilian adults.

#### Source

Journal of Psychosomatic Research; 2021. 140. 37 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

**Objective:** To analyze the associations of physical activity and TV-viewing reported changes during the COVID-19 pandemic quarantine with mental health among Brazilian adults with and without depression. **Methods:** Data of 43,995 Brazilian adults from a cross-sectional, nationwide behavior research were used. Participants reported the frequency on loneliness, sadness (feel sad, crestfallen or depressed) and anxiety (feel worried, anxious or nervous) feelings during the pandemic period. Frequency and duration of physical activity as well as duration of TV-viewing before and during the pandemic period were also reported. We created four categories of reported changes in physical activity (1-consistently active, 2-become active, 3-

become inactive or 4-consistently inactive) and TV-viewing (1-consistently high, 2-become low, 3-become high or 4-consistently high). Participants also reported previous diagnoses of depression [yes (PD) or no (nPD)]. Logistic regression models separating people with and without depression were created. Results: Compared to consistently active participants, to become inactive during the pandemic was associated with a higher odds for loneliness [nPD:OR:1.32 (95%CI,1.02-1.70); PD:2.22 (1.21-4.06)], sadness [nPD:1.34 (1.01-1.77); PD:2.88 (1.54-5.36)], and anxiety [nPD:1.71 (1.30-2.25); PD:2.55 (1.20-5.42)]. Also, people with depression and consistently physically inactive presented higher odds for loneliness and sadness. Compared to consistently low TV-viewing, participants that become with high TV-viewing showed higher odds for loneliness [nPD:1.59 (1.37-1.86)], sadness [nPD:1.68 (1.44-1.96); PD:1.61 (1.21 to 2.15)] and anxiety [nPD:1.73 (1.48-2.02); PD:1.58 (1.12-2.23)]. Conclusions: Reported increases in physical inactivity and TV-viewing during the COVID-19 pandemic were associated with poorer mental health indicators. People with depression and consistently physically inactivity were more likely to present loneliness and sadness.

#### Publication Type

Journal article.

<218>

#### Accession Number

20210024029

#### Author

John, S.; Hussain, S. I.; Piechowski-Jozwiak, B.; Dibu, J.; Kesav, P.; Bayrlee, A.; Elkambergy, H.; John, T. L. S.; Roser, F.; Mifsud, V. A.

#### Title

Clinical characteristics and admission patterns of stroke patients during the COVID 19 pandemic: a single center retrospective, observational study from the Abu Dhabi, United Arab Emirates.

#### Source

Clinical Neurology and Neurosurgery; 2020. 199.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

**Objective:** To compare ischemic and hemorrhagic stroke patients with COVID-19 to non-COVID-19 controls, and to describe changes in stroke admission patterns during the pandemic. **Methods:** This is a single center, retrospective, observational study. All consecutive patients admitted with primary diagnosis

of ischemic/hemorrhagic stroke between March 1st -May 10th 2020 were included and compared with the same time period in 2019. Results: There was a 41.9% increase in stroke admissions in 2020 (148 vs 210, P =.001). When comparing all ischemic strokes, higher rate of large vessel occlusion (LVO) (18.3% vs 33.8%, P =.008) and significant delay in initiation of mechanical thrombectomy after hospital arrival (67.75 vs 104.30 minutes, P =.001) was observed in 2020. When comparing all hemorrhagic strokes, there were no differences between the two years. Among 591 COVID-19 admissions, 31 (5.24%) patients with stroke including 19 with ischemic (3.21%) and 12 with hemorrhagic stroke (2.03%) were identified. Patients with COVID-19 and ischemic stroke were significantly younger (58.74 vs 48.11 years, P =.002), predominantly male (68.18% vs 94.74%, P =.016), had lesser vascular risk factors, had more severe clinical presentation (NIHSS 7.01 vs 17.05, P <.001), and higher rate of LVO (23.6% vs. 63.1%, P =.006). There was no difference in the rate of endovascular thrombectomy, but time to groin puncture was significantly longer in COVID-19 patients (83.41 vs 129.50 minutes, P =.003). For hemorrhagic stroke, COVID-19 patients did not differ from non-COVID-19 patients. Conclusions: Stroke continues to occur during this pandemic and stroke pathways have been affected by the pandemic. Stroke occurs in approximately 5% of patients with COVID-19. COVID-19 associated ischemic stroke occurs in predominantly male patients who are younger, with fewer vascular risk factors, can be more severe, and have higher rates of LVO. Despite an increase in LVO during the pandemic, treatment with mechanical thrombectomy has not increased. COVID-19 associated hemorrhagic stroke does not differ from non-COVID-19 hemorrhagic stroke patients.

#### Publication Type

Journal article.

<219>

#### Accession Number

20210023218

#### Author

Sujata Baveja; Nitin Karnik; Gita Natraj; Milind Natkar; Asha Bakshi; Anand Krishnan

#### Title

Rapid volunteer-based SARS-CoV-2 antibody screening among health care workers of a hospital in Mumbai, India.

#### Source

Indian Journal of Medical Sciences; 2020. 72(3):148-154. 26 ref.

#### Publisher

Scientific Scholar Pvt. Ltd.

#### Location of Publisher

Mumbai

#### Country of Publication

India

#### Abstract

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**Objectives:** COVID-19 is highly contagious, and health care workers are at high risk of being infected. We carried out a rapid survey to estimate the proportion of HCWs who are serologically positive for SARS-CoV-2 in the Lokmanya Tilak Municipal General Hospital, Mumbai, India. **Material and Methods:** After the consent of the hospital authorities, volunteers were asked to report at a special booth set up in the hospital between May 1, 2020, and May 16, 2020. After consent, each worker was administered a questionnaire using a handheld computer which had questions on symptoms in the past 30 days, place of posting (COVID designated area or other), work category (doctor/nurse/others), use of personal protective equipment, smoking, comorbidity, and exposure followed by a test for COVID-19 using the STANDARD Q COVID-19 IgM/IgG Duo Test of SD Biosensor. We estimated weighted seroprevalence with 95% confidence limits after adjusting for the work category. We calculated the adjusted odds ratio (aOR) using logistic regression with seropositivity as an outcome variable and others as independent variables. **Results:** The final sample included 501 and 1051 subjects working in the COVID area and non-COVID area, respectively, covering 35% of the total staff of the hospital. Overall, 6.9% (95% CI of 5.7-8.2) of the hospital staff was serologically positive for SARS-Cov-2, similar in the COVID area -5.7 (3.8-8.1) and non-COVID area -7.2 (5.7-9.0). Age more than 50 years (aOR 2.65; 1.45-4.85) and being in others work category 2.84 (1.34-6.02) were identified as significant predictors of being seropositive. Only 10% of the subjects reported COVID-like illness in the past 1 month. **Conclusion:** The overall modest prevalence of infection among the health care workers, especially non-doctors and nurses, and similarity of prevalence in COVID and non-COVID area staff indicate the possibility of nonhospital source of infection.

#### Publication Type

Journal article.

<220>

#### Accession Number

20210023217

#### Author

Preethi Selvaraj; Muthukanagaraj, P.; Bhavya Saluja; Madhan Jeyaraman; Anudeep, T. C.; Arun Gulati; Sushmitha, E. S.; Dheemant, M.; Rashmi Jain; Rao, S. P.

#### Title

Psychological impact of COVID-19 pandemic on health-care professionals in India - a multicentric cross-sectional stud.

#### Source

Indian Journal of Medical Sciences; 2020. 72(3):141-147. 21 ref.

#### Publisher

Scientific Scholar Pvt. Ltd.

#### Location of Publisher

Mumbai

#### Country of Publication



India

## Abstract

**Objectives:** The world is grappling with an ongoing COVID-19 pandemic that has shaken the mankind to the core and disrupted the lives of everyone. The aim of the study was to assess the presence of psychological distress, depression, anxiety, stress, and insomnia experienced by the Indian healthcare workers. **Material and Methods:** A cross-sectional study was conducted in India among 777 doctors to evaluate the mental health of doctors working in Corona wards from April 2020 to May 2020 using a pre-designed, pre-tested validated, semi-structured DASS-21 questionnaire, and the Insomnia Severity Index. Continuous variables between the groups were measured using the Mann-Whitney U-test and the Kruskal-Wallis H test. **Results:** Among the doctors working for the pandemic, around 55% of medical officers in the study reported having moderate levels of depression. With respect to anxiety, it was found that among men as many as 52% reported experiencing severe anxiety and 24% had moderate levels of anxiety whereas females reported as high as 68% and 48% of moderate and severe anxiety, respectively. In our study, around 30% and 44% of male doctors reported mild and moderate levels of stress, respectively, whereas 70% and 56% of female doctors reported mild and moderate levels of stress, respectively. It was also observed that among female doctors the rates of moderate insomnia were especially high (65%), whereas a high level of male participants reported sub-threshold insomnia (52%). **Conclusion:** Early screening targeting the medical workforce and the implementation of psychological interventions is essential for protecting and maintaining the functionality of the health-care system.

## Publication Type

Journal article.

<221>

## Accession Number

20210023181

## Author

Zarghami, A.; Farjam, M.; Fakhraei, B.; Hashemzadeh, K.; Yazdanpanah, M. H.

## Title

A report of the telepsychiatric evaluation of SARS-CoV-2 patients.

## Source

Telemedicine and e-health; 2020. 26(12):1461-1465.

## Publisher

Mary Ann Liebert, Inc.

## Location of Publisher

New Rochelle

## Country of Publication

USA

## Abstract

**Objective:** During the current coronavirus disease 2019 (COVID-19) pandemic, telemedicine has been brought to the forefront of attention. This report aimed to assess psychiatric comorbidities in COVID-19 patients by utilizing telepsychiatry. **Methods:** COVID-19 patients admitted in Fasa University Hospital and nonhospitalized outpatients of Fasa city were interviewed by a psychiatrist through video chat for a 1-month period (March-April, 2020). Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder Assessment (GAD-7), and Perceived Stress Scale-14 (PSS 14) questionnaires were administered for all patients. Each patient's mental status was recorded, and if any psychiatric problem was diagnosed, supportive psychotherapy, pharmacotherapy, and follow-up visits based on the patient's condition were started. **Result:** From a total of 82 COVID-19 patients who entered the study, 32 (39.03%) and 50 (60.97%) subjects were inpatients and outpatients, respectively. Moreover, 32 (39.03%) subjects were male and 50 (60.97%) were female. Insomnia seen in 24 (29.3%) patients and adjustment disorder in 13 (15.9%) patients were the most common psychiatric disorders among a total of 33 (40.2%) patients suffering from mental illness. Female and hospitalized patients presented significantly more frequent comorbidities than males and outpatients. **Conclusions:** Psychiatric disorders were significantly more common in patients with hospital admission than those without and more frequent in female versus male subjects. There were no significant differences between male and female subjects with and without admission according to the PHQ-9, GAD-7, and PSS-14 scores. It was concluded that telepsychiatry in the early stages of mental problems during a catastrophic event like the coronavirus pandemic, can be an efficient instrument for the screening of psychosomatic comorbidities, so that pharmacological treatment (considering possible drug interactions with COVID-19 medications) and psychotherapeutic intervention can be optimized by psychiatrists.

## Publication Type

Journal article.

<222>

## Accession Number

20210023073

## Author

Okediran, J. O.; Ilesanmi, O. S.; Fetuga, A. A.; Onoh, I.; Afolabi, A. A.; Ogunbode, O.; Olajide, L.; Kwaghe, A. V.; Balogun, M. S.

## Title

The experiences of healthcare workers during the COVID-19 crisis in Lagos, Nigeria: a qualitative study.

## Source

GERMS; 2020. 10(4):356-366. 24 ref.

## Publisher

European Academy of HIV/AIDS and Infectious Diseases

## Location of Publisher

Bucharest

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Country of Publication

Romania

Abstract

**Introduction:** The novel coronavirus (COVID-19) pandemic has overwhelmed health systems globally. Healthcare workers (HCWs) are faced with numerous challenges during the COVID-19 response. In this study, we aimed to describe the experiences of HCWs during the COVID-19 outbreak in Lagos, Nigeria. **Methods:** We conducted a qualitative study on the experiences of frontline HCWs at the COVID-19 isolation centers in Lagos, Nigeria using purposive and snowballing sampling techniques. An in-depth interview which lasted for 25-40 minutes for each respondent was conducted among ten medical officers and four nurses between 15th June and 13th July 2020. We analyzed data using Colaizzi's phenomenological method. **Results:** Respondents' age ranged between 29 and 51 years with a median age of 36.5 years. Four themes were identified from data analysis. In the first theme, "COVID-19 care: A call to responsibility", HCWs expressed optimism regarding COVID-19 care, and described the work conditions at COVID-19 isolation centers. In the second theme, "Challenges encountered while caring for COVID-19 patients - coping strategies", HCWs experienced difficulties working in a new environment and with limited resources. They however coped through the available support systems. Regarding the "Experiences in COVID-19 care", the feelings of HCWs varied from pleasure on patients' recovery to distress following patients' demise. On the "Necessities in COVID-19 care", HCWs identified the need for increased psychosocial support, and adequate provision of material and financial support. **Conclusions:** HCWs at COVID-19 isolation centers need to be assured of a safe working environment while providing them with a strengthened support system.

Publication Type

Journal article.

<223>

Accession Number

20210023016

Author

Vecchie, A.; Bonaventura, A.; Toldo, S.; Dagna, L.; Dinarello, C. A.; Abbate, A.

Title

IL-18 and infections: is there a role for targeted therapies?

Source

Journal of Cellular Physiology; 2020. 236(3):1638-1657.

Publisher

Wiley

Location of Publisher

Hoboken

## Country of Publication

USA

## Abstract

Interleukin (IL)-18 is a pro-inflammatory cytokine belonging to the IL-1 family, first identified for its interferon- $\gamma$ -inducing properties. IL-18 regulates both T helper (Th) 1 and Th2 responses. It acts synergistically with IL-12 in the Th1 paradigm, whereas with IL-2 and without IL-12 it can induce Th2 cytokine production from cluster of differentiation (CD)4+ T cells, natural killer (NK cells, NKT cells, as well as from Th1 cells). IL-18 also plays a role in the hemophagocytic lymphohistiocytosis, a life-threatening condition characterized by a cytokine storm that can be secondary to infections. IL-18-mediated inflammation was largely studied in animal models of bacterial, viral, parasitic, and fungal infections. These studies highlight the contribution of either IL-18 overproduction by the host or overresponsiveness of the host to IL-18 causing an exaggerated inflammatory burden and leading to tissue injury. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is responsible for the coronavirus disease 2019 (COVID-19). The damage in the later phase of the disease appears to be driven by a cytokine storm, including interleukin IL-1 family members and secondary cytokines like IL-6. IL-18 may participate in this hyperinflammation, as it was previously found to be able to cause injury in the lung tissue of infected animals. IL-18 blockade has become an appealing therapeutic target and has been tested in some IL-18-mediated rheumatic diseases and infantile-onset macrophage activation syndrome. Given its role in regulating the immune response to infections, IL-18 blockade might represent a therapeutic option for COVID-19, although further studies are warranted to investigate more in detail the exact role of IL-18 in SARS-CoV-2 infection.

## Publication Type

Journal article.

<224>

## Accession Number

20210022970

## Author

Charsouei, S.; Esfahlani, M. Z.; Dorosti, A.; Zamiri, R. E.

## Title

Effects of COVID-19 pandemic on perceived stress, quality of life, and coping strategies of women with breast cancer with spinal metastasis under chemotherapy.

## Source

International Journal of Women's Health and Reproduction Sciences; 2021. 9(1):55-60. 22 ref.

## Publisher

Aras Part Medical International Press Co.

## Location of Publisher

Manisa

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## Country of Publication

Turkey

## Abstract

**Objectives:** Women with breast cancer spinal metastases are highly prone to coronavirus disease 2019 (COVID-19), resulting in the incidence of stress in these women. The present study aimed to investigate the perceived stress and its effect on the quality of life (QoL) and coping strategies of female chemotherapy patients with breast cancer spinal metastases during the COVID-19 pandemic. **Materials and Methods:** This descriptive-correlational study was conducted during February 20, 2020 and May 21, 2020 at Tabriz University of Medical Sciences during the COVID-19 pandemic. A total of 61 female chemotherapy patients with breast cancer spinal metastases completed the Perceived Stress Scale (PSS) and Billings, SF-36 questionnaire, and Moos' Coping Checklist. The data were analyzed in SPSS using the Pearson correlation coefficient test at the significance level of  $P < 0.05$ . **Results:** The overall perceived stress level of the participants was high (51.10  $\pm$  2.45). The overall score of coping strategies was 46.10  $\pm$  1.15 while the scores of problem- and emotion-focused subscales were 22.25  $\pm$  1.41 and 30.42  $\pm$  0.1.30, respectively. The perceived stress level had a significant correlation with overall coping ( $P=0.009$ ,  $r=0.8$ ), emotion-focused coping ( $P=0.04$ ,  $r=0.5$ ), and problem-focused coping ( $P=0.02$ ,  $r=0.6$ ) strategies. Finally, the results showed poor relationships between problem-focused and physical health ( $P=0.009$ ,  $r=0.4$ ), problem-focused mental health ( $P=0.01$ ,  $r=0.4$ ), emotion-focused and physical health ( $P=0.02$ ,  $r=0.3$ ), and emotion-focused and mental health ( $P=0.03$ ,  $r=0.3$ ). **Conclusions:** Based on the findings, there are direct correlations between the perceived stress (strong) and QoL (poor) levels of female chemotherapy patients with breast cancer spinal metastases and their coping strategies during the COVID-19 pandemic.

## Publication Type

Journal article.

<225>

## Accession Number

20210022923

## Author

Heydari, S. T.; Zarei, L.; Sadati, A. K.; Moradi, N.; Akbari, M.; Mehralian, G.; Lankarani, K. B.

## Title

The effect of risk communication on preventive and protective behaviours during the COVID-19 outbreak: mediating role of risk perception.

## Source

BMC Public Health; 2021. 21(54). 65 ref.

## Publisher

BioMed Central Ltd

## Location of Publisher

London

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Country of Publication

UK

Abstract

Background: The COVID-19 outbreak is a global pandemic, during which the community preventive and protective behaviors play a crucial role in the containment and control of infection. This study was designed to contribute to the existing knowledge on how risk communication (RC) and risk perception (RP) affect protective and preventive behaviors (PPB) during the COVID-19 outbreak. Methods: The required data were extracted from a national online survey of Iranian adults aged 15 and older during March 15-19, 2020 (n=3213). Data analysis was performed using structural equation modeling. Results: The study findings reveal that RC has direct and indirect positive effects on PB. Furthermore, this study also provides new evidence indicating that RP mediates the relationship between RC and PB and there is a two-way relationship between RC and RP. These interactions may have impact on risk communication strategies which should be adopted during this pandemic. Conclusion: The study findings have remarkable implications for informing future communications as well as interventions during this ongoing outbreak and subsequent national risk events.

Publication Type

Journal article.

<226>

Accession Number

20210022893

Author

Yan ShiYan; Xu Rui; Stratton, T. D.; Kavcic, V.; Luo Dan; Hou FengSu; Bi FengYing; Jiao Rong; Song KangXing; Jiang Yang

Title

Sex differences and psychological stress: responses to the COVID-19 pandemic in China.

Source

BMC Public Health; 2021. 21(79). 42 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: About 83,000 COVID-19 patients were confirmed in China up to May 2020. Amid the well-documented threats to physical health, the effects of this public health crisis - and the varied efforts to contain its spread - have altered individuals' "normal" daily functioning. These impacts on social, psychological, and emotional well-being remain relatively unexplored - in particular, the ways in which Chinese men and women experience and respond to potential behavioral stressors. Our study investigated sex differences in psychological stress, emotional reactions, and behavioral responses to COVID-19 and related threats among Chinese residents. Methods: In late February (2020), an anonymous online questionnaire was disseminated via WeChat, a popular social media platform in China. The cross-sectional study utilized a non-probabilistic "snowball" or convenience sampling of residents from various provinces and regions of China. Basic demographic characteristics (e.g., age and gender) - along with residential living arrangements and conditions - were measured along with psychological stress and emotional responses to the COVID-19 pandemic. Results: Three thousand eighty-eight questionnaires were returned: 1749 females (56.6%) and 1339 males (43.4%). The mean stress level, as measured by a visual analog scale, was 3.4 (SD = 2.4) - but differed significantly by sex. Besides sex, factors positively associated with stress included: age (< 45 years), employment (unsteady income, unemployed), risk of infection (exposure to COVID-19, completed medical observation), difficulties encountered (diseases, work/study, financial, mental), and related behaviors (higher desire for COVID-19 knowledge, more time concerning on the COVID-19 outbreak). "Protective" factors included frequent contact with colleagues, calmness of mood comparing with the pre-pandemic, and psychological resilience. Males and females also differed significantly in adapting to current living/working conditions, responding to run a fever, and needing psychological support services. Conclusions: The self-reported stress of Chinese residents related to the COVID-19 pandemic was significantly related to sex, age, employment, resilience and coping styles. Future responses to such public health threats may wish to provide sex- and/or age-appropriate supports for psychological health and emotional well-being to those at greatest risk of experiencing stress.

#### Publication Type

Journal article.

<227>

#### Accession Number

20210022888

#### Author

Tosun, S. A.; Nomer, K.; Alemdaroglu, S.; Ozkaya, E.

#### Title

Knowledge, behaviors and opinions of medical faculty students during the COVID-19 pandemic.

#### Source

Annals of Medical Research; 2020. 27(12):3181-3188. 18 ref.

#### Publisher

Inonu Universitesi Tip Fakultesi

#### Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

**Aim:** The emergency of COVID-19 pandemic has severely affected medical students' education and the possibility of being considered as health-care professionals has come to mind. We described knowledge, behaviours and opinions of medical students during the pandemic and separated into the continents and compared them with our country. **Materials and Methods:** The cross-sectional worldwide study including 26 items online questionnaire was conducted between March 24th and April 9th, 2020. Medical students were grouped according to their continent and Turkey as a separate group. **Results:** 1454 medical students studying in 64 countries from 4 continents including Asia, Europe, South America and Africa participated in study. Only 23.7% of all was adequately informed about approach to outbreak situations. This was the lowest in Europe and followed by Turkey (20.8%, 21.7% respectively). 71.2% of all changed their hygiene habits; paying attention to social distance increased from 2% to 61.9%. In Africa, 58.6% of students feel qualified to work in hospitals voluntarily, whereas it was only 19.9% in Turkey and 29.2% in Europe ( $p < 0.001$ ). 91.5% of Asian and 87.7% of European students would agree to volunteer in hospitals. In Turkey it was only 71.1% ( $p < 0.001$ ). 75.9% of all support the view that they should be qualified to volunteer in hospitals when necessary. **Conclusion:** Medical students seem to want to volunteer, but have not been adequately informed about the approach to outbreak situations. An international consensus on medical students' roles may improve medical school programs about the current COVID-19 Pandemic and future ones.

Publication Type

Journal article.

<228>

Accession Number

20210022840

Author

Bissenova, N. M.; Yergaliyeva, A. S.

Title

Microbiological indicators of patients with confirmed infection COVID-19. [Russian]

Source

Science & Healthcare; 2020. 22(6):5-10. 14 ref.

Publisher

Semey State Medical University

Location of Publisher

Semey



Country of Publication

Kazakhstan

Abstract

**Background.** The aim of this study was to identify etiological microorganisms and antibiotic resistance rates of bacterial infection in patients with COVID-19 infection. **Materials and methods.** A prospective microbiological study of the microbial landscape and antibiotic resistance of strains isolated from patients with confirmed COVID-19 infection, hospitalized in National Scientific Medical Research Center, Nur-Sultan, Kazakhstan. Identification of isolates and antibiotic susceptibility testing were performed by Vitek-2 automated system. **Results:** During study period, 282 strains were isolated; of them, the most frequently isolated microorganisms were as follows: Streptococcus viridans group 51.6%, Candida sp. 24.8%, Acinetobacter baumannii 6.4% and Klebsiella pneumoniae 3.5% with high level of antibiotic resistance. **Conclusion.** Based on our results, we report fungal and gram-negative bacterial infection with high level of antibiotic resistance in patients with COVID-19 infection. All this prompts the conduct of microbiological monitoring in order to make changes in the strategy of administration and treatment of these patients in accordance with the principles of the rational use of antimicrobial drugs.

Publication Type

Journal article.

<229>

Accession Number

20210022835

Author

Gupta, M.; Bhargava, S.

Title

The profile of teledermatology consultations during the COVID-19 pandemic: an observational study. (Special Issue: COVID-19.)

Source

Our Dermatology Online; 2020. 11(Suppl. 2):10-12. 13 ref.

Publisher

Our Dermatology Online

Location of Publisher

Slupsk

Country of Publication

Poland

Abstract

Background: The COVID-19 pandemic has caused major disruptions in healthcare settings all over the world. During the lockdown period, teledermatology (TD) played a salient role in helping aggrieved patients receive treatment. Material and Method: The following is a retrospective, observational study carried out over 6 weeks at two centers in which TD consultations during the pandemic were evaluated. Results: A total of 300 patients (male:female = 167:133) with a mean age of 28.34+or-7.2 years were evaluated. The most common age group was 20-40 years old (40.66%; n = 122). Almost three-fifths of the patients (58%; n = 174) consulted for the first time. Noninfectious conditions predominated (62%; n = 186), with eczema and dermatitis (19.3%; n = 57) being the most common, and with dermatophytosis and fungal infections (15.7%) being the most common among the infectious disorders. Conclusions: Because dermatology is a visual branch of medicine, TD has the potential to play a major role in providing dermatological care to a large number of patients in the future.

#### Publication Type

Journal article.

<230>

#### Accession Number

20210022756

#### Author

Liu LiLong; Hu JunYi; Hou YaXin; Tao Zhen; Chen ZhaoHui; Chen Ke

#### Title

Pit latrines may be a potential risk in rural China and low-income countries when dealing with COVID-19.

#### Source

Science of the Total Environment; 2021. 761.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

According to the latest reports, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which caused coronavirus disease 2019 (COVID-19), was successfully isolated from the excreta (stool and urine) of COVID-19 patients, suggesting SARS-CoV-2 could be transmitted through excreta contaminated water. As pit latrines and the use of untreated excreta as fertilizer were common in rural China, we surveyed 27 villages of Jiangxi and Hubei provinces and found that pit latrines could be a potential source of SARS-CoV-2 water pollution. Recently, bats have been widely recognized as the source of SARS-CoV-2. There were many possible intermediate hosts of SARS-CoV-2, including pangolin, snake, bird and fish, but which one was still

not clear exactly. Here, we proposed a hypothesis to illustrate the mechanism that SARS-CoV-2 might spread from the excreta of infected humans in pit latrines to potential animal hosts, thus becoming a sustainable source of infection in rural China. Therefore, we believe that abolishing pit latrines and banning the use of untreated excreta as fertilizer can improve the local living environment and effectively prevent COVID-19 and other potential waterborne diseases that could emanate from the excreta of infected persons. Although this study focused on rural areas in China, the results could also be applied to low-income countries, especially in Africa.

#### Publication Type

Journal article.

<231>

#### Accession Number

20210022257

#### Author

Tesfaldet, Y. T.; Ndeh, N. T.

#### Title

Chulalongkorn university precautionary measures amid COVID-19 outbreak.

#### Source

Journal of Infectious Diseases and Antimicrobial Agents; 2020. 37(3):163-170. 25 ref.

#### Publisher

Infectious Disease Association of Thailand

#### Location of Publisher

Bangkok

#### Country of Publication

Thailand

#### Abstract

Coronavirus of 2019 (COVID-19) is a pandemic that is very contagious. The infection was first reported outside of China in Thailand. Since the outbreak of the virus, different institutions have adopted certain measures in response to the public health emergency. The present report delves into the handling of the COVID-19 outbreak at Chulalongkorn University, one of Thailand's major universities located in the epicenter of discovered cases in the country. It outlines the key measures put in place by university authorities to counter the spread of COVID-19 infection such as provision of hand sanitizers, social distancing, the adoption of e-learning and the promotion of telemedicine. This report highlights the importance of prompt and decisive actions as key in the fight of the COVID-19 pandemic as exemplified by Chulalongkorn University.

#### Publication Type

Journal article.

<232>

Accession Number

20210022155

Author

Rajini Senthil; Balagurunathan Kunchithapathan; Sivapragasam Ramalingam; Ponmalar Manivannan

Title

COVID-19 awareness and its impact in rural and urban Puducherry - a community based cross sectional study.

Source

Journal of Evolution of Medical and Dental Sciences; 2020. 9(51):3862-3867. 18 ref.

Publisher

Akshantala Enterprises

Location of Publisher

Mysore

Country of Publication

India

Abstract

**BACKGROUND:** Covid-19 is a new disease & is having the most devastating effects globally; its emergence and spread causes' confusion, anxiety & fear among the general public. The aim of the study is to evaluate the impact of Covid-19 on psychosocial and socioeconomic status of select rural and urban community during lockdown. **METHODS:** We conducted a community based cross sectional study with a sample size of 600 using systematic random sampling method in both rural and urban areas of Puducherry. Pretested semi structured questionnaire was used to assess the awareness of Covid-19, psychosocial problems and socioeconomic impact. **RESULTS:** Our study observed that 62% had adequate awareness, 34% had moderate awareness among the sample population and 15% had moderate to severe psychosocial impact due to lockdown, which indicates there is increased distress and apprehension among the general population due to Covid-19 pandemic. There was highly significant association between locality (urban or rural) and various psychosocial problems like feeling of yourself or others in danger. **CONCLUSIONS:** There is a need for intensification of preventive aspects and stringent measures to reduce the incidence of cases in the community. To address the psychosocial impact, government can advertise the availability of helpline numbers which should be working 24 x 7 to fulfil the public grievances and arrange counseling specialist to tackle the mental health issues and further mitigation.

Publication Type

Journal article.

<233>

Accession Number

20210022037

Author

Refaat, H.; Mady, F. M.; Sarhan, H. A.; Rateb, H. S.; Alaaeldin, E.

Title

Optimization and evaluation of propolis liposomes as a promising therapeutic approach for COVID-19.

Source

International Journal of Pharmaceutics; 2021. 592. 43 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The present work aimed to develop an optimized liposomal formulation for enhancing the anti-viral activity of propolis against COVID-19. Docking studies were performed for certain components of Egyptian Propolis using Avigan, Hydroxychloroquine and Remdesivir as standard antivirals against both COVID-19 3CL-protease and S1 spike protein. Response surface methodology and modified injection method were implemented to maximize the entrapment efficiency and release of the liposomal formulation. The optimized formulation parameters were as follow: LMC of 60 mM, CH% of 20% and DL of 5 mg/ml. At those values the E.E% and released % were 70.112% and 81.801%, respectively with nanosized particles (117 +or- 11 nm). Docking studies revealed that Rutin and Caffeic acid phenethyl ester showed the highest affinity to both targets. Results showed a significant inhibitory effect of the optimized liposomal formula of Propolis against COVID-3CL protease (IC50 = 1.183 +or- 0.06) compared with the Egyptian propolis extract (IC50 = 2.452 +or- 0.11), P < 0.001. Interestingly, the inhibition of viral replication of COVID-19 determined by RT\_PCR has been significantly enhanced via encapsulation of propolis extract within the liposomal formulation (P < 0.0001) and was comparable to the viral inhibitory effect of the potent antiviral (remdesivir). These findings identified the potential of propolis liposomes as a promising treatment approach against COVID-19.

Publication Type

Journal article.

<234>

Accession Number

20210022010

Author

Turer, D. M.; Good, C. H.; Schilling, B. K.; Turer, R. W.; Karlowsky, N. R.; Dvoracek, L. A.; Ban, H.; Chang, J. S.; Rubin, J. P.

Title

Improved testing and design of intubation boxes during the COVID-19 pandemic.

Source

Annals of Emergency Medicine; 2021. 77(1):1-10. 17 ref.

Publisher

Mosby Inc.

Location of Publisher

St. Louis

Country of Publication

USA

Abstract

**Study objective:** Throughout the coronavirus disease 2019 pandemic, many emergency departments have been using passive protective enclosures ("intubation boxes") during intubation. The effectiveness of these enclosures remains uncertain. We sought to quantify their ability to contain aerosols using industry standard test protocols. **Methods:** We tested a commercially available passive protective enclosure representing the most common design and compared this with a modified enclosure that incorporated a vacuum system for active air filtration during simulated intubations and negative-pressure isolation. We evaluated the enclosures by using the same 3 tests air filtration experts use to certify class I biosafety cabinets: visual smoke pattern analysis using neutrally buoyant smoke, aerosol leak testing using a test aerosol that mimics the size of virus-containing particulates, and air velocity measurements. **Results:** Qualitative evaluation revealed smoke escaping from all passive enclosure openings. Aerosol leak testing demonstrated elevated particle concentrations outside the enclosure during simulated intubations. In contrast, vacuum-filter-equipped enclosures fully contained the visible smoke and test aerosol to standards consistent with class I biosafety cabinet certification. **Conclusion:** Passive enclosures for intubation failed to contain aerosols, but the addition of a vacuum and active air filtration reduced aerosol spread during simulated intubation and patient isolation.

Publication Type

Journal article.

<235>

Accession Number

20210021981

Author

Kock, J. H. de; Latham, H. A.; Leslie, S. J.; Grindle, M.; Munoz, S. A.; Ellis, L.; Polson, R.; O'Malley, C. M.

Title

A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being.

Source

BMC Public Health; 2021. 21(104). 75 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Health and social care workers (HSCWs) have carried a heavy burden during the COVID-19 crisis and, in the challenge to control the virus, have directly faced its consequences. Supporting their psychological wellbeing continues, therefore, to be a priority. This rapid review was carried out to establish whether there are any identifiable risk factors for adverse mental health outcomes amongst HSCWs during the COVID-19 crisis. Methods: We undertook a rapid review of the literature following guidelines by the WHO and the Cochrane Collaboration's recommendations. We searched across 14 databases, executing the search at two different time points. We included published, observational and experimental studies that reported the psychological effects on HSCWs during the COVID-19 pandemic. Results: The 24 studies included in this review reported data predominantly from China (18 out of 24 included studies) and most sampled urban hospital staff. Our study indicates that COVID-19 has a considerable impact on the psychological wellbeing of front-line hospital staff. Results suggest that nurses may be at higher risk of adverse mental health outcomes during this pandemic, but no studies compare this group with the primary care workforce. Furthermore, no studies investigated the psychological impact of the COVID-19 pandemic on social care staff. Other risk factors identified were underlying organic illness, gender (female), concern about family, fear of infection, lack of personal protective equipment (PPE) and close contact with COVID-19. Systemic support, adequate knowledge and resilience were identified as factors protecting against adverse mental health outcomes. Conclusions: The evidence to date suggests that female nurses with close contact with COVID-19 patients may have the most to gain from efforts aimed at supporting psychological well-being. However, inconsistencies in findings and a lack of data collected outside of hospital settings, suggest that we should not exclude any groups when addressing psychological well-being in health and social care workers. Whilst psychological interventions aimed at enhancing resilience in the individual may be of benefit, it is evident that to build a resilient workforce, occupational and environmental factors must be addressed. Further research including social care workers and analysis of wider societal structural factors is recommended.

Publication Type

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<236>

Accession Number

20210021979

Author

Li JingHua; Xu JingDong; Zhou Huan; You Hua; Wang XiaoHui; Li Yan; Liang Yuan; Li Shan; Ma LiNa; Zeng Jing; Cai HuanLe; Xie JinZhao; Pan ChengHao; Hao Chun; Gilmour, S.; Lau TakFai [Lau, T. F. J.]; Hao YuanTao; Xu Dong [Xu, D. R.]; Gu Jing

Title

Working conditions and health status of 6,317 front line public health workers across five provinces in China during the COVID-19 epidemic: a cross-sectional study.

Source

BMC Public Health; 2021. 21(106). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Public health workers at the Chinese Centre for Disease Control and Prevention (China CDC) and primary health care institutes (PHIs) were among the main workers who implemented prevention, control, and containment measures. However, their efforts and health status have not been well documented. We aimed to investigate the working conditions and health status of front line public health workers in China during the COVID-19 epidemic. Methods: Between 18 February and 1 March 2020, we conducted an online cross-sectional survey of 2,313 CDC workers and 4,004 PHI workers in five provinces across China experiencing different scales of COVID-19 epidemic. We surveyed all participants about their work conditions, roles, burdens, perceptions, mental health, and self-rated health using a self-constructed questionnaire and standardised measurements (i.e., Patient Health Questionnaire and General Anxiety Disorder scale). To examine the independent associations between working conditions and health outcomes, we used multivariate regression models controlling for potential confounders. Results: The prevalence of depression, anxiety, and poor self-rated health was 21.3, 19.0, and 9.8%, respectively, among public health workers (27.1, 20.6, and 15.0% among CDC workers and 17.5, 17.9, and 6.8% among PHI workers). The majority (71.6%) made immense efforts in both field and non-field work. Nearly 20.0% have worked all night for more than 3 days, and 45.3% had worked throughout the Chinese New Year holiday. Three risk factors and two protective factors were found to be independently associated with all three health outcomes in our final multivariate models: working all night for >3 days (multivariate odds ratio



[ORm]=1.67~1.75,  $p < 0.001$ ), concerns about infection at work (ORm=1.46~1.89,  $p < 0.001$ ), perceived troubles at work (ORm=1.10~1.28,  $p < 0.001$ ), initiating COVID-19 prevention work after January 23 (ORm=0.78~0.82,  $p=0.002\sim 0.008$ ), and ability to persist for  $> 1$  month at the current work intensity (ORm=0.44~0.55,  $p < 0.001$ ). Conclusions: Chinese public health workers made immense efforts and personal sacrifices to control the COVID-19 epidemic and faced the risk of mental health problems. Efforts are needed to improve the working conditions and health status of public health workers and thus maintain their morale and effectiveness during the fight against COVID-19.

#### Publication Type

Journal article.

<237>

#### Accession Number

20210021971

#### Author

Mahmood, Q. K.; Jafree, S. R.; Aisha Jalil; Nadir, S. M. H.; Fischer, F.

#### Title

Anxiety amongst physicians during COVID-19: cross-sectional study in Pakistan.

#### Source

BMC Public Health; 2021. 21(118). 64 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Background: Ensuring safety and wellbeing of healthcare providers is crucial, particularly during times of a pandemic. In this study, we aim to identify the determinants of anxiety in physicians on duty in coronavirus wards or quarantine centers. Methods: We conducted a cross-sectional quantitative survey with an additional qualitative item. Five constructs of workload, exhaustion, family strain, feeling of protection, and anxiety were measured using items from two validated tools. Modifications were made for regional relevance. Factor analysis was performed showing satisfactory Cronbach alpha results. Overall, 103 physicians completed the questionnaire. Results: T-test results revealed significant associations between gender and anxiety. Structural equation modeling identified that high workload contributed to greater exhaustion ( $\beta=0.41$ ,  $R^2=0.17$ ,  $p < 0.001$ ) and greater family strain ( $\beta=0.47$ ,  $R^2=0.22$ ,  $p < 0.001$ ). Exhaustion ( $\beta=0.17$ ,  $p < 0.005$ ), family strain ( $\beta=0.34$ ,  $p < 0.001$ ), and feelings of protection ( $\beta=-0.30$ ,  $p < 0.001$ ) significantly explained anxiety ( $R^2=0.28$ ). Qualitative findings further identified specific

needs of physicians with regard to protective equipment, compensation, quarantine management, resource allocation, security and public support, governance improvement, and health sector development. Conclusions: It is imperative to improve governmental and social support for physicians and other healthcare providers during the corona pandemic. Immediate attention is needed to reduce anxiety, workload, and family strain in frontline practitioners treating coronavirus patients, and to improve their (perceptions of) protection. This is a precondition for patient safety.

#### Publication Type

Journal article.

<238>

#### Accession Number

20210021966

#### Author

Asgary, A.; Cojocaru, M. G.; Najafabadi, M. M.; Wu JianHong

#### Title

Simulating preventative testing of SARS-CoV-2 in schools: policy implications.

#### Source

BMC Public Health; 2021. 21(125). 20 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Background: School testing for SARS-CoV-2 infection has become an important policy and planning issue as schools were reopened after the summer season and as the COVID-19 pandemic continues. Decisions to test or not to test and, if testing, how many tests, how often and for how long, are complex decisions that need to be taken under uncertainty and conflicting pressures from various stakeholders. Method: We have developed an agent-based model and simulation tool that can be used to analyze the outcomes and effectiveness of different testing strategies and scenarios in schools with various number of classrooms and class sizes. We have applied a modified version of a standard SEIR disease transmission model that includes symptomatic and asymptomatic infectious populations, and that incorporates feasible public health measures. We also incorporated a pre-symptomatic phase for symptomatic cases. Every day, a random number of students in each class are tested. If they tested positive, they are placed in self-isolation at home when the test results are provided. Last but not least, we have included options to allow for full testing or complete self-isolation of a classroom with a positive case. Results: We present sample simulation results

for parameter values based on schools and disease related information, in the Province of Ontario, Canada. The findings show that testing can be an effective method in controlling the SARS-CoV-2 infection in schools if taken frequently, with expedited test results and self-isolation of infected students at home. Conclusions: Our findings show that while testing cannot eliminate the risk and has its own challenges, it can significantly control outbreaks when combined with other measures, such as masks and other protective measures.

#### Publication Type

Journal article.

<239>

#### Accession Number

20210021909

#### Author

Firouzbakht, M.; Omidvar, S.; Firouzbakht, S.; Asadi-Amoli, A.

#### Title

COVID-19 preventive behaviors and influencing factors in the Iranian population; a web-based survey.

#### Source

BMC Public Health; 2021. 21(143). 26 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Background: COVID19 is a respiratory disease caused by a novel coronavirus. As there has been no definitive treatment for the disease so far, the only way to control the spread is to break the chain of infection. Our study aimed to analyze the preventive behaviors and influencing factors in the Iranian population. Methods: This cross-sectional study was a web-based survey in the Iranian population. We performed the study during the first peak of COVID-19 outbreak (from March 25th, 2020 to April 5th). We used demographic and Preventive behaviors questionnaires to collect the data. This web-based survey was publicized on the internet through the common platforms used by the Iranian population. This survey was released on the website "Porline.com. A total of 2097 acceptable questionnaires were filled. All data were analyzed, using Statistical Package for Social Sciences (SPSS) version 19. Results: 61.9% of the participants checked the hand-washing question as "Always". 55.7 and 58.2% checked the wearing masks and gloves as "Always", respectively. We found a significant relationship between gender and hand washing behavior ( $P = 0.006$ ) and the use of masks and gloves ( $P < 0.001$ ). Results showed that wearing gloves had a significant relation with the education status ( $P = 0.029$ ) and economic status ( $P = 0.011$ ). Wearing masks had a

significant relation with economic status ( $P = 0.032$ ). Overall women had better preventive behaviors. Conclusions: Preventive behaviors have a significant relation with some socio-demographic characteristics. According to the 3 main preventive behaviors of hand-washing, wearing masks and gloves 50% of the population has not taken these behaviors seriously.

#### Publication Type

Journal article.

<240>

#### Accession Number

20210021907

#### Author

Oh TakKyu; Choi JaeWook; Song InAe

#### Title

Socioeconomic disparity and the risk of contracting COVID-19 in South Korea: an NHIS-COVID-19 database cohort study.

#### Source

BMC Public Health; 2021. 21(144). 29 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** The relationship between socioeconomic status and the risk of contracting coronavirus disease (COVID-19) remains controversial. We aimed to investigate whether socioeconomic status affected the risk of contracting COVID-19 in the South Korean population. **Methods:** The NHIS-COVID-19 database cohort was used in this population-based study. We collected the data of COVID-19 patients who were diagnosed between January 1, 2020 and June 4, 2020 and those of the control population. The income levels of all individuals as of February 2020 were extracted, and study participants were classified into four groups based on quartiles: Q1 (the lowest) to Q4 (the highest). Data were statistically analyzed using multivariable logistic regression modeling. **Results:** In total, 122,040 individuals-7669 and 114,371 individuals in the COVID-19 and control groups, respectively-were included in the final analysis. The multivariable logistic regression model showed that the Q1 group had a 1.19-fold higher risk of contracting COVID-19 than the Q4 group, whereas the Q2 and Q3 groups showed no significant differences. In the 20-39 years age group, compared with the Q4 group, the Q3 and Q2 groups showed 11 and 22% lower risks of contracting COVID-19, respectively. In the 60 years age group, compared with the Q4 group, the Q1, Q2,

and Q3 groups showed a 1.39-, 1.29-, and 1.14-fold higher risks of COVID-19, respectively. Conclusions: Lower socioeconomic status was associated with a higher risk of contracting COVID-19 in South Korea. This association was more evident in the older population (age 60 years), whereas both lower and higher socioeconomic statuses were associated with higher risks of contracting COVID-19 in the young adult population (in the 20-39 year age group). Strategies for the prevention of COVID-19 should focus on individuals of lower socioeconomic status and on young adults of higher and lower socioeconomic status.

#### Publication Type

Journal article.

<241>

#### Accession Number

20210021900

#### Author

Villela, E. F. de M.; Lopez, R. V. M.; Sato, A. P. S.; Oliveira, F. M. de; Waldman, E. A.; Bergh, R. van den; Fodjo, J. N. S.; Colebunders, R.

#### Title

COVID-19 outbreak in Brazil: adherence to national preventive measures and impact on people's lives, an online survey.

#### Source

BMC Public Health; 2021. 21(152). 40 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** The first case of COVID-19 infection was diagnosed in Brazil 26th February 2020. By March 16th, physical distancing and confinement measures were implemented by the Brazilian government. Little is known about how these measures were followed up by the Brazilian people and their impact on daily routine. **Methods:** In early April 2020, using an online platform, we organized an online survey among adults living in Brazil about their COVID-19 preventive behavior and impact on their daily routine. **Results:** Data from 23,896 respondents were analyzed (mean age: 47.4 years). Due to COVID-19 restrictions, half (51.1%) of the professionals reported working from home. Regular handwashing was practiced by 98.7% of participants; 92.6% reported adhering to the 1.5-2 m physical distancing rule, but only 45.5% wore a face mask when going outside. While 29.3% of respondents found it relatively easy to stay at home, indoor confinement was extremely difficult for 7.9% of participants. Moreover, 11% of participants were

extremely worried about their health during the COVID-19 epidemic. Younger people, male, persons living in a rural area/village or popular neighbourhoods, students and workers reported less preventive behaviour. Conclusion: Restrictive measures markedly affected the daily and professional routines of Brazilians. Participants showed a satisfactory level of adherence to national COVID-19 prevention guidelines. Qualitative and follow-up studies are needed to monitor the impact of COVID-19 in the Brazilian society.

#### Publication Type

Journal article.

<242>

#### Accession Number

20210021836

#### Author

Bulut, S.

#### Title

Determination of changes in people's attitudes and behaviors during period of COVID-19 pandemic (attitude and behavior change in pandemic). [Turkish]

#### Source

Saglik Bilimleri Tip Dergisi, Firat Universitesi; 2020. 34(3):241-248. 25 ref.

#### Publisher

Saglik Bilimleri Enstitusu, Firat Universitesi

#### Location of Publisher

Elazig

#### Country of Publication

Turkey

#### Abstract

**Objective:** In this study, it was aimed to determine the changes in people's attitudes and behaviors during the months of March, April, and May when COVID-19 pandemics was experienced heavily in Turkey.

**Materials and Methods:** The population of the research consists of people living in Turkey. Research data was collected between 22-25 June and using social media tools. During this period 278 people participated in the research. Data was collected by using a questionnaire form and social media tools in the research.

The data were analyzed with SPSS 22.0 package program. **Results:** In the research, 46.8% of the participants feel helpless against COVID-19 and the tolerance level of 38.5% of the participants against the developing events decreased. 53.2% of the participants became more protective in this period when the pandemic was intense. 77.7% of the participants were worried about COVID-19 and 52.2% of participants think they were infected with COVID-19 when they have a health problem. 56.1% of the participants stocked food and hygiene items. In the research, 72.3% of the participants stated that their use of social media increased

during this period. Conclusion: Pandemic has caused changes in people's attitudes and behaviors. For this reason, determining the attitudes and behaviors of the societies, especially during the pandemic periods, will provide convenience in reducing the effects of the pandemic.

#### Publication Type

Journal article.

<243>

#### Accession Number

20210021835

#### Author

Yildirim, T. T.; Yildirim, K.; Asafov, A.

#### Title

The evaluation of insomnia level of healthcare workers during COVID-19 pandemic in Turkey. [Turkish]

#### Source

Saglik Bilimleri Tip Dergisi, Firat Universitesi; 2020. 34(3):235-240. 24 ref.

#### Publisher

Saglik Bilimleri Enstitusu, Firat Universitesi

#### Location of Publisher

Elazig

#### Country of Publication

Turkey

#### Abstract

**Objective:** The aim of this study was to evaluate the insomnia severity of healthcare workers in Turkish society during the COVID-19 epidemic according to demographic data, working conditions and other variables. **Materials and Methods:** This study was carried out in Turkey, a total of 277 medical employees, including 107 men and 170 women providing active service in various health centers. Healthcare workers were asked to fill in the personal information form and the Insomnia Severity Index (ISI) to determine the insomnia level. The prepared questionnaires were applied online to healthcare workers who agreed to participate in the study. Mann-Whitney U ve Kruskal Wallis test were used in the statistical analysis of the data. The significance level was accepted as  $P < 0.05$  in these analyzes. **Results:** The average age of women was  $33.70 \pm 7.86$ , the average age of men was  $36.41 \pm 9.34$ . The ISI level was found higher in single healthcare workers ( $P < 0.05$ ). The ISI level was found higher in women, those who had high school education, and the younger age group, but this difference was not significant ( $P > 0.05$ ). The level of ISI was higher in secretaries and those working in the field of radiology, smokers and people with chronic diseases, but this difference is not significant ( $P > 0.05$ ). **Conclusion:** As a result of the psychological effects of healthcare workers, the ISI level was detected higher. Regular psychoeducation may be helpful for healthcare workers to be less psychologically affected by the COVID-19 outbreak.

Publication Type

Journal article.

<244>

Accession Number

20210021772

Author

Ladiwala, Z. F. R.; Dhillon, R. A.; Ibrahim Zahid; Omar Irfan; Khan, M. S.; Safia Awan; Khan, J. A.

Title

Knowledge, attitude and perception of Pakistanis towards COVID-19; a large cross-sectional survey.

Source

BMC Public Health; 2021. 21(21). 33 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** The Novel Coronavirus Disease (COVID-19) has created havoc globally as countries worldwide struggle to combat this pandemic. Since prevention and social isolation are known to be the only ways to prevent the spread of COVID-19, this has created challenges among the lower-middle income countries (LMIC) including Pakistan, as it battles between an under-resourced healthcare, an economic shutdown, and widespread myths and misconceptions. Therefore, a study was conducted to evaluate the knowledge, attitude and perceptions regarding COVID-19 as public understanding is vital to help facilitate the control of this outbreak. **Methods:** A pre-validated online questionnaire was distributed among the general population of Pakistan from 1st to 12th June 2020. Descriptive statistics were analyzed using SPSS v25. Adequate knowledge was assigned as a score of > 4 (range: 0-8) and good perception as a score of > 3 (range: 0-5). Chi-square test was used to determine the significance of difference in knowledge and perception of COVID-19 with socio-demographic characteristics. Logistic regression analysis was run to identify factors associated with adequate knowledge and perception.  $P < 0.05$  was considered as significant. **Results:** A total of 1200 respondents participated in this study with a wide range of age groups and education. Majority of the respondents had adequate knowledge (93.3%) with a mean score of 6.59+or-1.35, and good perception (85.6%) with a mean score of 4.29+or-0.82. Significant differences in knowledge and perception were observed among genders, age groups, education and between students and employees in the healthcare and non-healthcare department. A multivariate analysis revealed a higher educational status and female gender to be significant predictors of adequate knowledge and perception. **Conclusions:** Albeit the surge of COVID-19 cases in Pakistan, the participants demonstrated an overall

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adequate knowledge and good perception towards COVID-19. There is a need to follow the preventive protocols and dissemination of correct information through conducting educational interventions that target safe health practices and provide appropriate information on this infection.

#### Publication Type

Journal article.

<245>

#### Accession Number

20210021653

#### Author

George, M.; Alexander, A.; Mathew, J.; Iyer, A.; Waterval, J.; Simon, C.; Marchioni, D.; Maire, R.

#### Title

Proposal of a timing strategy for cholesteatoma surgery during the COVID-19 pandemic.

#### Source

European Archives of Oto-Rhino-Laryngology; 2020. 277(9):2619-2623. 9 ref.

#### Publisher

Springer-Verlag GmbH

#### Location of Publisher

Berlin

#### Country of Publication

Germany

#### Abstract

**Purpose:** The COVID-19 infection is an aggressive viral illness with high risk of transmission during otolaryngology examination and surgery. Cholesteatoma is known for its potential to cause complications and scheduling of surgery during the pandemic must be done carefully. The majority of otological surgeries may be classified as elective and postponed at this time (e.g., stapedotomy, tympanoplasty); whereas, others are emergencies (e.g., complicated acute otitis media, complicated cholesteatoma with cerebral or Bezold's abscess, meningitis, sinus thrombosis) and require immediate intervention. What is the ideal time for the surgical management of Cholesteatoma during the COVID-19 pandemic? **Methods:** Senior otologic surgeons from six teaching hospitals from various countries affected by the COVID-19 from around the world met remotely to make recommendations on reorganizing schedules for the treatment of cholesteatoma which has a risk of severe morbidity and mortality. The recommendations are based on their experiences and on available literature. **Results:** Due to the high risk of infecting the surgical staff it is prudent to stop all elective ear surgeries and plan cholesteatoma surgery after careful selection of patients, based on the extent of the disease and available resources. Specific precautions including use of appropriate personal protection equipment should be followed when operating on all patients during the pandemic. To facilitate the decision-making in the management of cholesteatoma, timing for surgery can

be divided into two categories with 3 and 2 sub-groups based on disease severity. Conclusions: Evidence on the timing of surgery of patients with cholesteatoma during the COVID-19 pandemic is lacking. This manuscript contains practical tips on how cholesteatoma surgery can be reorganized during this pandemic.

#### Publication Type

Journal article.

<246>

#### Accession Number

20210021535

#### Author

Sumitha, A.; Devi, P. B.; Sowmya Hari; Dhanasekaran, R.

#### Title

COVID-19 - in silico structure prediction and molecular docking studies with doxycycline and quinine.

#### Source

Biomedical & Pharmacology Journal; 2020. 13(3):1185-1193. 27 ref.

#### Publisher

Oriental Scientific Publishing Company

#### Location of Publisher

Bhopal

#### Country of Publication

India

#### Abstract

Coronavirus disease (covid-19) is a pandemic of international concern. It creates serious health risk all around the globe and it has no effective treatment. Doxycycline and Quinine are the drugs used as ligands in the study as these drugs has proved in vitro antiviral activity against dengue virus and herpes simplex virus. These compounds were targeted against non structural protein (nsp 12) which plays a vital role in replication and transcription of Corona viral genome. The protein 6 NUR that showed maximal identity of target protein nsp 12 was retrieved using BLASTp. Further the protein was modelled and the compounds were docked using AUTODOCK software and to study the structure activity relationship of ligand with target protein and biochemical information of ligand receptor interaction was done. Both the compounds, Doxycycline and Quinine were well engaged into the active site of target protein nsp 12 with strong hydrogen bond interaction and non polar interaction with active site of the protein. The Docking score of Doxycycline is found to be - 7.34 kcal/mol while that of Quinine being -6.14 Kcal/mol. This indicates the potential of these drugs as a lead against the nsp target protein of Corona virus which need further analysis and Optimisation studies.

#### Publication Type

<247>

Accession Number

20210021468

Author

Tani, H.; Kimura, M.; Tan Long; Yoshida, Y.; Ozawa, T.; Kishi, H.; Fukushi, S.; Saijo, M.; Sano, K.; Suzuki, T.; Kawasuji, H.; Ueno, A.; Miyajima, Y.; Fukui, Y.; Sakamaki, I.; Yamamoto, Y.; Morinaga, Y.

Title

Evaluation of SARS-CoV-2 neutralizing antibodies using a vesicular stomatitis virus possessing SARS-CoV-2 spike protein.

Source

Virology Journal; 2021. 18(16). 22 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: SARS-CoV-2 is a novel coronavirus that emerged in 2019 and is now classified in the genus Coronavirus with closely related SARS-CoV. SARS-CoV-2 is highly pathogenic in humans and is classified as a biosafety level (BSL)-3 pathogen, which makes manipulating it relatively difficult due to its infectious nature. Methods: To circumvent the need for BSL-3 laboratories, an alternative assay was developed that avoids live virus and instead uses a recombinant VSV expressing luciferase and possesses the full length or truncated spike proteins of SARS-CoV-2. Furthermore, to measure SARS-CoV-2 neutralizing antibodies under BSL2 conditions, a chemiluminescence reduction neutralization test (CRNT) for SARS-CoV-2 was developed. The neutralization values of the serum samples collected from hospitalized patients with COVID-19 or SARS-CoV-2 PCR-negative donors against the pseudotyped virus infection evaluated by the CRNT were compared with antibody titers determined from an enzyme-linked immunosorbent assay (ELISA) or an immunofluorescence assay (IFA). Results: The CRNT, which used whole blood collected from hospitalized patients with COVID-19, was also examined. As a result, the inhibition of pseudotyped virus infection was specifically observed in both serum and whole blood and was also correlated with the results of the IFA. Conclusions: In conclusion, the CRNT for COVID-19 is a convenient assay system that can be performed in a BSL-2 laboratory with high specificity and sensitivity for evaluating the occurrence of neutralizing antibodies against SARS-CoV-2.

Publication Type

<248>

Accession Number

20210021240

Author

Cifcibasi, H. S.; Elibol, A.; Kef, B.; Gur, B.; Kolsuz, S.; Kurtoglu, B.; Ipsalali, H. O.; Kukurtcu, N.; Senyigit, E.; Altinbas, E.; Tan, B.; Goztepe, A.; Certel, A. T.; Mutlu, A. U.; Bardakci, B.; Cengiz, E.; Celik, N. K.; Erzik, C.; Doymaz, M. Z.; Atici, S.; Sahiner, M.; Guven, S. G.

Title

Thoughts and awareness of medical students about the COVID-19 pandemic.

Source

Turkish Medical Student Journal; 2020. 7(2):44-64. 50 ref.

Publisher

Trakya University

Location of Publisher

Edirne

Country of Publication

Turkey

Abstract

**Aims:** This study aims to evaluate medical students' knowledge, thoughts, and awareness of the COVID-19 pandemic. **Methods:** A questionnaire consisting of 31 questions was prepared for this descriptive study. In the questionnaire, medical students' knowledge, attitudes and behaviors during the COVID-19 pandemic were investigated. Categorical variables are demonstrated as numbers and percentages, whereas continuous variables are presented as minimum, maximum, and mean values. **Results:** A total of 575 participants completed the questionnaire. The mean participant age was 21.7 years. Fifty-two percent of participants knew about the coronaviridae family before the outbreak and 38.8% were informed about COVID-19 in their medical schools. Of the students, 99.7% stated that the first case's origin was in China. Eighty percent of the participants stated that droplet spread is the transmission route of COVID-19. The most common opinion about the incubation period of the SARS CoV-2 was two to twelve days. Being older than 65 years old, having a comorbidity, being immunosuppressed, or working in the healthcare sector were the most particular risk factors to get infected. The majority of the participants follow the vaccine developments from social media, radio and television. According to 75.83% of the participants, all people should wear a mask in daily life for protection. **Conclusion:** The epidemiology and diagnostic factors of COVID-19 are well known by medical students. To minimize information pollution and raise awareness, medical students should be educated about pandemic and management of it. Further evaluation with various methods and more participants may help to better understand the awareness of the COVID-19 pandemic in medical students.

Publication Type

Journal article.

<249>

Accession Number

20210021202

Author

Yusoff, A. R.; Ahmad, F.; Obaid, K. J.

Title

Endoscopic retrograde cholangiopancreatography for acute gallstone pancreatitis: implementation of an institution safety protocol during the COVID-19 outbreak in Malaysia.

Source

Medical Journal of Malaysia; 2020. 75(6):764-766. 9 ref.

Publisher

Malaysian Medical Association

Location of Publisher

Kuala Lumpur

Country of Publication

Malaysia

Abstract

Coronavirus disease 2019 (COVID-19) is a highly contagious, severe acute respiratory syndrome that poses significant health risks to healthcare providers. A delicate balance is needed between timely intervention for ill patients without apparent COVID-19 infection and the safety of healthcare personnel who provide essential treatment in the midst of the pandemic. We report our experience managing a 70-year-old man who presented with acute gallstone pancreatitis at our hospital during the COVID-19 outbreak in Malaysia. We also describe the safety protocol measures that have been implemented in our institution to protect the healthcare personnel from this disease during endoscopic retrograde cholangiopancreatography. This case illustrates the importance of meticulous planning, risk assessment, effective team communication and strict adherence to recommendations when providing treatment during an unprecedented pandemic.

Publication Type

Journal article.

<250>

Accession Number

20210021201

Author

Voon, K.; Premnath Nagalingam

Title

How do surgeons weather the storm of COVID-19 pandemic?

Source

Medical Journal of Malaysia; 2020. 75(6):762-763. 10 ref.

Publisher

Malaysian Medical Association

Location of Publisher

Kuala Lumpur

Country of Publication

Malaysia

Abstract

COVID-19 has infected more than 10 million people worldwide and it has become one of the biggest challenges in the modern medical history. Wearing of face masks, social distancing, effective hand hygiene and the use of appropriate personal protective equipment are important in flattening the curve of the pandemic. The role of the surgeons in this battle against COVID-19 include curbing the spread of the disease, to protect and preserve the surgical workforce and to ensure the continuance of essential surgical services. We report our experience in dealing with the COVID-19 outbreak in a tertiary surgical centre in the Penang General Hospital in Northern Malaysia.

Publication Type

Journal article.

<251>

Accession Number

20210021185

Author

Davis, P. J.; Lin HungYun; Hercbergs, A.; Keating, K. A.; Mousa, S. A.

Title

Coronaviruses and integrin avbeta3: does thyroid hormone modify the relationship?

Source

Endocrine Research; 2020. 45(3):210-215. 40 ref.

Publisher

Taylor & Francis

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Background: Uptake of coronaviruses by target cells involves binding of the virus by cell ectoenzymes. For the etiologic agent of COVID-19 (SARS-CoV-2), a receptor has been identified as angiotensin-converting enzyme-2 (ACE2). Recently it has been suggested that plasma membrane integrins may be involved in the internalization and replication of clinically important coronaviruses. For example, integrin avbeta3 is involved in the cell uptake of a model porcine enteric a-coronavirus that causes human epidemics. ACE2 modulates the intracellular signaling generated by integrins. Background: We propose that the cellular internalization of avbeta3 applies to uptake of coronaviruses bound to the integrin, and we evaluate the possibility that clinical host T4 may contribute to target cell uptake of coronavirus and to the consequence of cell uptake of the virus. Discussion and Conclusions: The viral binding domain of the integrin is near the Arg-Gly-Asp (RGD) peptide-binding site and RGD molecules can affect virus binding. In this same locale on integrin avbeta3 is the receptor for thyroid hormone analogues, particularly, L-thyroxine (T4). By binding to the integrin, T4 has been shown to modulate the affinity of the integrin for other proteins, to control internalization of avbeta3 and to regulate the expression of a panel of cytokine genes, some of which are components of the 'cytokine storm' of viral infections. If T4 does influence coronavirus uptake by target cells, other thyroid hormone analogues, such as deaminated T4 and deaminated 3,5,3'-triiodo-L-thyronine (T3), are candidate agents to block the virus-relevant actions of T4 at integrin avbeta3 and possibly restrict virus uptake.

Publication Type

Journal article.

<252>

Accession Number

20210021054

Author

Sayiner, S.; Sehirli, A. O.; Serakinci, N.

Title

Alpha lipoic acid as a potential treatment for COVID-19 - a hypothesis.

Source

Current Topics in Nutraceutical Research; 2021. 19(2):172-175. 43 ref.

Publisher

New Century Health Publishers, LLC

Location of Publisher

New Orleans

Country of Publication

USA

Abstract

SARS-CoV-2 infection has led to COVID-19 outbreak worldwide. To date, a specific antiviral drug does not exist to treat the disease and control the virus. In this paper, we have explored the potential utility of alpha lipoic acid, an anti-inflammatory and antioxidant molecule, for treatment. Alpha lipoic acid exhibits strong antioxidant properties and modulates the immune system by regulating T cell activation making it a useful therapeutic candidate for cytokine storm triggering SARS-CoV-2 infection. In the present communication, we focused on the therapeutic potential of ALA with respect to its potential role on reducing the severity of symptoms and the adverse effects of other antiviral drugs used. We consider different mechanisms by which modulating ACE2 levels after virus replication and preventing cytokine storm and also focus on a new therapeutic venue that utilizes ALA.

Publication Type

Journal article.

<253>

Accession Number

20210021015

Author

Azevedo, P. S.; Fock, R. A.; Pereira, F. L.; Santos, P. P. dos; Ferro, F. C.; Sacco, N.; Polegato, B. F.; Zornoff, L. M.; Okoshi, M. P.; Achterberg, W.; Paiva, S. R. de

Title

The evident and the hidden factors of vitamin D status in older people during COVID-19 pandemic.

Source

Nutrire; 2021. 46(1). 65 ref.

Publisher

BioMed Central Ltd



Location of Publisher

London

Country of Publication

UK

Abstract

**Purpose:** Considering the COVID-19 pandemic, vitamin D is a target of research and speculation. Lockdown or home isolation reduces sunlight exposition and increases the risk of vitamin D deficiency. Special attention is needed for older people at risk of both severe forms of COVID-19 and vitamin D deficiency. This review aims to highlight the association of vitamin D and COVID-19 in two instances, the direct influence of vitamin D on the immune system, and the indirect risks for other vitamin D deficiency-related diseases, such as musculoskeletal properties in older persons. **Methods** We performed a narrative review. **Results:** Whether vitamin D deficiency is associated with COVID-19 poor prognosis, and if vitamin D supplementation may improve the post-infection outcomes is still unclear. In any case, the pandemic generates indirect burden, such as the sequence: home isolation, low sunlight exposition, vitamin D deficiency, and fragility fractures. **Conclusion:** Therefore, it is time to debate how to optimize vitamin D status in older people, especially during the COVID-19 pandemic.

Publication Type

Journal article.

<254>

Accession Number

20210020989

Author

Chakrabarty, R. K.; Beeler, P.; Liu Pai; Goswami, S.; Harvey, R. D.; Shamsh Pervez; Donkelaar, A. van; Martin, R. V.

Title

Ambient PM2.5 exposure and rapid spread of COVID-19 in the United States.

Source

Science of the Total Environment; 2021. 760. 41 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

## Abstract

It has been posited that populations being exposed to long-term air pollution are more susceptible to COVID-19. Evidence is emerging that long-term exposure to ambient PM<sub>2.5</sub> (particulate matter with aerodynamic diameter 2.5 μm or less) associates with higher COVID-19 mortality rates, but whether it also associates with the speed at which the disease is capable of spreading in a population is unknown. Here, we establish the association between long-term exposure to ambient PM<sub>2.5</sub> in the United States (US) and COVID-19 basic reproduction ratio R<sub>0</sub>- a dimensionless epidemic measure of the rapidity of disease spread through a population. We inferred state-level R<sub>0</sub> values using a state-of-the-art susceptible, exposed, infected, and recovered (SEIR) model initialized with COVID-19 epidemiological data corresponding to the period March 2-April 30. This period was characterized by a rapid surge in COVID-19 cases across the US states, implementation of strict social distancing measures, and a significant drop in outdoor air pollution. We find that an increase of 1 μg/m<sup>3</sup> in PM<sub>2.5</sub> levels below current national ambient air quality standards associates with an increase of 0.25 in R<sub>0</sub> (95% CI: 0.048-0.447). A 10% increase in secondary inorganic composition, sulfate-nitrate-ammonium, in PM<sub>2.5</sub> associates with 10% increase in R<sub>0</sub> by 0.22 (95% CI: 0.083-0.352), and presence of black carbon (soot) in the ambient environment moderates this relationship. We considered several potential confounding factors in our analysis, including gaseous air pollutants and socio-economical and meteorological conditions. Our results underscore two policy implications - first, regulatory standards need to be better guided by exploring the concentration-response relationships near the lower end of the PM<sub>2.5</sub> air quality distribution; and second, pollution regulations need to be continually enforced for combustion emissions that largely determine secondary inorganic aerosol formation.

## Publication Type

Journal article.

<255>

## Accession Number

20210020985

## Author

Navarro, K. M.; Clark, K. A.; Hardt, D. J.; Reid, C. E.; Lahm, P. W.; Domitrovich, J. W.; Butler, C. R.; Balmes, J. R.

## Title

Wildland firefighter exposure to smoke and COVID-19: a new risk on the fire line.

## Source

Science of the Total Environment; 2021. 760. many ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

## Country of Publication

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## Abstract

Throughout the United States, wildland firefighters respond to wildfires, performing arduous work in remote locations. Wildfire incidents can be an ideal environment for the transmission of infectious diseases, particularly for wildland firefighters who congregate in work and living settings. In this review, we examine how exposure to wildfire smoke can contribute to an increased likelihood of SARS-CoV-2 infection and severity of coronavirus disease (COVID-19). Human exposure to particulate matter (PM), a component of wildfire smoke, has been associated with oxidative stress and inflammatory responses; increasing the likelihood for adverse respiratory symptomology and pathology. In multiple epidemiological studies, wildfire smoke exposure has been associated with acute lower respiratory infections, such as bronchitis and pneumonia. Co-occurrence of SARS-CoV-2 infection and wildfire smoke inhalation may present an increased risk for COVID-19 illness in wildland firefighters due to PM based transport of SARS CoV-2 virus and up-regulation of angiotensin-converting enzyme II (ACE-2) (i.e. ACE-2 functions as a trans-membrane receptor, allowing the SARS-CoV-2 virus to gain entry into the epithelial cell). Wildfire smoke exposure may also increase risk for more severe COVID-19 illness such as cytokine release syndrome, hypotension, and acute respiratory distress syndrome (ARDS). Current infection control measures, including social distancing, wearing cloth masks, frequent cleaning and disinfecting of surfaces, frequent hand washing, and daily screening for COVID-19 symptoms are very important measures to reduce infections and severe health outcomes. Exposure to wildfire smoke may introduce additive or even multiplicative risk for SARS-CoV-2 infection and severity of disease in wildland firefighters. Thus, additional mitigative measures may be needed to prevent the co-occurrence of wildfire smoke exposure and SARS-CoV-2 infection.

## Publication Type

Journal article.

<256>

## Accession Number

20210020903

## Author

Philo, S. E.; Keim, E. K.; Swanstrom, R.; Ong, A. Q. W.; Burnor, E. A.; Kossik, A. L.; Harrison, J. C.; Demeke, B. A.; Zhou, N. A.; Beck, N. K.; Shirai, J. H.; Meschke, J. S.

## Title

A comparison of SARS-CoV-2 wastewater concentration methods for environmental surveillance.

## Source

Science of the Total Environment; 2021. 760. 27 ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

Country of Publication

UK

Abstract

Wastewater surveillance of SARS-CoV-2 may be a useful supplement to clinical surveillance as it is shed in feces, there are many asymptomatic cases, and diagnostic testing can have capacity limitations and extended time to results. Although numerous studies have utilized wastewater surveillance for SARS-CoV-2, the methods used were developed and/or standardized for other pathogens. This study evaluates multiple methods for concentration and recovery of SARS-CoV-2 and seeded human coronavirus OC43 from municipal primary wastewater and/or sludge from the Greater Seattle Area (March-July 2020). Methods evaluated include the bag-mediated filtration system (BMFS), with and without Vertrel™ extraction, skimmed milk flocculation, with and without Vertrel™ extraction, polyethylene glycol (PEG) precipitation, ultrafiltration, and sludge extraction. Total RNA was extracted from wastewater concentrates and analyzed for SARS-CoV-2 and OC43 with RT-qPCR. Skimmed milk flocculation without Vertrel™ extraction performed consistently over time and between treatment plants in Seattle-area wastewater with the lowest average OC43 Cq value and smallest variability (24.3; 95% CI: 23.8-24.9), most frequent SARS-CoV-2 detection (48.8% of sampling events), and highest average OC43 percent recovery (9.1%; 95% CI: 6.2-11.9%). Skimmed milk flocculation is also beneficial because it is feasible in low-resource settings. While the BMFS had the highest average volume assayed of 11.9 mL (95% CI: 10.7-13.1 mL), the average OC43 percent recovery was low (0.7%; 95% CI: 0.4-1.0%). Ultrafiltration and PEG precipitation had low average OC43 percent recoveries of 1.0% (95% CI: 0.5-1.6%) and 3.2% (95% CI: 1.3-5.1%), respectively. The slopes and efficiency for the SARS-CoV-2 standard curves were not consistent over time, confirming the need to include a standard curve each run rather than using a single curve for multiple plates. Results suggest that the concentration and detection methods used must be validated for the specific water matrix using a recovery control to assess performance over time.

Publication Type

Journal article.

<257>

Accession Number

20210020894

Author

Hartanto, B. W.; Mayasari, D. S.

Title

Environmentally friendly non-medical mask: an attempt to reduce the environmental impact from used masks during COVID 19 pandemic.

Source

Science of the Total Environment; 2021. 760. many ref.

Publisher

Elsevier Ltd

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Location of Publisher

Oxford

Country of Publication

UK

Abstract

During COVID-19 pandemic, wearing a mask has become a usual custom as a personal protection in every activity. The growth in consumption of face masks leads the increasing of mask waste and became a particular problem in environment. This study uses analytic hierarchy process (AHP) to determine appropriate material for making environmentally friendly non-medical mask. Filtration efficiency, breathability, and environmental impact index are defined as main criteria and carried out 26 alternative material from previous study. AHP presents a ranking of priority for all the alternative materials with Quilt and Cotton 600 TPI are the best values and fulfilled the material characteristics required by WHO. The sensitivity analysis generates some material with constant global priority results, such as Quilt, Cotton 600 TPI, Quilting cotton, Polycotton, and Polypropylene fabric 1. Quilting cotton with woven structure becomes the third ranking of alternative material, and Polypropylene fabric 1 is the worst material for making environmentally friendly non-medical mask.

Publication Type

Journal article.

<258>

Accession Number

20210020604

Author

Hasen, G.; Edris, R.; Chala, G.; Tefera, Y.; Hussen, H.; Tekassa, T.; Suleman, S.

Title

Medicines dispensing practice during the era of COVID-19 pandemic: a commentary.

Source

Journal of Pharmaceutical Policy and Practice; 2021. 14(1). 18 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

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The coronavirus disease 19 (COVID-19) pandemic is putting a huge strain on healthcare systems and is a turning point for the beginning of a global health crisis of an unprecedented condition. As such, the provision of quality pharmacy services particularly, dispensing practice with pre-existing challenges in resource-limited settings is a grave concern in the era of the COVID-19 pandemic. Thus, in this commentary we described the pattern of dispensing practice in the midst of the COVID-19 pandemic by evaluating the current condition of drug dispensing practice in drug retail outlets of Jimma Town.

#### Publication Type

Journal article.

<259>

#### Accession Number

20210020585

#### Author

McGowan, C. R.; Hellman, N.; Baxter, L.; Chakma, S.; Nahar, S.; Daula, A. U.; Kelly Rowe; Gilday, J.; Kingori, P.; Pounds, R.; Cummings, R.

#### Title

A graphic elicitation technique to represent patient rights.

#### Source

Conflict and Health; 2020. 14(86). 18 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** A patient charter is an explicit declaration of the rights of patients within a particular health care setting. In early 2020 the Save the Children Emergency Health Unit deployed to Cox's Bazar Bangladesh to support the establishment of a severe acute respiratory infection isolation and treatment centre as part of the COVID-19 response. We developed a charter of patient rights and had it translated into Bangla and Burmese; however, the charter remained inaccessible to Rohingya and members of the host community with low literacy. **Methods:** To both visualise and contextualise the patient charter we undertook a graphic elicitation method involving both the Rohingya and host communities. We carried out two focus group discussions during which we discussed the charter and agreed how best to illustrate the individual rights contained therein. **Results:** Logistical constraints and infection prevention and control procedures limited our ability to follow up with the original focus group participants and to engage in back-translation as we had planned; however, we were able to elicit rich descriptions of each right. Reflecting on

our method we were able to identify several key learnings relating to: (1) our technique for eliciting feedback on the charter verbatim versus a broader discussion of concepts referenced within each right, (2) our decision to include both men and women in the same focus group, (3) our decision to ask focus group participants to describe specific features of each illustration and how this benefited the inclusivity of our illustrations, and (4) the potential of the focus groups to act as a means to introduce the charter to communities. Conclusions: Though executing our method was operationally challenging we were able to create culturally appropriate illustrations to accompany our patient charter. In contexts of limited literacy it is possible to enable access to critical clinical governance and accountability tools.

#### Publication Type

Journal article.

<260>

#### Accession Number

20210020344

#### Author

Peng SzeMin; Yang KuenCheh; Chan, W. P.; Wang YingWei; Lin LiJu; Yen, A. M. F.; Smith, R. A.; Chen, T. H. H.

#### Title

Impact of the COVID-19 pandemic on a population-based breast cancer screening program.

#### Source

Cancer; 2020. 126(24):5202-5205. 8 ref.

#### Publisher

Wiley

#### Location of Publisher

Hoboken

#### Country of Publication

USA

#### Abstract

Not only were social events and public facilities closed temporarily due to the coronavirus disease 2019 (COVID-19) pandemic, but health services also were affected greatly. In this commentary, the authors discuss how the national program of mammography screening in Taiwan was affected, even without known community-acquired transmission.

#### Publication Type

Journal article.

<261>

Accession Number

20210020325

Author

Maes, M.; Higginson, E.; Pereira-Dias, J.; Curran, M. D.; Parmar, S.; Khokhar, F.; Cuchet-Lourenco, D.; Lux, J.; Sharma-Hajela, S.; Ravenhill, B.; Hamed, I.; Heales, L.; Mahroof, R.; Solderholm, A.; Forrest, S.; Sridhar, S.; Brown, N. M.; Baker, S.; Navapurkar, V.; Dougan, G.; Scott, J. B.; Morris, A. C.

Title

Ventilator-associated pneumonia in critically ill patients with COVID-19.

Source

Critical Care; 2021. 25(25). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Pandemic COVID-19 caused by the coronavirus SARS-CoV-2 has a high incidence of patients with severe acute respiratory syndrome (SARS). Many of these patients require admission to an intensive care unit (ICU) for invasive ventilation and are at significant risk of developing a secondary, ventilator-associated pneumonia (VAP). Objectives: To study the incidence of VAP and bacterial lung microbiome composition of ventilated COVID-19 and non-COVID-19 patients. Methods: In this retrospective observational study, we compared the incidence of VAP and secondary infections using a combination of microbial culture and a TaqMan multi-pathogen array. In addition, we determined the lung microbiome composition using 16S RNA analysis in a subset of samples. The study involved 81 COVID-19 and 144 non-COVID-19 patients receiving invasive ventilation in a single University teaching hospital between March 15th 2020 and August 30th 2020. Results: COVID-19 patients were significantly more likely to develop VAP than patients without COVID (Cox proportional hazard ratio 2.01 95% CI 1.14-3.54,  $p = 0.0015$ ) with an incidence density of 28/1000 ventilator days versus 13/1000 for patients without COVID ( $p = 0.009$ ). Although the distribution of organisms causing VAP was similar between the two groups, and the pulmonary microbiome was similar, we identified 3 cases of invasive aspergillosis amongst the patients with COVID-19 but none in the non-COVID-19 cohort. Herpesviridae activation was also numerically more frequent amongst patients with COVID-19. Conclusion: COVID-19 is associated with an increased risk of VAP, which is not fully explained by the prolonged duration of ventilation. The pulmonary dysbiosis caused by COVID-19, and the causative organisms of secondary pneumonia observed are similar to that seen in critically ill patients ventilated for other reasons.

Publication Type



<262>

Accession Number

20210020314

Author

Logie, C. H.; Okumu, M.; Latif, M.; Musoke, D. K.; Lukone, S. O.; Mwima, S.; Kyambadde, P.

Title

Exploring resource scarcity and contextual influences on wellbeing among young refugees in Bidi Bidi refugee settlement, Uganda: findings from a qualitative study.

Source

Conflict and Health; 2021. 15(3). many ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Contextual factors including poverty and inequitable gender norms harm refugee adolescent and youths' wellbeing. Our study focused on Bidi Bidi refugee settlement that hosts more than 230,000 of Uganda's 1.4 million refugees. We explored contextual factors associated with wellbeing among refugee adolescents and youth aged 16-24 in Bidi Bidi refugee settlement. Methods: We conducted 6 focus groups (n = 3: women, n = 3: men) and 10 individual interviews with young refugees aged 16-24 living in Bidi Bidi. We used physical distancing practices in a private outdoor space. Focus groups and individual interviews explored socio-environmental factors associated with refugee youth wellbeing. Focus groups were digitally recorded, transcribed verbatim, and coded by two investigators using thematic analysis. Analysis was informed by a social contextual theoretical approach that considers the interplay between material (resource access), symbolic (cultural norms and values), and relational (social relationships) contextual factors that can enable or constrain health promotion. Results: Participants included 58 youth (29 men; 29 women), mean age was 20.9 (range 16-24). Most participants (82.8%, n = 48) were from South Sudan and the remaining from the Democratic Republic of Congo (17.2% [n = 10]). Participant narratives revealed the complex interrelationships between material, symbolic and relational contexts that shaped wellbeing. Resource constraints of poverty, food insecurity, and unemployment (material contexts) produced stress and increased sexual and gender-based violence (SGBV) targeting adolescent girls and women. These economic insecurities exacerbated inequitable gender norms (symbolic contexts) to increase early marriage and transactional sex (relational context) among adolescent girls and young women. Gendered tasks such as collecting water and firewood also increased SGBV exposure among girls and young women, and this

was exacerbated by deforestation. Participants reported negative community impacts (relational context) of COVID-19 that were associated with fear and panic, alongside increased social isolation due to business, school and church closures. Conclusions: Resource scarcity produced pervasive stressors among refugee adolescents and youth. Findings signal the importance of gender transformative approaches to SGBV prevention that integrate attention to resource scarcity. These may be particularly relevant in the COVID-19 pandemic. Findings signal the importance of developing health enabling social contexts with and for refugee adolescents and youth.

#### Publication Type

Journal article.

<263>

#### Accession Number

20210020308

#### Author

Hamida, R. S.; Ashwag Shami; Ali, M. A.; Almohawes, Z. N.; Mohammed, A. E.; Bin-Meferij, M. M.

#### Title

Kefir: a protective dietary supplementation against viral infection.

#### Source

Biomedicine & Pharmacotherapy; 2021. 133. 156 ref.

#### Publisher

Elsevier Masson SAS

#### Location of Publisher

Issy-les-Moulineaux

#### Country of Publication

France

#### Abstract

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by a recently discovered coronavirus termed 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2). Several scholars have tested antiviral drugs and compounds to overcome COVID-19. 'Kefir' is a fermented milk drink similar to a thin yogurt that is made from kefir grains. Kefir and its probiotic contents can modulate the immune system to suppress infections from viruses (e.g., Zika, hepatitis C, influenza, rotaviruses). The antiviral mechanisms of kefir involve enhancement of macrophage production, increasing phagocytosis, boosting production of cluster of differentiation-positive (CD4+), CD8+, immunoglobulin (Ig)G+ and IgA+ B cells, T cells, neutrophils, as well as cytokines (e.g., interleukin (IL)-2, IL-12, interferon gamma-P). Kefir can act as an anti-inflammatory agent by reducing expression of IL-6, IL-1, TNF-a, and interferon-P. Hence, kefir might be a significant inhibitor of the 'cytokine storm' that contributes to COVID-19. Here, we review several studies with a particular emphasis on the effect of kefir consumption and their microbial composition against viral

infection, as well as discussing the further development of kefir as a protective supplementary dietary against SARS-CoV-2 infection via modulating the immune response.

Publication Type

Journal article.

<264>

Accession Number

20210020289

Author

Tsai KengChang; Huang YiChia; Liaw ChiaChing; Tsai Chial; Chiou ChunTang; Lin ChienJung; Wei WenChi; Lin JuiShan [Lin, J. S. S.]; Tseng YuHwei; Yeh KuoMing; Lin YiLing; Jan JiaTsong; Liang JianJong; Liao ChunChe; Chiou WenFei; Kuo YaoHaur; Lee ShenMing; Lee MingYung; Su YiChang

Title

A traditional Chinese medicine formula NRICM101 to target COVID-19 through multiple pathways: a bedside-to-bench study.

Source

Biomedicine & Pharmacotherapy; 2021. 133. 40 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

COVID-19 is a global pandemic, with over 50 million confirmed cases and 1.2 million deaths as of November 11, 2020. No therapies or vaccines so far are recommended to treat or prevent the new coronavirus. A novel traditional Chinese medicine formula, Taiwan Chingguan Yihau (NRICM101), has been administered to patients with COVID-19 in Taiwan since April 2020. Its clinical outcomes and pharmacology have been evaluated. Among 33 patients with confirmed COVID-19 admitted in two medical centers, those (n = 12) who were older, sicker, with more co-existing conditions and showing no improvement after 21 days of hospitalization were given NRICM101. They achieved 3 consecutive negative results within a median of 9 days and reported no adverse events. Pharmacological assays demonstrated the effects of the formula in inhibiting the spike protein/ACE2 interaction, 3CL protease activity, viral plaque formation, and production of cytokines interleukin (IL)-6 and tumor necrosis factor (TNF)-a. This bedside-to-bench study suggests that NRICM101 may disrupt disease progression through its antiviral and anti-inflammatory properties, offering promise as a multi-target agent for the prevention and treatment of COVID-19.

## Publication Type

Journal article.

<265>

## Accession Number

20210020284

## Author

Bakadia, B. M.; He Feng; Souho, T.; Lamboni, L.; Ullah, M. W.; Boni, B. O.; Ahmed, A. A. Q.; Mukole, B. M.; Yang Guang

## Title

Prevention and treatment of COVID-19: focus on interferons, chloroquine/hydroxychloroquine, azithromycin, and vaccine.

## Source

Biomedicine & Pharmacotherapy; 2021. 133. 255 ref.

## Publisher

Elsevier Masson SAS

## Location of Publisher

Issy-les-Moulineaux

## Country of Publication

France

## Abstract

The ongoing pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has drawn the attention of researchers and clinicians from several disciplines and sectors who are trying to find durable solutions both at preventive and treatment levels. To date, there is no approved effective treatment or vaccine available to control the coronavirus disease-2019 (COVID-19). The preliminary in vitro studies on viral infection models showed potential antiviral activities of type I and III interferons (IFNs), chloroquine (CQ)/hydroxychloroquine (HCQ), and azithromycin (AZM); however, the clinical studies on COVID-19 patients treated with CQ/HCQ and AZM led to controversies in different regions due to their adverse side effects, as well as their combined treatment could prolong the QT interval. Interestingly, the treatment with type I IFNs showed encouraging results. Moreover, the different preliminary reports of COVID-19 candidate vaccines showcase promising results by inducing the production of a high level of neutralizing antibodies (NAbs) and specific T cell-mediated immune response in almost all participants. The present review aims to summarize and analyze the recent progress evidence concerning the use of IFNs, CQ/HCQ, and AZM for the treatment of COVID-19. The available data on immunization options to prevent the COVID-19 are also analyzed with the aim to present the promising options which could be investigated in future for sustainable control of the pandemic.

## Publication Type

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Journal article.

<266>

Accession Number

20210020283

Author

Mukesh Kumar; Jitender Madan; Sodhi, R. K.; Singh, S. B.; Anju Katyal

Title

Decoding the silent walk of COVID-19: halting its spread using old bullets.

Source

Biomedicine & Pharmacotherapy; 2021. 133. 151 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

Severe acute respiratory syndrome (SARS) develops within 3-14 days when CoV2 invades epithelial, myeloid cells in the nasopharynx and pneumocytes in the respiratory tract through angiotensin converting enzyme (ACE2). Infection swiftly disseminates to gastrointestinal, cardiovascular, renal organs as well as immune system to deregulate their normal functioning through unique and distinct mechanisms. The health system and economy has been intensely thwarted by the rapid spread and exorbitant mortality caused by COVID-19 disease across the globe. The acute progression of the disease and high infection rate pose an enormous challenge for its therapeutic management and critical care. The viral structure, genome and proteome have been deciphered which yielded cues for targeting already available therapeutic entities. More than 200 compounds have been screened and till date approximately 69 therapeutic agents are undergoing clinical trials across the world. Among these, remdesivir (RMD), chloroquine (CQ), hydroxychloroquine (HCQ), nospapine (NOS) and heparin have demonstrated fairly promising results in preclinical and clinical studies. Recently, RMD has been approved by USFDA for the management of COVID 19. However, intense research is going on to screen and ace the 'magic bullets' for the management of SARS-CoV2 infection worldwide. The current review illustrates the plausible therapeutic targets in SARS-CoV2 important for inhibition of virus cycle. In addition, the role of RMD, CQ, HCQ, NOS and heparin in combating infection has been addressed. The importance of vitamin C and D supplements as adjunct therapies in the prevention of SARS-CoV2 virus infection have also been summarized.

Publication Type

Journal article.

<267>

Accession Number

20210020281

Author

Ud-Din, A.; Mazhar, M.; Waseem, M.; Ahmad, W.; Bibi, A.; Hassan, A.; Ali, N.; Gang Wang; Qian Gao; Ullah, R.; Shah, T.; Ullah, M.; Khan, I.; Nisar, M. F.; Wu JianBo

Title

SARS-CoV-2 microbiome dysbiosis linked disorders and possible probiotics role.

Source

Biomedicine & Pharmacotherapy; 2021. 133. 171 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Abstract

In December 2019, a pneumonia outbreak of unknown etiology was reported which caused panic in Wuhan city of central China, which was later identified as Coronavirus disease (COVID-19) caused by a novel coronavirus, Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) by the Chinese Centre for Disease Control and Prevention (CDC) and WHO. To date, the SARS-CoV-2 spread has already become a global pandemic with a considerable death toll. The associated symptoms of the COVID-19 infection varied with increased inflammation as an everyday pathological basis. Among various other symptoms such as fever, cough, lethargy, gastrointestinal (GI) symptoms included diarrhea and IBD with colitis, have been reported. Currently, there is no sole cure for COVID-19, and researchers are actively engaged to search out appropriate treatment and develop a vaccine for its prevention. Antiviral for controlling viral load and corticosteroid therapy for reducing inflammation seems to be inadequate to control the fatality rate. Based on the available related literature, which documented GI symptoms with diarrhea, inflammatory bowel diseases (IBD) with colitis, and increased deaths in the intensive care unit (ICU), conclude that dysbiosis occurs during SARS-COV-2 infection as the gut-lung axis cannot be ignored. As probiotics play a therapeutic role for GI, IBD, colitis, and even in viral infection. So, we assume that the inclusion of studies to investigate gut microbiome and subsequent therapies such as probiotics might help decrease the inflammatory response of viral pathogenesis and respiratory symptoms by strengthening the host immune system, amelioration of gut microbiome, and improvement of gut barrier function.

Publication Type

Journal article.

<268>

Accession Number

20210020193

Author

Frater, J. L.; Anderson, J.

Title

The impact of biosafety enhancement on stat laboratory quality metrics: lessons from the COVID-19 pandemic.

Source

Clinica Chimica Acta; 2021. 512:58-62. 20 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Objective: It is unclear if implementation of biosafety action plans in response to the COVID-19 pandemic has affected laboratory quality metrics. Methods: This retrospective study used quality data, including turnaround time (TAT) and number/type of unacceptable specimens from a stat laboratory supporting an outpatient medical clinic serving predominantly elderly cancer patients. Four months of data from the height of the COVID-19 pandemic (March-June 2020) were compared to the same months in 2019. Results: March-May 2020 test volumes were decreased compared to 2019. June 2020 test volume was slightly increased compared to 2019. TATs in 2020 were similar/slightly improved compared to the same months in 2019, due to shortened collect to receive and receive to verify TATs. The number and types of unacceptable specimens were similar in 2020 and 2019. Conclusions: Despite the challenges to the system caused by the pandemic, laboratory quality metrics were maintained.

Publication Type

Journal article.

<269>

Accession Number

20210020045

Author

Strong, K.; Noor, A.; Aponte, J.; Banerjee, A.; Cibulskis, R.; Diaz, T.; Ghys, P.; Glaziou, P.; Hereward, M.; Hug, L.; Kantorova, V.; Mahy, M.; Moller, A. B.; Requejo, J.; Riley, L.; Say, L.; You DanZhen

Title

Monitoring the status of selected health related sustainable development goals: methods and projections to 2030.

Source

Global Health Action; 2020. 13(1846903). 30 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Background: Monitoring Sustainable Development Goal indicators (SDGs) and their targets plays an important role in understanding and advocating for improved health outcomes for all countries. We present the United Nations (UN) Inter-agency groups' efforts to support countries to report on SDG health indicators, project progress towards 2030 targets and build country accountability for action. Background: We highlight common principles and practices of each Inter-agency group and the progress made towards SDG 3 targets using seven health indicators as examples. The indicators used provide examples of best practice for modelling estimates and projections using standard methods, transparent data collection and country consultations. Methods: Practices common to the UN agencies include multi-UN agency participation, expert groups to advise on estimation methods, transparent publication of methods and data inputs, use of UN-derived population estimates, country consultations, and a common reporting platform to present results. Our seven examples illustrate how estimates, using mostly Bayesian models, make use of country data to track progress towards SDG targets for 2030. Results: Progress has been made over the past decade. However, none of the seven indicators are on track to achieve their respective SDG targets by 2030. Accelerated efforts are needed, especially in low- and middle-income countries, to reduce the burden of maternal, child, communicable and noncommunicable disease mortality, and to provide access to modern methods of family planning to all women. Conclusion: Our analysis shows the benefit of UN interagency monitoring which prioritizes transparent country data sources, UN population estimates and life tables, and rigorous but replicable modelling methods. Countries are supported to build capacity for data collection, analysis and reporting. Through these monitoring efforts we support countries to tackle even the most intransigent health issues, including the pandemic caused by SARS-CoV-2 that is reversing the hard-earned gains of all countries.

Publication Type

Journal article.



<270>

Accession Number

20210020013

Author

Razazi, K.; Arrestier, R.; Haudebourg, A. F.; Benelli, B.; Carteaux, G.; Decousser, J. W.; Fourati, S.; Woerther, P. L.; Schlemmer, F.; Charles-Nelson, A.; Botterel, F.; Prost, N. de; Dessap, A. M.

Title

Risks of ventilator-associated pneumonia and invasive pulmonary aspergillosis in patients with viral acute respiratory distress syndrome related or not to Coronavirus 19 disease.

Source

Critical Care; 2020. 24(699). 43 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** Data on incidence of ventilator-associated pneumonia (VAP) and invasive pulmonary aspergillosis in patients with severe SARS-CoV-2 infection are limited. **Methods:** We conducted a monocenter retrospective study comparing the incidence of VAP and invasive aspergillosis between patients with COVID-19-related acute respiratory distress syndrome (C-ARDS) and those with non-SARS-CoV-2 viral ARDS (NC-ARDS). **Results:** We assessed 90 C-ARDS and 82 NC-ARDS patients, who were mechanically ventilated for more than 48 h. At ICU admission, there were significantly fewer bacterial coinfections documented in C-ARDS than in NC-ARDS: 14 (16%) vs 38 (48%),  $p < 0.01$ . Conversely, significantly more patients developed at least one VAP episode in C-ARDS as compared with NC-ARDS: 58 (64%) vs. 36 (44%),  $p = 0.007$ . The probability of VAP was significantly higher in C-ARDS after adjusting on death and ventilator weaning [sub-hazard ratio = 1.72 (1.14-2.52),  $p < 0.01$ ]. The incidence of multi-drug-resistant bacteria (MDR)-related VAP was significantly higher in C-ARDS than in NC-ARDS: 21 (23%) vs. 9 (11%),  $p = 0.03$ . Carbapenem was more used in C-ARDS than in NC-ARDS: 48 (53%), vs 21 (26%),  $p < 0.01$ . According to AspICU algorithm, there were fewer cases of putative aspergillosis in C-ARDS than in NC-ARDS [2 (2%) vs. 12 (15%),  $p = 0.003$ ], but there was no difference in Aspergillus colonization. **Conclusions:** In our experience, we evidenced a higher incidence of VAP and MDR-VAP in C-ARDS than in NC-ARDS and a lower risk for invasive aspergillosis in the former group.

Publication Type

Journal article.

<271>

Accession Number

20210019793

Author

Acosta-Olmos, D. M.; Losada-Szipina, C.; Jimenez-Vargas, I. D.; Ramirez-Ossa, D. M.; Rey-Mora, D.; Silva-Salgar, J.; Villegas-Bateman, C.; Villegas-Trujillo, L. M.; Aristizabal-Perez, J. F.

Title

Special biosecurity considerations in orthodontics during pandemic (SARS CoV-2). [Spanish]

Source

CES Odontologia; 2020. 33(2):213-232. 35 ref.

Publisher

Facultad de Odontologia de la Universidad CES

Location of Publisher

Medellin

Country of Publication

Colombia

Abstract

Periodic control in an Orthodontic treatment allows establishing a good treatment sequence without risks for the patient. Treatment without proper monitoring can lead to irreversible damage. However, due to the COVID-19 pandemic facing the world today and the risks in the health area, non-vital and potentially contagious services such as scheduled consultation dental services have been temporarily closed. Taking into account this situation, and that this virus will end up being endemic, it is necessary to establish biosafety protocols that allow reactivating dental practices, and in turn generate guarantees for operators, support staff, patients and the environment of the themselves. In this context, it is of great importance to develop a protocol carried out with expert professionals in orthodontic treatments and in the pandemic, to outline the quality protocol that guarantees a safe environment and minimizes the risks of infection.

Publication Type

Journal article.

<272>

Accession Number

20210019681

Author

Castro, C. G., Jr. de; Gregianin, L. J.; Burger, J. A.

Title

Continuous high-dose ivermectin appears to be safe in patients with acute myelogenous leukemia and could inform clinical repurposing for COVID-19 infection.

Source

Leukemia and Lymphoma; 2020. 61(10):2536-2537. 5 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Publication Type

Correspondence.

<273>

Accession Number

20210019474

Author

Rahmanian, M.; Dorodchi, A.; Zarenezhad, M.; Hatami, N.; Javdani, F.; Kalani, N.

Title

Knowledge, attitude and practice of students of Jahrom University of medical sciences to the new coronavirus (COVID- 19). [Persian]

Source

Medical Journal of Mashhad University of Medical Sciences; 2020. 63(3):fa2359-fa2369. 30 ref.

Publisher

Mashhad University of Medical Sciences

Location of Publisher

Mashhad

Country of Publication

Iran

## Abstract

**Background and Aim:** COVID19 was developed in late 2019 and is rapidly spreading across the globe, including Iran. The main programs offered are to prevent the spread of the disease based on personal hygiene and to observe behaviors such as social distance. Meanwhile, the knowledge of medical students about the disease and the behavior they offer against it is also important for people because of this pattern. In this study, the awareness, attitude and performance of medical students in Jahrom city against this disease have been studied. **Methods:** In this descriptive cross-sectional study, awareness, attitude and performance of 241 students of Jahrom University of Medical Sciences in relation to COVID 19 by designing a questionnaire consisting of areas of awareness, attitude and performance of people and the source of information and confidence (media) was measured for coronavirus. After confirming the validity and reliability of the questionnaire, the online questionnaire was completed by individuals. **Results:** The mean score of students' awareness, attitude and performance of Corona virus was above average and was 73.84, 79.62 and 77.97% (out of 100%), respectively. The results showed that there was a significant relationship between field of study, marital status, academic year and the number of family members and students' performance in coronary heart disease ( $p$ -value  $<0.05$ ). **Conclusion:** Given the importance of individual behavior in controlling the prevalence of COVID-19 disease, providing a tool for measuring the awareness, attitude and performance of people in the community, the questionnaire designed in this study can be used in future research. Also, medical students seem to have an acceptable insight into the disease as individuals who are at the forefront of the fight against coronavirus.

## Publication Type

Journal article.

<274>

## Accession Number

20210019467

## Author

Karabulut, N.; Gurcayir, D.; Aktas, Y. Y.; Kara, A.; Kiziloglu, B.; Arslan, B.; Bolukbas, N.

## Title

The effect of perceived stress on anxiety and sleep quality among healthcare professionals in intensive care units during the coronavirus pandemic.

## Source

Psychology, Health & Medicine; 2020. 26(1):119-130. 43 ref.

## Publisher

Routledge

## Location of Publisher

Abingdon

## Country of Publication

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UK

## Abstract

The study aimed to explore the effect of perceived stress of healthcare workers on anxiety and sleep level in intensive care units during corona virus pandemic. The research was conducted in descriptive and cross-sectional types. The study was conducted between April 2020 and July 2020 at Ataturk University Research Hospital and Erzurum Regional Training and Research Hospital. In the research, it was aimed to reach all the healthcare professionals (260) working in intensive care units without selecting a sample. The data was collected by using the personal information form prepared by the researchers in line with the literature, Perceived Stress Scale, State-Trait Anxiety Inventory, and Visual Analog Sleep Scale. Of the 210 participants, 75.4% were female, and 88.1% were nurses. The mean age of the participants was 27.04 +or- 5.71 years, and 51.9% of the participants were 20-25 years old. The mean perceived stress, state anxiety, trait anxiety, and visual analog sleep scores were moderate and found as 29.9 +or- 6.83, 43.09 +or- 5.55, 46.15 +or- 5.3, and 503.79 +or- 134.24, respectively. In conclusion, a general picture of the psychological state of healthcare professionals in Turkey during the COVID-19 pandemic has been presented.

## Publication Type

Journal article.

<275>

## Accession Number

20210019463

## Author

Ceri, V.; Cicek, I.

## Title

Psychological well-being, depression and stress during COVID-19 pandemic in Turkey: a comparative study of healthcare professionals and non-healthcare professionals.

## Source

Psychology, Health & Medicine; 2020. 26(1):85-97. 32 ref.

## Publisher

Routledge

## Location of Publisher

Abingdon

## Country of Publication

UK

## Abstract

In this study, we aimed to investigate psychological well-being, depression, and stress among healthcare professionals and non-healthcare professionals in Turkey. An online questionnaire was prepared and

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shared with participants using social networking sites. Participants were 546 healthcare professionals (females = 313) and 445 non-healthcare professionals (females = 333), aged between 20 and 67 years. All participants completed measures of Depression Anxiety and Stress Scale-21 and Psychological Well-Being Scale. The results showed no significant difference in the scores of psychological well-being, depression and stress of healthcare professionals and non-healthcare professionals. However, the psychological well-being of healthcare professionals and stress varied in terms of age, gender, marital status, job descriptions, and ways of working in clinic. Women, non-physician healthcare professionals, young and single people and those who worked in COVID-19 service and stayed at least one week away from their families during the pandemic were found to have poor mental well-being. Psychological well-being was significantly and negatively correlated with depression and anxiety. Our findings indicate that healthcare professionals who are at the frontline of the fight against the COVID-19, and nurses, women, single person and those who are away from their family for more than a week during the pandemic are at greater risk.

#### Publication Type

Journal article.

<276>

#### Accession Number

20210019460

#### Author

Huang Lei; Wang Yun; Liu Juan; Ye PengFei; Chen Xijian; Xu HuaYan; Guo YingKun; Qu HaiBo; Ning Gang

#### Title

Factors determining perceived stress among medical staff in radiology departments during the COVID-19 outbreak.

#### Source

Psychology, Health & Medicine; 2021. 26(1):56-61. 17 ref.

#### Publisher

Routledge

#### Location of Publisher

Abingdon

#### Country of Publication

UK

#### Abstract

Medical staff in radiology departments faces a higher risk of infection and a heavier workload during the new coronavirus disease (COVID-19) outbreak. High perceived stress levels endanger physical and mental health and affect work efficiency and patient safety. Therefore, it is urgent to understand the perceived stress levels of medical staff and explore its risk factors. We recruited 600 medical staff from the radiology departments of 32 public hospitals in Sichuan Province, China, to evaluate perceived stress scores via a

mobile app-based questionnaire. The results showed that the perceived stress level among medical staff in the radiology departments during the COVID-19 outbreak was high and a sense of tension was strongly present. A positive correlation was found between anxiety score and perceived stress. Multivariate analysis showed that risk factors for perceived stress were female, existing anxiety, and fears of being infected at work, an uncontrollable outbreak, and not being able to pay rent or mortgage. Conversely, good knowledge about COVID-19, being unmarried, and working in a higher-grade hospital were protective factors for perceived stress. Therefore, more attention should be given to medical staff in the radiology departments that present the risk factors outlined above. Timely risk assessment of psychological stress and effective intervention measures should be taken for these high-risk groups to keep their perceived stress within normal limits.

Publication Type

Journal article.

<277>

Accession Number

20210019458

Author

Yildirim, M.; Gecer, E.; Akgul, O.

Title

The impacts of vulnerability, perceived risk, and fear on preventive behaviours against COVID-19.

Source

Psychology, Health & Medicine; 2021. 26(1):35-43. 20 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The world has been under the negative effect of the COVID-19 pandemic for the last few months. While people may take many preventive behaviours to minimize the risk, very little is known about the factors that can increase preventive behaviours during the COVID-19 pandemic. This study examined the effects of vulnerability, perceived risk, and fear on preventive behaviours of COVID-19. The study used a sample of 4,536 Turkish adults (M = 30.33 +or- 10.95 years) recruited from 17 March through 1 April 2020. Vulnerability, perceived risk, fear, and preventive behaviours were measured with self-rating scales. Participants mostly engaged in avoidance of public transportation and frequent handwashing as preventive behaviours. Women had a significantly higher vulnerability to, perceived risk, and fear of new coronavirus

compared to men. Correlation results indicated that age, gender, education level, vulnerability, perceived risk, and fear were related to preventive behaviours. Regression results demonstrated that vulnerability, perceived risk, and fear accounted for a significant amount of variance in preventive behaviours over and above the effects of demographic variables. The results suggest that vulnerability, perceived risk, and fear can significantly increase engagement in preventive behaviours during the novel coronavirus pandemic. The results have important implications for research and practice.

#### Publication Type

Journal article.

<278>

#### Accession Number

20210019129

#### Author

Rahim, A. A.; Chacko, T. V.

#### Title

Replicating the Kerala state's successful COVID-19 containment model: insights on what worked.

#### Source

Indian Journal of Community Medicine; 2020. 45(3):261-265. 32 ref.

#### Publisher

Medknow Publications

#### Location of Publisher

Mumbai

#### Country of Publication

India

#### Abstract

Although Kerala was the first state in India to report COVID cases, it was well prepared drawing on its past experience in managing effectively the Nipah outbreak and Kerala floods. It knew and initiated the measures required for containment because of its prior experience with mobilizing community-based groups, involvement of local-self government in decentralized planning, and participation in the containment and relief measure as well as a system-ready health system and infrastructure. The measures taken to "flatten the curve" that is unique to Kerala and the determinants of success are described in detail as "what worked" using the framework we developed post the Nipah outbreak containment experience. These are being shared with the hope that the insights these measures undertaken by the state provide can be used elsewhere to translate and replicate components that work.

#### Publication Type

Journal article.

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<279>

Accession Number

20210018953

Author

Schintler, L. A.; Wu JiaYi; McNeely, C. L.

Title

Regional health disparities, surge capacity, and impacts on COVID-19: critical insights and lessons from China.

Source

World Medical and Health Policy; 2020. 12(4):487-497. 33 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

In the face of the unexpected tidal wave of infections brought by the COVID-19 pandemic, many hospitals and medical care facilities around the world were woefully unprepared, particularly in terms of having adequate surge capacity. Going into a situation like a pandemic, regional inequalities in health-care resources and surge capacity, as well as disease incidence can compound these challenges and even further perpetuate already existing gaps and disparities. In this regard, China provides a compelling case in point. In this brief article, we draw upon the example of China, highlighting how regional health disparities in the country impacted the outcomes and dynamics of the pandemic in its early stages, including the possible reinforcement of existing health inequities. We conclude with some lessons learned from China, which can be used to inform other places facing similar resource constraints and disparities, especially in the management of a global epidemic like COVID-19.

Publication Type

Journal article.

<280>

Accession Number

20210018951

Author

Haeder, S. F.; Gollust, S. E.

Title

From poor to worse: health policy and politics scholars' assessment of the U.S. COVID-19 response and its implications.

Source

World Medical and Health Policy; 2020. 12(4):454-481. many ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

By any standard, the U.S. response to the coronavirus pandemic has been abysmal, with countless unnecessary deaths and suffering. Although the human impact is most important, the pandemic has also had enormous consequences on the U.S. political system. Health policy and politics scholars, particularly from political science orientations, are ideally equipped to evaluate the pandemic response from a political perspective. In this study, we report on the results of a two-wave survey of academic health policy researchers in April/May (N = 239) and September (N = 158) 2020. Respondents noted an outsized influence of public health, medicine, and economics, while noting limited public engagement of social scientists like sociologists and political scientists. The perceived expert influence declined over the two waves, while assessment of electoral consequences to favor Democrats grew. Respondents also offered a sober perspective on federal and state responses to the pandemic, forecasting lasting implications for health policy and political dynamics for years to come. Given their expertise, health policy and politics scholars appear uniquely qualified to enter the public and policy discourse going forward.

Publication Type

Journal article.

<281>

Accession Number

20210018949

Author

Choi YonJung

Title

The power of collaborative governance: the case of South Korea responding to COVID-19 pandemic.

Source

World Medical and Health Policy; 2020. 12(4):430-442. 23 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

The COVID-19 pandemic, the unprecedented global health crisis, has challenged the current systems of governance, both global governance and national governance. While the alleged "advanced" societies have shown their vulnerabilities and incompetence to deal with this crisis so far, a few countries have shown better ways of responding, in particular South Korea. In dealing with this kind of health crisis, criticism and praise can easily point to the national government and their policies, but rarely to the entire governance system and collaborative efforts of various actors. This article explores the synergy produced by the entire governance system participated in by various sectors, including both public and private ones, namely the collaborative governance, as an important factor of its more successful control of the epidemic compared with other countries.

Publication Type

Journal article.

<282>

Accession Number

20210018948

Author

Stockenhuber, R.

Title

Did we respond quickly enough? How policy-implementation speed in response to COVID-19 affects the number of fatal cases in Europe.

Source

World Medical and Health Policy; 2020. 12(4):413-429. many ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

The health crisis caused by COVID-19 reached Europe by February 2020, with remarkable differences in its potency by nation (ECDC, 2020). This effectively caused variation in mitigation efforts in European countries, in opposition to the World Health Organization's recommendations to a common response. Highly contrasting policies were implemented by neighboring countries, from "stay-at-home" requirements to very light restrictions. Furthermore, the application time of these measures was extremely variable across Europe. This study investigated whether the stringency of containment policies and the implementation speed of 24 European countries may have affected the number of COVID-19-associated casualties. The overall stringency (i.e., the containment measures in place) fluctuated over time and by country, which prohibited a clear association with the mortality rate. Importantly, the implementation speed of these containment measures in response to the coronavirus had a strong effect on the successful mitigation of fatalities. The results also suggest that early adopters of strategies are likely to return to normal life more rapidly. Based on these data, the implementation of containment measures at the very early stages of a future health crisis is highly recommended to reduce the negative impact on society and improve the speed of recovery.

Publication Type

Journal article.

<283>

Accession Number

20210018946

Author

Shelley, L.

Title

Fentanyl, COVID-19, and public health.

Source

World Medical and Health Policy; 2020. 12(4):390-397. 30 ref.

Publisher

Wiley

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Location of Publisher

Boston

Country of Publication

USA

Abstract

COVID-19 temporarily severed the production and the supply chains for fentanyl, a synthetic narcotic responsible for over 30,000 deaths in the United States in 2018. Much fentanyl was produced in Wuhan, China, the source of the epidemic. Fentanyl was previously sold directly to American consumers through online websites and was also supplied by Mexican drug traffickers, who produced the drug from precursor chemicals purchased from China. With the advent of the pandemic, websites from Wuhan-based sellers reported that the drugs were not being produced or shipped. Moreover, Mexican drug traffickers were deprived of the precursor chemicals to produce this highly potent opioid. Despite the reduced entry of illicit fentanyl to the United States, enough was stockpiled by drug traffickers perpetuating a very serious problem of illegal fentanyl abuse. Deaths have increased since the start of the COVID epidemic, as the problems of drug abuse have not stopped and access to treatment and medical services are diminished. Moreover, isolation and lack of social support compound the problem. The initial data on increased deaths from illegal fentanyl consumption are consistent with the overall picture of the impact of the COVID epidemic. Those who are most vulnerable are suffering disproportionately from the drug trade.

Publication Type

Journal article.

<284>

Accession Number

20210018942

Author

Jacobsen, G. D.; Jacobsen, K. H.

Title

Statewide COVID-19 stay-at-home orders and population mobility in the United States.

Source

World Medical and Health Policy; 2020. 12(4):347-356. 27 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Many jurisdictions enacted stay-at-home orders (also called shelter-in-place orders, safer-at-home orders, or lockdowns) when SARS-CoV-2 began spreading in the United States. Based on Google mobility data, every state had substantially fewer visits to transit stations, retail and recreation facilities, workplaces, grocery stores, and pharmacies by the end of March 2020 than in the previous two months. The mean decrease in visitation rates across destination categories was about 30 percent in states without stay-at-home orders and 40 percent in states with stay-at-home orders. Similarly, there were fewer routing requests received by Apple in large cities for public transportation, walking, and driving, with a 10 percentage point greater mean reduction in metropolitan areas under statewide stay-at-home orders. The pandemic led to large decreases in mobility even in states without legal restrictions on travel, but statewide orders were effective public health policy tools for reducing human movement below the level achieved through voluntary behavior change.

Publication Type

Journal article.

<285>

Accession Number

20210018775

Author

Saab, R.; Obeid, A.; Gachi, F.; Boudiaf, H.; Sargsyan, L.; Al-Saad, K.; Javakhadze, T.; Mehrvar, A.; Abbas, S. S.; Al-Agele, Y. S. A.; Al-Haddad, S.; Ani, M. H. A.; Al-Sweedan, S.; Amani Al-Kofide; Wasil Jastaniah; Khalifa, N.; Bechara, E.; Baassiri, M.; Noun, P.; El-Houdzi, J.; Khattab, M.; Sharma, K. S.; Wali, Y.; Naureen Mushtaq; Aliya Batool; Mahwish Faizan; Raza, M. R.; Najajreh, M.; Abdallah, M. A. M.; Sousan, G.; Ghanem, K. M.; Kocak, U.; Kutluk, T.; Demir, H. A.; Hodeish, H.; Muwakkit, S.; Asim Belgaumi; Al-Rawas, A. H.; Jeha, S.

Title

Impact of the coronavirus disease 2019 (COVID-19) pandemic on pediatric oncology care in the Middle East, North Africa, and West Asia region: a report from the pediatric oncology east and Mediterranean (poem) group.

Source

Cancer; 2020. 126(18):4235-4245. 22 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

## Abstract

Background: Childhood cancer is a highly curable disease when timely diagnosis and appropriate therapy are provided. A negative impact of the coronavirus disease 2019 (COVID-19) pandemic on access to care for children with cancer is likely but has not been evaluated. METHODS: A 34-item survey focusing on barriers to pediatric oncology management during the COVID-19 pandemic was distributed to heads of pediatric oncology units within the Pediatric Oncology East and Mediterranean (POEM) collaborative group, from the Middle East, North Africa, and West Asia. Responses were collected on April 11 through 22, 2020. Corresponding rates of proven COVID-19 cases and deaths were retrieved from the World Health Organization database. Results: In total, 34 centers from 19 countries participated. Almost all centers applied guidelines to optimize resource utilization and safety, including delaying off-treatment visits, rotating and reducing staff, and implementing social distancing, hand hygiene measures, and personal protective equipment use. Essential treatments, including chemotherapy, surgery, and radiation therapy, were delayed in 29% to 44% of centers, and 24% of centers restricted acceptance of new patients. Clinical care delivery was reported as negatively affected in 28% of centers. Greater than 70% of centers reported shortages in blood products, and 47% to 62% reported interruptions in surgery and radiation as well as medication shortages. However, bed availability was affected in <30% of centers, reflecting the low rates of COVID-19 hospitalizations in the corresponding countries at the time of the survey. Conclusions: Mechanisms to approach childhood cancer treatment delivery during crises need to be re-evaluated, because treatment interruptions and delays are expected to affect patient outcomes in this otherwise largely curable disease.

## Publication Type

Journal article.

<286>

## Accession Number

20210018552

## Author

Nagarajan Ramakrishnan; Somasundaram, P. T. A.; Mana, N. N. K.

## Title

Tele-sleep medicine: an opportunity in a crisis.

## Source

Journal of the International Society for Telemedicine and eHealth; 2020. 8. 5 ref.

## Publisher

International Society for Telemedicine and eHealth

## Location of Publisher

Congella

## Country of Publication

South Africa

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## Abstract

The countrywide lockdown in India has necessitated healthcare providers consider alternate options for providing care during the COVID-19 pandemic. While there has been a tremendous focus in coping with emergency and inpatient care for COVID-19 related illness, there is also an increasing need to address management of non-communicable disease. The pandemic and the associated lockdown have witnessed the onset or worsening of sleep disorders often related to changing lifestyle, including inactivity, fear of the disease, and generalised anxiety caused by the uncertainty of the future. We propose the term 'Lockdown Sleep Syndrome' to describe this grouping of signs and symptoms. The wide coverage and extensive use of smartphones and more importantly, the appropriately timed Telemedicine Practice Guidelines from the Government of India, have made telehealth an attractive option, particularly in specialities such as Sleep Medicine which involves minimal physical examination. The experience of restricting personal visits to the clinic and promoting teleconsultation during the initial fifty days of lockdown is described. It was observed that two thirds of consultations shifted to a telehealth platform, and this was effective in giving satisfactory care and valid prescriptions, including to those outside the city of Chennai. Telemedicine not only helped provide uncompromised care to existing patients but also helped in identifying and managing the onset of new sleep problems with a pattern of signs and symptoms which are described as "Lockdown Sleep Syndrome".

## Publication Type

Journal article.

<287>

## Accession Number

20210018544

## Author

Shimizu, S.; Tomimatsu, S.; Kudo, K.; Ueda, S.; Kekalih, A.; Makmun, D.; Estiasari, R.; Oki, A. S.; Moriyama, T.

## Title

Remote medical education in Indonesia: analysis of 10 years of activities.

## Source

Journal of the International Society for Telemedicine and eHealth; 2020. 8. 30 ref.

## Publisher

International Society for Telemedicine and eHealth

## Location of Publisher

Congella

## Country of Publication

South Africa

## Abstract



**Introduction:** With ongoing development of technology, and especially amid the current COVID-19 pandemic, there is rapidly increasing need for remote communications, including in the field of medical education. This study aimed to evaluate our telemedicine activities between Japan and Indonesia. **Methods:** We retrospectively analysed the data acquired for the period 2010-2019 inclusive, looking at number of programmes, content, participating sites, and videoconferencing systems. We also digitally sent questionnaires to attendees to request their evaluation of image quality and programmes. **Results:** There were a total 135 programmes, with 29 participating institutions in Indonesia. The number of programmes increased rapidly in 2017, following a rapid increase of participating sites in 2016. Programmes included endoscopy (50 programmes, 37%), neurology (25, 19%), and dentistry (12, 9%). Between 5 and 10 sites connected with 81 programmes (60% of all), and more than 10 sites with 33 (24%). The most commonly used videoconferencing system was Vidyo (108, 80%), followed by Zoom (15, 11%). Participating institutions were located among 19 cities on the five major islands. Image quality received a favourable evaluation from 98% (504/516) of questionnaire respondents, with 100% (400/400) holding a favourable view of the programmes. **Conclusion:** Remote medical education expanded in Indonesia in the 10 years under review. This expansion is expected to continue to foster more specialists and it is anticipated to improve medical care nationwide.

#### Publication Type

Journal article.

<288>

#### Accession Number

20210018064

#### Author

Motayo, B. O.; Oluwasemowo, O. O.; Akinduti, P. A.

#### Title

Evolutionary dynamics and geographic dispersal of beta coronaviruses in African bats.

#### Source

PeerJ; 2020. 8(10434). 38 ref.

#### Publisher

PeerJ

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

Bats have been shown to serve as reservoir host of various viral agents including coronaviruses. They have also been associated with the novel coronavirus SARS-CoV-2. This has made them an all important agent for

CoV evolution and transmission. Our objective in this study was to investigate the dispersal, phylogenomics and evolution of betacoronavirus (betaCoV) among African bats. We retrieved sequence data from established databases such as GenBank and Virus Pathogen Resource, covering the partial RNA dependent RNA polymerase (RdRP) gene of bat coronaviruses from eight African, three Asian, five European, two South American countries and Australia. We analyzed for phylogeographic information relating to genetic diversity and evolutionary dynamics. Our study revealed that majority of the African strains fell within Norbecovirus subgenera, with an evolutionary rate of  $1.301 \times 10^{-3}$ , HPD ( $1.064 \times 10^{-3}$ - $1.434 \times 10^{-3}$ ) subs/site/year. The African strains diversified into three main subgenera, Norbecovirus, Hibecovirus and Merbecovirus. The time to most common recent ancestor for Norbecovirus strains was 1973, and 2007, for the African Merbecovirus strains. There was evidence of inter species transmission of Norbecovirus among bats in Cameroun and DRC. Phlylogeography showed that there were inter-continental spread of Bt-CoV from Europe, China and Hong Kong into Central and Southern Africa, highlighting the possibility of long distance transmission. Our study has elucidated the possible evolutionary origins of betaCoV among African bats; we therefore advocate for broader studies of whole genome sequences of BtCoV to further understand the drivers for their emergence and zoonotic spillovers into human population.

#### Publication Type

Journal article.

<289>

#### Accession Number

20210017967

#### Author

Wajiha Haq; Raza, S. H.; Mahmood, T.

#### Title

The pandemic paradox: domestic violence and happiness of women.

#### Source

PeerJ; 2020. 8(10472). 28 ref.

#### Publisher

PeerJ

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

**Background:** Across the globe, lockdowns have been enforced as a pandemic response to COVID-19. Such lockdown coupled with school closures and stay-at-home orders made women more vulnerable in terms of higher responsibility and spending more time with an abusive partner, if any. **Methods:** This study

investigates the situation of women during COVID-19 induced lockdown by focusing on their happiness and inquiring about the incidence of violence. Using the zero-inflated negative binomial model, our findings ascertained that family settings, type of relationship with a spouse, and age significantly affects the positive count of violence during the lockdown. We further estimated the determinants of happiness and found that years of schooling, the role of women in household decision making, and feeling empowered is affecting their happiness. Results: Women having higher education have more odds of zero violence. Unemployed women and women who are not working have higher odds of zero violence as compared to women who are working. During this lockdown after the COVID-19 pandemic, women living in urban areas, having higher education, having an adequate household income to meet the expenditures, having lesser anxiety, not facing violence, feeling empowered when their husband is around, and have higher decision-making power are happier. Discussion and conclusion: The study is important in the context of happiness and violence inflicted on women during the lockdown and provides the basis to improve the pandemic response policy. The inclusion of women's safety and happiness in pandemic response policy is important to ensure the well-being of women and to devise better health and economic policy. Our estimates suggest higher education results in less incidence of violence which could be argued as desirable outcomes for building healthy, productive, and happy communities. In addition to this, as pandemic induced lock-down is likely to result in higher unemployment across the globe including Pakistan, therefore, in light of our estimates pertaining to the role of unemployment in the incidence of violence, policymakers should deploy more resources to enhance income and to combat the rising unemployment. As a counter-intuitive outcome of these policy interventions, incidence of violence will be dampened, educational attainment and women empowerment will be increased which will certainly increase happiness.

#### Publication Type

Journal article.

<290>

#### Accession Number

20210017934

#### Author

Xu SongXiao; Cheng XiangDong; Pan ZhiWen; Song Qian; Wang YiHong; Xiong Juan; Chen YongYi; Fan Fan; Zhu Jing; Wu WanYing; Deng XueYing; Yu YanPin; Xu XiaoHong; Chen WenHu; Zhu Tao; Yu Yang; Liu KaiZhong; Shao GuoLiang; Chen Ming; Yu EnYan

#### Title

Cancer patient management strategy in a cancer center of Zhejiang, China during the COVID-19 pandemic.

#### Source

BMC Cancer; 2020. 20(1194). 30 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

## Country of Publication

UK

## Abstract

**Background:** Due to the increased risk of viral infection and the severe shortage of medical resources during the pandemic of COVID-19, most hospitals in the epidemic areas significantly reduced non-emergency admissions and services, if not closed. As a result, it has been difficult to treat cancer patients on time, which adversely affects their prognosis. To address this problem, cancer centers must develop a strategic plan to manage both inpatients and outpatients during the pandemic, provide them with the necessary treatment, and at the same time prevent the spread of the virus among patients, visitors and medical staff. **Methods:** Based upon the epidemic situation in Zhejiang Province, China, the number of running non-emergency medical wards in the Zhejiang Cancer Hospital was gradually increased in a controlled manner. All staff of the hospital received COVID-19 preventive training and was provided with three different levels of protection according to the risks of their services. Only patients without a known history of SARS-CoV-2 contact were eligible to schedule an appointment. Body temperature was measured on all patients upon their arrival at the hospital. Chest CT image, blood cell counting and travel/contact history were investigated in patients with fever. Respiratory tract samples, such as sputum and throat swabs, from all patients, including those clinically suspected of SARS-CoV-2 infection, were collected for nucleic acid detection of SARS-CoV-2 before treatment. **Results:** A total of 3697 inpatients and 416 outpatients seeking cancer treatment were enrolled from February 1 to April 3, 2020, in compliance with the hospital's infection-control interventions. The clinicopathological parameters of the patients were summarized herein. 4237 samples from 4101 patients produced negative RNA testing results. Four clinically suspected patients all presented negative RNA test results and were excluded from the SARS-CoV-2 infection through follow-up retesting and monitoring. Seven patients with only N-gene positive results were retested, followed by CT scan and SARS-CoV-2 contact history investigation. All of them were finally diagnosed as non-infected patients. There was one outpatient who was confirmed positive by virus RNA test and then followed up. She might be an asymptomatic laboratory-confirmed case. During the study period, there was no SARS-CoV-2 infection among staff, patients and escorts of patients in the Zhejiang Cancer Hospital. **Conclusion:** This study suggested our infection-control interventions, including viral nucleic acid test, could be used as a reliable method to screen cancer patients in the area with moderate COVID-19 prevalence. Cancer may not be a high-risk factor of SARS-CoV-2 infection.

## Publication Type

Journal article.

<291>

## Accession Number

20210017860

## Author

Beas-Jimenez, J. D.; Vaz-Pardal, M. C.; Cis-Spoturno, A. C.; Ortiz-Bish, A. M.; Fernandez-de-Alba-Sanchez, M. C.; Centeno-Prada, R. A.

## Title

Proposal of the Andalusian center for sports medicine to carry out stress tests with gas analysis on elite athletes during the SARS-CoV-2 pandemic. [Spanish]

Source

Revista Andaluza de Medicina del Deporte; 2020. 13(4):257-260. 16 ref.

Publisher

Consejeria de Turismo y Deporte Junta de Andalucia

Location of Publisher

Seville

Country of Publication

Spain

Abstract

The current pandemic situation, produced by SARS-CoV-2, forces exercise physiology laboratories to take a series of additional measures for the safe performance of stress tests, both diagnostic and performance. The objective of this report is to present preventive measures to be taken to avoid contagion by SARS-CoV-2 during exercise tests on athletes, proposed by the professionals of the Andalusian Center for Sports Medicine, based on scientific evidence available, and oriented towards its application in the laboratory itself, to athletes and to all professionals who participate in its evaluation.

Publication Type

Journal article.

<292>

Accession Number

20210017846

Author

Law WoonYi; Mohd Razip Asaruddin; Showkat Ahamd Bhawani; Samsur Mohamad

Title

Pharmacophore modelling of vanillin derivatives, favipiravir, chloroquine, hydroxychloroquine, monolaurin and tetrodotoxin as MPro inhibitors of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2).

Source

BMC Research Notes; 2020. 13(527). 36 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** The aim of this study was to use Ligand-based pharmacophore modelling approach for four established antiviral drugs, namely remdesivir, lopinavir, ritonavir and hydroxychloroquine for COVID-19 inhibitors as training sets. In this study Twenty vanillin derivatives together with monolaurin and tetrodotoxin were used as test sets to evaluate as potential SARS-CoV-2 inhibitors. The Structure-based pharmacophore modelling approach was also performed using 5RE6, 5REX and 5RFZ in order to analyse the binding site and ligand-protein complex interactions. **Results:** The pharmacophore modelling mode of 5RE6 displayed two Hydrogen Bond Acceptors (HBA) and one Hydrophobic (HY) interaction. Besides, the pharmacophore model of 5REX showed two HBA and two HY interactions. Finally, the pharmacophore model of 5RFZ showed three HBA and one HY interaction. Based on ligand-based approach, 20 Schiff-based vanillin derivatives, showed strong MPro inhibition activity. This was due to their good alignment and common features to PDB-5RE6. Similarly, monolaurin and tetrodotoxin displayed some significant activity against SARS-CoV-2. From structure-based approach, vanillin derivatives (1) to (12) displayed some potent MPro inhibition against SARS-CoV-2. Favipiravir, chloroquine and hydroxychloroquine also showed some significant MPro inhibition.

Publication Type

Journal article.

<293>

Accession Number

20210017564

Author

Castagnino, A. M.; Marin Castro, M. A.; Bazan, P.; Diaz, K. E.; Marina, J. A.; Echeverria, S.; Galizio, R.; Martinoia, G. I.; Rogers, W. J.; Diaz, H.; Reina, R.; Rubel, I.; Miranda Lasprilla, D.

Title

Latin American reality of 2020 vegetable production and consumption, in COVID-19 times. [Spanish]

Source

Horticultura Argentina; 2020. 39(100):149-188. many ref.

Publisher

Asociacion Argentina de Horticultura

Location of Publisher

La Consulta

Country of Publication

Argentina

## Abstract

Vegetable consumption has become relevant in the present global socio-economical and sanitary context. Consequently, the need to have a dynamic diagnosis in Latin American countries arises in order to guide actions of spreading vegetable and fruit production and consumption. Therefore, a survey was carried out in 12 Latin American countries with 518 respondents. This survey was driven by the Horticulture teams of the Latin American universities: Universidad Nacional del Centro de la Provincia de Buenos Aires (UNCPBA), Argentina, Benemerita Universidad Autonoma de Puebla (BUAP), Mexico, Universidad Nacional de Colombia (UNAL) and Universidad Nacional de San Luis (UNSL) Argentina, within the framework of their projects and interinstitutional bonds. The survey aimed at having an updated panorama about the reality of vegetable production and consumption, preferences, habits of consumption and changes produced in the Latin American population's diet due to the COVID-19 global pandemics. The results obtained show the existence of differences between perception and the reality of the population's consumption generating the need to drive actions to produce coincidence of what the population believes it consumes with what it actually does, so as to have a diet rich in quantity, quality and diversity of vegetables that benefits its health and life quality and reduces the risk of developing potential illnesses.

## Publication Type

Journal article.

<294>

## Accession Number

20210017563

## Author

Castagnino, A. M.; Diaz, K. E.; Bazan, P.; Luna, A.; Martinoia, G. I.; Marina, J. A.; Echeverria, S.; Galizio, R.; Rosini, M. B.; Rogers, W. J.; Rubel, I.; Benson, S.; Diaz, H.; Reina, R.

## Title

National reality of 2020 vegetable production and consumption, in COVID-19 times. [Spanish]

## Source

Horticultura Argentina; 2020. 39(100):113-148. 41 ref.

## Publisher

Asociacion Argentina de Horticultura

## Location of Publisher

La Consulta

## Country of Publication

Argentina

## Abstract

In the present complex socioeconomical and sanitary context, with the aim of having updated information on the national reality of vegetable production and consumption, of the Argentinian population's preferences and consumption habits of vegetables as well as the changes produced in their diet due to the global COVID-19 pandemics, a national survey, titled "Trends in the consumption of vegetables in Argentina in Coronavirus times" was carried out obtaining 1694 responses. The Argentinian population has had a great inclination to start growing, urban family gardens in this new context; it has clear consumption preferences, it values the benefits of consuming vegetables for health reasons and considers it has an adequate proportion of vegetables in its diet. However, the survey shows that real consumption is much lower than that recommended by national and international entities arises from the survey. Therefore, there is a great asymmetry between what the population believes it consumes and what it actually eats. This fact implies intensifying actions towards raising greater awareness of these differences and promoting adequate consumption of quantity, quality and diversity of vegetables to improve well-being, reduce the risk of developing illnesses and benefit the population's life quality by various organizations and institutions.

#### Publication Type

Journal article.

<295>

#### Accession Number

20210017561

#### Author

Castagnino, A. M.; Marina, J. A.; Benvenuti, S.; Marin Castro, M. A.

#### Title

Microgreens and sprouts, two innovative functional foods for a healthy diet in Km 0. [Spanish]

#### Source

Horticultura Argentina; 2020. 39(100):55-95. many ref.

#### Publisher

Asociacion Argentina de Horticultura

#### Location of Publisher

La Consulta

#### Country of Publication

Argentina

#### Abstract

The production of micro vegetables or microgreens and of sprouts is an interesting alternative for the optimization of vegetable consumption admitting great diversity and feasibility at a family as well as a commercial level, and whose consumption provides multiple benefits. Both options have productive potential for entrepreneurs, especially in the Km 0 due to immediate consumption. These productive



alternatives contain several times more nutrients than their adult counterparts and can be obtained by sustainable production means, as in the case of microgreens in the presence of light or sprouts in darkness. Both foster greater nutrient bioavailability which helps to increase immunity, decrease vulnerability to diseases and contribute to a better physical and mental development of the population. In this sense, in the current global and national socioeconomical and sanitary context due to Covid-19 pandemics where the optimization of consumption of food which promotes optimal nutrition becomes a challenge, this review article is carried out in order to show a panorama of the peculiarities and benefits of consumption as well as the potential market, especially as Km 0 products, of two innovative alternatives of production (microgreens and sprouts) which admit great biodiversity and to contribute to promote their production and consumption.

#### Publication Type

Journal article.

<296>

#### Accession Number

20210017438

#### Author

Cagirgan, O. Y.; Cagirgan, A. A.

#### Title

Epidemiological modelling in infectious diseases: stages and classification.

#### Source

Veterinary Journal of Mehmet Akif Ersoy University; 2020. 5(3):151-158. 36 ref.

#### Publisher

Mehmet Akif Ersoy University

#### Location of Publisher

Burdur

#### Country of Publication

Turkey

#### Abstract

Modelling in infectious diseases has recently been an important field due to avian influenza, swine influenza, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome-coronavirus (MERS-CoV), novel coronavirus (nCoV) and many other diseases. Epidemiological models are usually defined as mathematical and/or logical demonstrations of epidemiology of diseases and the related process. Concerning animal disease management, 'models' can be defined more widely in that they contain a range of statistical/mathematical tools regarding other aspects of the disease in addition to its spreading. Modelling might be useful when experimental or field studies are impossible or not practical or in retrospective analyzing of previous epidemics in order to search alternative control strategies. The aim of

this study was to examine some of the modelling methods and determine what mathematical modelling meant in infectious diseases, its purpose of use, to classify the steps followed during modelling period and models used in the field of animal health.

#### Publication Type

Journal article.

<297>

#### Accession Number

20210016896

#### Author

Asita Elengoe

#### Title

Indian spices boost the immune system against COVID-19.

#### Source

Annals of the University "Dunarea de Jos" of Galati - Fascicle VI: Food Technology; 2020. 44(2):189-206.  
many ref.

#### Publisher

University Dunarea de Jos of Galati

#### Location of Publisher

Galati

#### Country of Publication

Romania

#### Abstract

Since 12th December 2019, the epidemic outbreak of an unknown acute respiratory tract infection has emerged in Wuhan City, China. The World Health Organization (WHO) discovered that this outbreak was caused by the 2019 novel coronavirus (2019-nCoV) or the extreme acute respiratory coronavirus 2 syndrome (SARS-CoV-2). No vaccine or no specific anti-viral treatment against COVID-19 has been made available so far. Therefore, COVID-19 can be prevented by enhancing the body's immune system and fighting off the symptoms. Nuclear factor kappa-light-chain-enhancer of activated B cells (NF- $\kappa$ B) is one of the essential transcription factors in humans which are responsible for the regulation of immune cell, synthesis of pro-inflammatory cytokines and gene expression of inflammatory molecules and reactive oxygen species (ROS). Phytochemicals derived from Indian spices (turmeric, garlic, ginger, etc.) can modulate the gene expression in the NF- $\kappa$ B pathway. In the midst of pandemic COVID-19, adding spices to food (eg. 'Rasam') can boost up the body's immune system. Indian spices are emerging as potential agents for the prevention of COVID-19.

#### Publication Type

Journal article.

<298>

Accession Number

20210016850

Author

Odume, B.; Falokun, V.; Chukwuogo, O.; Ogbudebe, C.; Useni, S.; Nwokoye, N.; Aniwada, E.; Faleye, B. O.; Okekearu, I.; Nongo, D.; Odusote, T.; Lawanson, A.

Title

Impact of COVID-19 on TB active case finding in Nigeria.

Source

Public Health Action; 2020. 10(4):157-162. 23 ref.

Publisher

International Union Against Tuberculosis and Lung Disease

Location of Publisher

Paris

Country of Publication

France

Abstract

Background: Active TB case finding (ACF) is a key strategy employed by the National Tuberculosis and Leprosy Control Programme (NTBLCP) to address the increasing gap in TB case finding in Nigeria. KNCV TB foundation Nigeria rolled out two high-impact ACF interventions; TB Surge and the Wellness on Wheels (WoW) campaigns from January 2020. Method: The TB Surge intervention supports the engagement of ad hoc staff for TB ACF. The WoW campaign employs a mobile diagnostic unit to deliver care to the doorstep of people at risk of TB. Data along the TB cascade are recorded for all clients using the CommCare app. Cochran-Armitage X2 test for linear trend was used to assess the significance declining trends along the TB cascade. Results: There was a progressive decrease of respectively 63%, 64%, 73% and 72% in clinic attendance, presumptive TB identification, TB cases detected and treatment initiation for the TB Surge ACF intervention since the emergence of coronavirus; a similar decrease was noted for the WoW intervention. Trend analysis showed a significant decline in trends for both interventions for all variables ( $P < 0.001$ ) Conclusion: The COVID-19 epidemic has impacted negatively on TB services in Nigeria. The TB programme could leverage some resources used to combat the epidemic such as digital health technology and funds, and work towards strengthening patient-centred approach to care to limit the challenges that COVID-19 presents to TB control.

Publication Type

Journal article.

<299>

Accession Number

20210016678

Author

Hu XiaoWen; Ni Wei; Wang ZhaoGuo; Ma GuangRen; Pan Bei; Dong LiYan; Gao RuQin; Jiang FaChun

Title

The distribution of SARS-CoV-2 contamination on the environmental surfaces during incubation period of COVID-19 patients. (Special Section: Health impacts.)

Source

Ecotoxicology and Environmental Safety; 2021. 208. many ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Roles of environmental factors in transmission of COVID-19 have been highlighted. In this study, we sampled the high-touch environmental surfaces in the quarantine room, aiming to detect the distribution of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on the environmental surfaces during the incubation period of coronavirus disease 2019 (COVID-19) patients. Fifteen sites were sampled from the quarantine room, distributing in the functional areas such as bedroom, bathroom and living room. All environmental surface samples were collected with sterile polyester-tipped applicator pre-moistened in viral transport medium and tested for SARS-CoV-2. Overall, 34.1% of samples were detected positively for SARS-CoV-2. The positive rates of Patient A, B and C, were 46.2%, 0% and 61.5%, respectively. SARS-CoV-2 was detected positively in bedroom and bathroom, with the positive rate of 50.0% and 46.7%, respectively. In contrast, living room had no positive sample detected. Environmental contamination of SARS-CoV-2 distributes widely during the incubation period of COVID-19, and the positive rates of SARS-CoV-2 on environmental surfaces are relatively high in bathroom and bedroom.

Publication Type

Journal article.

<300>

Accession Number

20210016112

Author

Eren, E.; Celik, I.; Yildiz, M.; Topaloglu, U. S.; Kilinc-Toker, A.; Arman-Firat, E.; Gur, A.; Bolat, E.; Ulu-Kilic, A.

Title

Evaluation of health care workers with COVID-19. [Turkish]

Source

Klimik Dergisi; 2020. 33(3):230-234. 19 ref.

Publisher

AVES Publishing

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

**Objective:** In this study, we aimed to determine the contact risk levels of infected health care workers for patients with COVID-19 and to evaluate their disease status. **Methods:** Health care workers with COVID-19 were analyzed, retrospectively. Close contact with patients was classified as high, medium, low-risk or risk-free contact according to the use of personal protective equipment, and transmission levels were evaluated. Symptoms and disease severity after infection were determined. **Results:** A total of 82 health care workers were infected during the study period, and only 2% had high-risk contact status. There was risk-free contact in 71% of the patients. Community/family-borne contaminations were detected as the main source of transmission. 82% of the infected health care workers have developed at least one symptom. Fever (65%) and dry cough (54%) were more common symptoms. According to their clinical severity, 66% of them had mild illness. Only one had severe illness. All the health care workers with COVID-19 recovered and were discharged. **Conclusions:** Health care workers are at increased risk of COVID-19 transmission. In addition to the use of appropriate personal protective equipment, masks and social distance rules should be followed in social settings.

Publication Type

Journal article.

<301>

Accession Number

20210016017

Author

Mamun, M. A.; Najmuj Sakib; Gozal, D.; Bhuiyan, A. I.; Sahadat Hossain; Md. Bodrud-Doza; Firoj Al-Mamun; Ismail Hosen; Safiq, M. B.; Abdullah, A. H.; Sarker, M. A.; Istihak Rayhan; Sikder, M. T.; Mohammad Muhit; Lin ChungYing; Griffiths, M. D.; Pakpour, A. H.

Title

The COVID-19 pandemic and serious psychological consequences in Bangladesh: a population-based nationwide study.

Source

Journal of Affective Disorders; 2021. 279:462-479. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: As with other countries worldwide, lockdown measures during the COVID-19 outbreak in Bangladesh were sudden and unexpected, and have the capacity to elicit serious psychological consequences. The present study examined the psychological consequences of COVID-19 in Bangladesh during the lockdown period. Methods: A nationwide online cross-sectional survey study recruited 10,067 individuals covering all 64 districts in Bangladesh via social media (April 1-10, 2020). The survey comprised questions concerning socio-demographics, knowledge of COVID-19, behavior towards COVID-19, fear of COVID-19, insomnia, depression, and suicidal ideation. Logistic regression and structural equation modeling (SEM) analyses were performed to identify the risk factors depression and suicidal ideation. Geographical information system (GIS)-based spatial analysis was used to identify district-wise susceptibility to depression and suicidal ideation. Findings: The prevalence rate of depression and suicidal ideation related to COVID-19 was 33% and 5%. Common risk factors for suicidal ideation and depression included being young, being female, being a cigarette smoker, having comorbid diseases, having high scores on the Fear COVID-19 Scale, and having insomnia symptoms. GIS-based maps detected high depression and suicidal ideation in the capital of Bangladesh and the districts near the capital as well as coastal areas where COVID-19 prevalence was high, as compared with districts with no reported cases. Limitations: Self-reported scales and cross-sectional design of the study. Conclusion: COVID-19 is associated with major psychological impact across Bangladesh, underlining the need of strategically located psychological support measures and improved access to mental health services, especially among women and younger people.

Publication Type

Journal article.

<302>

Accession Number

20210016012

Author

Liu Qi; Zhou Yu; Xie XinYan; Xue Qi; Zhu KaiHeng; Wan ZiHao; Wu Hao; Zhang JiaJia; Song RanRan

Title

The prevalence of behavioral problems among school-aged children in home quarantine during the COVID-19 pandemic in China.

Source

Journal of Affective Disorders; 2021. 279:412-416.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: To prevent spreading of the COVID-19 infection, many countries have implemented a nationwide school closure. We aimed to assess the prevalence of behavioral problems in school-aged children during home confinement. Methods: We conducted an internet-based survey involving 1264 children (grades 2-6) and their parents from two primary schools between February 25 and March 8, 2020, in Hubei province, China. Behavioral problems were evaluated using the Strengths and Difficulties Questionnaire (SDQ). Results: The prevalence of prosocial behaviors among children was 10.3%, followed by total difficulty (8.2%), conduct problems (7.0%), peer problems (6.6%), hyperactivity-inattention (6.3%) and emotional problems (4.7%). Compared with children who did not exercise, children with physical activity had a lower hyperactivity-inattention risk (Odds Ratio (OR): 0.44 for 1-2 days/week; OR: 0.56 for more than 2 days/week) and less prosocial behaviors problems (OR: 0.65 for 1-2 days/week; OR: 0.55 for more than 2 days/week). Children of parents with anxious symptoms were associated with increased risks of emotional symptoms and total difficulty (OR: 5.64 and 3.78, respectively). Limitations: We adopted self-report questionnaires and did not collect baseline information before COVID-19 outbreak. The potential self-selection bias inherent in the study should be noted. Conclusion: The prevalence of behavioral problems among school-aged children varied from 4.7% to 10.3% in home quarantine during the COVID-19 outbreak. Taking physical exercise may be an efficient measure to reduce behavioral problems for school-aged children in home confinement.

Publication Type

Journal article.

<303>

Accession Number

20210016008

Author

Tang SuQin; Xiang Mi; Cheung TeRis; Xiang YuTao

Title

Mental health and its correlates among children and adolescents during COVID-19 school closure: the importance of parent-child discussion.

Source

Journal of Affective Disorders; 2021. 279:353-360.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: School closures due to the COVID-19 outbreak have affected 87% of the world's students physically, socially, and psychologically, yet rigorous investigation into their mental health during this period is still lacking. Methods: A cross-sectional online survey of 4-342 primary and secondary school students from Shanghai, China was conducted during March 13-23, 2020. Besides demographic information, psychological distress (including depression, anxiety, and stress), life satisfaction, perceived impact of home quarantine, and parent-child discussions on COVID-19 were assessed. Results: The three most prevalent symptoms were: anxiety (24.9%), depression (19.7%), and stress (15.2%). Participants were generally satisfied with life and 21.4% became more satisfied with life during school closures. Senior grades were positively correlated with psychopathological symptoms and negatively associated with life satisfaction, whereas the perceived benefit from home quarantine and parent-child discussions on COVID-19 were negatively correlated with psychopathological symptoms and positively correlated with life satisfaction. Among participants who perceived no benefit from home quarantine, those who had discussions with their parents about COVID-19 experienced less depression, anxiety, and stress. Limitations: Limitations included the inability to infer the casual relationship, no parental report for mental health of children aged 6 to 9, and the inadequate measurement of parent-child discussion. Conclusions: Mental health problems and resilience co-existed in children and adolescents during the COVID-19 outbreak. Given the important role of parent-child discussions, open communication between parents and children about the pandemic should be encouraged to help children and adolescents cope with mental health problems in public health crisis.

Publication Type

Journal article.



<304>

Accession Number

20210015938

Author

Celik, S.; Demirag, A. D.; Ozel, A. E.; Akyuz, S.

Title

Interactions mechanism of commonly used drugs for the treatment of COVID-19.

Source

Bulletin of the Chemical Society of Ethiopia; 2021. 34(3):613-623. 30 ref.

Publisher

Chemical Society of Ethiopia

Location of Publisher

Addis Ababa

Country of Publication

Ethiopia

Abstract

In this study conformation analysis of seven drugs commonly used in the treatment of COVID-19 was performed. The most stable conformers of the drug molecules were used as initial data for docking analysis. Using the Cavityplus program, the probable most active binding sites of both apo and holo forms of COVID-19 main protease enzyme (Mpro) and spike glycoprotein of SARSCoV-2 receptors were determined. The interaction mechanisms of the 7 FDA approved drugs (arbidol, colchicine, dexamethasone, favipiravir, galidesivir, hydroxychloroquine, remdesivir) were examined using the AutoDock Vina program. The six of the seven drugs were found to be more stable in binding to apo form of COVID-19 Mpro and spike glycoprotein. Moreover, a set of molecular mechanics (MM) Poisson-Boltzmann (PB) surface area (SA) calculations on the investigated drugs-protein systems were performed and the estimated binding free energy of remdesivir and the apo form of Mpro system was found to be the best. The interaction results of FDA drugs with the apo form of COVID-19 Mpro and spike glycoprotein can play an important role for the treatment of COVID-19.

Publication Type

Journal article.

<305>

Accession Number

20210015930

Author

Palacios Cruz, M.; Santos, E.; Velazquez Cervantes, M. A.; Leon Juarez, M.

Title

COVID-19, a worldwide public health emergency. [Spanish]

Source

Revista Clinica Espanola; 2021. 221(1):55-61.

Publisher

Elsevier Espana, S. L.

Location of Publisher

Barcelona

Country of Publication

Spain

Abstract

A new coronavirus outbreak emerged on the 31st of December 2019 in Wuhan, China, causing commotion among the medical community and the rest of the world. This new species of coronavirus has been termed 2019-nCoV and has caused a considerable number of cases of infection and deaths in China and, to a growing degree, beyond China, becoming a worldwide public health emergency. 2019-nCoV has high homology to other pathogenic coronaviruses, such as those originating from bat-related zoonosis (SARS-CoV), which caused approximately 646 deaths in China at the start of the decade. The mortality rate for 2019-nCoV is not as high (approximately 2-3%), but its rapid propagation has resulted in the activation of protocols to stop its spread. This pathogen has the potential to become a pandemic. It is therefore vital to follow the personal care recommendations issued by the World Health Organisation.

Publication Type

Journal article.

<306>

Accession Number

20210015909

Author

Ahmed, K.; Aldosouky, M.; Ali, S. M.; Aftab, Z.; Zarour, A.

Title

Acute care surgery fellowship program acclimatization to the COVID-19 pandemic: experience from Qatar.

Source

British Journal of Surgery; 2020. 107(13):e666-e666. 5 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Publication Type

Correspondence.

<307>

Accession Number

20210015908

Author

Vikesh Agrawal; Riti Seth; Sanjay Kumar Yadav; Dhananjaya Sharma

Title

Comment on: COVID-19 outbreak and the practice of surgery: do we need to change?

Source

British Journal of Surgery; 2020. 107(13):e654-e654. 5 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Publication Type

Correspondence.

<308>

Accession Number

20210015894

Author

Sloan, A. E.

Title

Consumers, COVID-19, and CBD edibles.

Source

Food Technology (Chicago); 2020. 74(12).

Publisher

Institute of Food Technologists

Location of Publisher

Chicago

Country of Publication

USA

Publication Type

Journal article.

<309>

Accession Number

20210015459

Author

Surindra Suthar; Sukanya Das; Ajay Nagpure; Chaithanya Madhurantakam; Tiwari, S. B.; Pallavi Gahlot; Tyagi, V. K.

Title

Epidemiology and diagnosis, environmental resources quality and socio-economic perspectives for COVID-19 pandemic.

Source

Journal of Environmental Management; 2021. 280. many ref.

Publisher

Elsevier

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Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The COVID-19 pandemic caused by SARS-CoV-2 has emerged as a global issue of concern for public health, environment and socio-economic setup. This review addresses several aspects of epidemiology, and pathogenesis, environmental resource quality (air quality, hazardous waste management, and wastewater surveillance issues), and socio-economic issues worldwide. The accelerated research activity in the development of diagnostic kits for SARS-CoV-2 is in progress for the rapid sequencing of various strains of SARS-CoV-2. A notable reduction in air pollutants (NO<sub>2</sub> and PM<sub>2.5</sub>) has been observed worldwide, but high air polluted cities showed intense mortalities in COVID-19 affected areas. The use of health safety equipment halted transportation, and work-from-home policy drastically impacted the quantity of solid and hazardous wastes management services. Wastewater appeared as another mode of enteric transmission of SARS-CoV-2. Thus, wastewater-based surveillance could act as a mode of the data source to track the virus's community spread. The pandemic also had a substantial socio-economic impact (health budget, industrial manufacturing, job loss, and unemployment) and further aggravated the countries' economic burden.

Publication Type

Journal article.

<310>

Accession Number

20210015005

Author

Feyereisen, S.; Neeraj Puro

Title

Seventeen states enacted executive orders expanding advanced practice nurses' scopes of practice during the first 21 days of the COVID-19 pandemic.

Source

Rural and Remote Health; 2020. 20(4). 11 ref.

Publisher

Deakin University, Department of Human Services, Rural Health Division

Location of Publisher

Victoria

Country of Publication

Australia

## Abstract

Context: Rural hospitals in the USA are often served by advanced practice nurses, due to the difficulty for such facilities to recruit physicians. In order to facilitate a full range of services for patients, some states permit advanced practice nurses to practice with full independence. However, many states limit their scopes of practice, resulting in the potential for limited healthcare access in underserved areas. The COVID-19 pandemic temporarily upended these arrangements for several states, as 17 governors quickly passed waivers and suspensions of physician oversight restrictions. Issues: Physician resistance is a primary hurdle for states that limit advanced practice nurse scopes of practice. Longstanding restrictions were removed, however, in a short period of time. The pandemic demonstrated that even governors with strong political disagreements agreed on one way that healthcare access could potentially be improved. Lessons learned: Despite longstanding concerns over patient safety when advanced practice nurses practice with full autonomy, governors quickly removed practice restrictions when faced with a crisis situation. Implied in such behavior are that policymakers were aware of advanced practice nurses' capabilities prior to the pandemic, but chose not to implement full practice authority, and that governors appeared to disagree as to whether to temporarily waive specific restrictions or suspend restrictions entirely, consistent with their political affiliation. We propose more research into understanding whether or not such changes should become permanent.

## Publication Type

Journal article.

<311>

## Accession Number

20210014998

## Author

Jha, S. S.; Arista Lahiri

## Title

Domestic migrant workers in India returning to their homes: emerging socioeconomic and health challenges during the COVID-19 pandemic.

## Source

Rural and Remote Health; 2020. 20(4). 23 ref.

## Publisher

Deakin University, Department of Human Services, Rural Health Division

## Location of Publisher

Victoria

## Country of Publication

Australia

## Abstract

Domestic migrant workers were stranded far from home when India declared nationwide lockdown to combat the pandemic of novel coronavirus (COVID-19). A large number of these workers were left with no economic support, no food and in many cases nowhere to live. The pandemic posed a serious health threat to these people, and the socioeconomic insecurity pushed them towards the edge of sustainability. Many of the migrants began walking home and accepted an uncertain fate if they could not return back home. The Government of India initiated efforts to provide transport support with special train services from the beginning of May 2020. While the migrants have started to return to their villages and towns, the states are facing the challenges of preventing the spread of COVID-19. The point-of-entry screening, quarantine and isolation facilities have increased substantially in capacity, although the quality of care remains a point of concern. Back at their homes, the migrants are enduring stigma, discrimination and poor social security. In order to avert the brewing humanitarian crisis, empathetic administration combined with political will is a must. Prudent, evidence-based decision-making in the economic and health sectors is also necessary.

## Publication Type

Journal article.

<312>

## Accession Number

20210014858

## Author

Chen YiYi; Jones, C.; Dunse, N.

## Title

Coronavirus disease 2019 (COVID-19) and psychological distress in China: does neighbourhood matter?

## Source

Science of the Total Environment; 2021. 759. many ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

## Country of Publication

UK

## Abstract

Using individual data (n=937) obtained from an online questionnaire between 20th January and 13th February, the early stage of the outbreak of the Coronavirus Disease 2019 (COVID-19) in 2020, we explore the direct association between people's perceptions of Coronavirus Disease 2019 (COVID-19) and psychological distress. We further examine the moderating role of neighbourhood environment and this

distress. We find that people living in infected communities tend to perceive higher level of psychological distress compared to people living in uninfected communities. People's expected duration of COVID-19 is associated with higher psychological distress and this is partially moderated by the perception of neighbourhood noise level and overall environment quality. Additional results quantify the evidence that a quiet and well maintained neighbourhood environment could reduce the negative influences of expectation of a long duration of COVID-19 on people's psychological distress.

#### Publication Type

Journal article.

<313>

#### Accession Number

20210014821

#### Author

Hamouda, M.; Mustafa, F.; Maraqa, M.; Rizvi, T.; Hassan, A. A.

#### Title

Wastewater surveillance for SARS-CoV-2: lessons learnt from recent studies to define future applications.

#### Source

Science of the Total Environment; 2021. 759.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Wastewater-based epidemiology (WBE) is successful in the detection of the spread of SARS-CoV-2. This review examines the methods used and results of recent studies on the quantification of SARS-CoV-2 in wastewater. WBE becomes essential, especially with virus transmission path uncertainty, limitations on the number of clinical tests that could be conducted, and a relatively long period for infected people to show symptoms. Wastewater surveillance was used to show the effect of lockdown on the virus spread. A WBE framework tailored for SARS-CoV-2 that incorporates lessons learnt from the reviewed studies was developed. Results of the review helped outline challenges facing the detection of SARS-CoV-2 in wastewater samples. A comparison between the various studies with regards to sample concentration and virus quantification was conducted. Five different primers sets were used for qPCR quantification; however, due to limited data availability, there is no consensus on the most sensitive primer. Correlating the slope of the relationship between the number of gene copies vs. the cumulative number of infections normalized to the total population served with the average new cases, suggests that qPCR results could help estimating



the number of new infections. The correlation is improved when a lag period was introduced to account for asymptomatic infections. Based on lessons learnt from recent studies, it is recommended that future applications should consider the following: (1) ensuring occupational safety in managing sewage collection and processing, (2) evaluating the effectiveness of greywater disinfection, (3) measuring viral RNA decay due to biological and chemical activities during collection and treatment, (4) assessing the effectiveness of digital PCR, and (5) conducting large scale international studies that follow standardized protocols.

#### Publication Type

Journal article.

<314>

#### Accession Number

20210014784

#### Author

Dai QiLi; Ding Jing; Song CongBo; Liu BaoShuang; Bi XiaoHui; Wu JianHui; Zhang YuFen; Feng YinChang; Hopke, P. K.

#### Title

Changes in source contributions to particle number concentrations after the COVID-19 outbreak: insights from a dispersion normalized PMF.

#### Source

Science of the Total Environment; 2021. 759. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Factor analysis models use the covariance of measured variables to identify and apportion sources. These models, particularly positive matrix factorization (PMF), have been extensively used for analyzing particle number concentrations (PNCs) datasets. However, the variation of observed PNCs and particle size distribution are driven by both the source emission rates and atmospheric dispersion as well as chemical and physical transformation processes. This variation in the observation data caused by meteorologically induced dilution reduces the ability to obtain accurate source apportionment results. To reduce the influence of dilution on quantitative source estimates, a methodology for improving the accuracy of source apportionment results by incorporating a measure of dispersion, the ventilation coefficient, into the PMF analysis (called dispersion normalized PMF, DN-PMF) was applied to a PNC dataset measured from a field campaign that includes the Spring Festival event and the start of the COVID-19 lockdown in Tianjin, China.

The data also included gaseous pollutants and hourly PM<sub>2.5</sub> compositional data. Eight factors were resolved and interpreted as municipal incinerator, traffic nucleation, secondary inorganic aerosol (SIA), traffic emissions, photonucleation, coal combustion, residential heating and festival emissions. The DN-PMF enhanced the diel patterns of photonucleation and the two traffic factors by enlarging the differences between daytime peak values and nighttime concentrations. The municipal incinerator plant, traffic emissions, and coal combustion have cleaner and more clearly defined directionalities after dispersion normalization. Thus, dispersion normalized PMF is capable of enhancing the source emission patterns. After the COVID-19 lockdown began, PNC of traffic nucleation and traffic emissions decreased by 41% and 44%, respectively, while photonucleation produced more particles likely due to the reduction in the condensation sink. The significant changes in source emissions indicate a substantially reduced traffic volume after the implement of lockdown measures.

#### Publication Type

Journal article.

<315>

#### Accession Number

20210014769

#### Author

Latha, R.; Murthy, B. S.; Sandeepan, B. S.; Vinayak Bhanage; Aditi Rathod; Arpit Tiwari; Gufran Beig; Siddhartha Singh

#### Title

Propagation of cloud base to higher levels during COVID-19-Lockdown.

#### Source

Science of the Total Environment; 2021. 759. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Aerosol-cloud interactions and feedbacks play an important role in modulating cloud development, microphysical and optical properties thus enhancing or reducing precipitation over polluted/pristine regions. The lockdown enforced on account of Covid-19 pandemic is a unique opportunity to verify the influence of drastic reduction in aerosols on cloud development and its vertical distribution embedded in identical synoptic conditions. Cloud bases measured by ceilometer in Delhi, the capital of India, are observed to propagate from low level to higher levels as the lockdown progresses. It is explained in terms

of trends in temporal variation of cloud condensation nuclei (CCN) and precursor gases to secondary hygroscopic aerosols. The large reduction (47%) in CCN estimated from aerosol extinction coefficient during the lockdown results in upward shift of cloud bases. Low clouds with bases located below 3 km are found to have reduced significantly from 63% (of total clouds distributed in the vertical) during pre-lockdown to 12% in lockdown period (less polluted). Cloud base height is found to have an inverse correlation with CCN ( $r = -0.64$ ) and  $\text{NO}_2/\text{NH}_3$  concentrations ( $r = -0.7$ ). The role of meteorology and CCN in modulating the cloud vertical profiles is discussed in terms of anomalies of various controlling factors like lifting condensation level (LCL), precipitable water content (PWC) and mixing layer height (MLH).

#### Publication Type

Journal article.

<316>

#### Accession Number

20210014758

#### Author

Sivakumar Subpiramaniyam

#### Title

Outdoor disinfectant sprays for the prevention of COVID-19: are they safe for the environment?

#### Source

Science of the Total Environment; 2021. 759. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Due to the wide range of viability on inanimate surfaces and fomite transmission of SARS-CoV-2, hydrogen peroxide (0.5%, HP) and hypochlorite-based (0.1%, HC) disinfectants (common biocides) are proposed by World Health Organization to mitigate the spread of this virus in healthcare settings. They can be adopted and applied to outdoor environments. However, many studies have shown that these two disinfectants are toxic to fishes and aquatic non-target organisms (primary producers and macroinvertebrates). The global market of these disinfectants will increase in coming years due to COVID-19. Therefore, it is urgent to highlight the toxicities of these disinfectants. The main findings of this article allow the community to develop a new strategy to protect the environment against the hazardous effects of disinfectants. Therefore, we use the "toxicity calculated ratio (TC ratio)" that refers to the fold increase or decrease in the toxicities reported in the literature (NOEC, LOEC, LC50 and EC50) relative to the WHO-recommended dose

of HP and HC. The calculated TC ratios are valuable for policy makers to formulate the regulations to prevent disinfectant exposure in the environment. Our results were collected via PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analysis) guidelines and showed that the TC ratios are from the single digits to several thousand-fold lower than the HP and HC recommended dose, which means these disinfectants are potentially dangerous to non-target organisms. The results also showed that HP and HC are toxic to the growth and reproduction of non-target organisms. Therefore, we recommend policymakers formulate protocols for critical assessment and monitoring of the environment - especially on non-target organisms in water bodies located in and around disinfectant-exposed areas to safeguard the environment in the future.

#### Publication Type

Journal article.

<317>

#### Accession Number

20210014753

#### Author

Neha Parashar; Subrata Hait

#### Title

Plastics in the time of COVID-19 pandemic: protector or polluter?

#### Source

Science of the Total Environment; 2021. 759. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The COVID-19 pandemic has reemphasized the indispensable role of plastics in our daily life. Plastics in terms of personal protective equipment (PPEs) and other single-use medical equipment along with packaging solutions owing to their inherent properties have emerged as a life-savior for protecting the health and safety of the frontline health workers and the common citizens during the pandemic. However, plastics have been deemed as evil polluter due to their indiscriminate littering and mismanagement amid increased plastic usage and waste generation during this unprecedented crisis. This article reviews and assesses to dwell upon whether plastics in the time of pandemic are acting as protector of the public health or polluter of the environment. Considering the utilities and limitations of plastic along with its management or mismanagement, and the fate, an equitable appraisal suggests that the consumers'

irresponsible behavior, and attitude and poor awareness, and the stress on waste management infrastructure in terms of collection, operation, and financial constraints as the major drivers, leading to mismanagement, turn plastic into an evil polluter of the environment. Plastic can be a protector if managed properly and complemented by the circular economy strategies in terms of reduction, recycle and recovery, and thereby preventing leakage into the environment. To safeguard the supply chain of PPEs, several decontamination techniques have been adopted worldwide ensuring their effective reprocessing to prioritize the circular economy within the system. Policy guidelines encouraging to adopt safer practices and sustainable technical solutions along with consumers' education for awareness creation are the need of the hour for preventing plastic to turn from protector with high utility to polluter.

#### Publication Type

Journal article.

<318>

#### Accession Number

20210014569

#### Author

Sekhon, H.; Sekhon, K.; Launay, C.; Afililo, M.; Innocente, N.; Vahia, I.; Rej, S.; Beauchet, O.

#### Title

Telemedicine and the rural dementia population: a systematic review.

#### Source

Maturitas; 2021. 143:105-114.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Background: Telemedicine is a timely solution for the restrictions that COVID-19 social distancing places upon conventional modalities of healthcare provision. Geriatric populations affected by dementia require greater access to healthcare services, particularly in rural areas. As such, the aim of this systematic review is to examine the impact of telemedicine on health outcomes in elderly individuals with dementia living in rural areas. Methods: A systematic review was completed using Ovid Medline, Web of Science and ACM Digital Libraries. The keywords for the selection of articles were: (telemedicine OR Telehealth) AND (Rural) AND (Age\* OR Eld\*) AND (Dementia) and (Telemedicine) AND (Rural Health OR Rural Population OR Hospitals, Rural OR Rural Health Services) AND (Aged OR Aging) AND (Dementia OR Multi-Infarct Dementia OR Vascular Dementia OR Frontotemporal Dementia). Among the 94 articles identified, 79 (84.0%) were

screened, 58 (61.7%) were assessed and 12 (12.8%) were included. Results: The studies had diverse populations. Two were conducted in Australia, five in Canada, one in Korea, and four in the United States of America. The studies used a variety of cognitive tests and reported mixed results regarding the differences in patient performance when assessed in-person as compared to telemedicine consultation. Overall, both patients and physicians reported satisfaction with telemedicine; however, there were mixed results regarding the reliability of cognitive tests and the infrastructure required. Convenience, satisfaction, comfort and recommending telemedicine were reported to be high in the telemedicine group and physicians reported they would use telemedicine again. Conclusion: The testing conditions and the accessibility of telemedicine yield inconclusive results as to whether telemedicine can improve the management of dementia in geriatric individuals.

#### Publication Type

Journal article.

<319>

#### Accession Number

20210014497

#### Author

Sirin, H.; Ketrez, G.; Ahmadi, A. A.; Arslan, A.; Altunel, E.; Gunes, I. S.; Secilmis, E.; Ozkan, S.; Hasde, M.

#### Title

Community approach towards COVID-19 in Turkey: one month after the first confirmed case.

#### Source

Turk Hijyen ve Deneysel Biyoloji Dergisi; 2020. 77(4):381-398. 38 ref.

#### Publisher

Turkiye Halk Sagligi Kurumu

#### Location of Publisher

Ankara

#### Country of Publication

Turkey

#### Abstract

**INTRODUCTION:** During this time when the COVID-19 is rising in Turkey, assessing the knowledge, attitude and practices of the public about the COVID-19 will be useful in finding out whether the interventions to control the outbreak are effective and viable. Furthermore, such studies are needed to properly manage the outbreak process and cast light on future interventions. This study aims to assess the knowledge, attitude and practices of people in Turkey about the COVID-19. **METHODS:** A cross-sectional survey was implemented between 11 and 21 April 2020 using an online questionnaire. The survey was applied online, and social media platforms were used to reach out to the highest number of people who met the inclusion criteria (i.n., people aged 18 or older). The questionnaire consists of three parts (socio-demographic 40

questions, medical history, and knowledge, attitude, and practice section). Descriptive statistics and a comparison of participants' knowledge degrees about COVID-19 is tested using the Chi square test. RESULTS: A total number of 8505 participant were accepted for the study. 59.3% (5045) of respondents were women and 77.7% (6808) had a university degree or higher. 85.6% (7277) of the participants had a good level of knowledge about COVID-19. Over 90% of participants have answered the questions about the mode of transmission of the COVID-19, symptoms, risk groups, isolation, and treatment correctly. 55.2% (4696) of respondents thought that the disease would be successfully taken under control in Turkey and 38.6% (3282) in the world eventually. 55.6% (4731) believed that the COVID-19 will not go away when the weather gets warmer. 35.1% (2983) believed that getting the disease is preordained by fate. The most frequently practiced protective behaviors included hand hygiene, staying at home and wearing mask outside. 98.8% reported that they use their hands in order to protect themselves from COVID-19. DISCUSSION AND CONCLUSION: Though, the knowledge attitude and practice of participants in our study was evaluated high, there were some knowledge and practice gaps in study population that should be considered in further community interventions. The future interventions for the epidemic control need to consider social determinants such as the level of education, employment status and religious beliefs of people.

#### Publication Type

Journal article.

<320>

#### Accession Number

20210014448

#### Author

Bauer, K. W.; Chriqui, J. F.; Andreyeva, T.; Kenney, E. L.; Stage, V. C.; Dev, D.; Lessard, L.; Cotwright, C. J.; Tovar, A.

#### Title

A safety net unraveling: feeding young children during COVID-19.

#### Source

American Journal of Public Health; 2020. 111(1):116-120. 25 ref.

#### Publisher

American Public Health Association

#### Location of Publisher

Washington

#### Country of Publication

USA

#### Abstract

The emergence of COVID-19 in the United States led most states to close or severely limit the capacity of their early child-care and education (ECE) programs. This loss affected millions of young children, including many of the 4.6 million low-income children who are provided free meals and snacks by their ECE programs through support from the federal Child and Adult Care Food Program (CACFP). Although Congress swiftly authorized waivers that would allow CACFP-participating ECE programs to continue distributing food to children, early evidence suggests that most ECE programs did not have the capacity to do so, leaving a fragmented system of federal, state, and local food programs to fill the gaps created by this loss. Critical steps are needed to repair our nation's fragile ECE system, including greater investment in CACFP, to ensure the nutrition, health, and development of young children during the COVID-19 pandemic and beyond.

#### Publication Type

Journal article.

<321>

#### Accession Number

20210014347

#### Author

An YaWen; Song Shuo; Li WeiXin; Chen YongXin; Hu XiaoPeng; Zhao Jia; Li ZhiWen; Jiang GuangYu; Wang Cheng; Wang JianChun; Yuan Bo; Liu HanQing

#### Title

Liver function recovery of COVID-19 patients after discharge, a follow-up study.

#### Source

International Journal of Medical Sciences (Sydney); 2021. 18(1):176-186. 38 ref.

#### Publisher

Ivyspring International Publisher Pty Ltd

#### Location of Publisher

Sydney

#### Country of Publication

Australia

#### Abstract

**Objective:** The aim of this study was to observe the liver function recovery of COVID-19 patients after discharge. **Patients and Methods:** A total of 253 discharged COVID-19 patients in Shenzhen city, China were selected. The clinical characteristics of these patients were assessed. A 2-month follow-up and laboratory hematology test were performed to examine the status of patients' liver function. **Results:** Patients combined with liver diseases, especially fatty liver, are more likely to progress to severe condition ( $P < 0.05$ ). Patients in severe condition and those with liver diseases have higher rates of liver injuries during hospitalization, characterized by a significant increase in alanine aminotransferase (ALT) and aspartate aminotransferase (AST,  $P < 0.01$ ). The ALT, AST/ALT, gamma-glutamyl transferase (GGT), alkaline



phosphatase (ALP), total protein (TP), albumin (ALB), and A/G levels showed significant differences in comparison with the control group ( $P < 0.05$ , and  $P < 0.001$ ); and the outlier ratio of A/G, ALT, GGT and ALP of patients remained abnormal higher within 14 days after discharge ( $P < 0.001$ ). Liver injuries of COVID-19 patients may be related to the epidemiological characteristics, clinical indexes, basic diseases, symptoms, drug treatment during hospitalization and the complications. Indicators of liver function were correlated with cardiac function, renal function, thyroid function, lipid metabolism, glucose metabolism, immune index, leukocyte, erythrocyte, hemoglobin and platelet related indexes. The outlier ratio of TP, ALB and GLB remained extremely low throughout the follow-up period; the outlier ratio of ALT, AST and GGT decreased below 10% from a high level at 40 days after discharged. However, the outlier ratio of A/G, AST/ALT and ALP remained high during the follow-up period. Conclusions: Abnormal liver function might indicate worse recovery of COVID-19 patients. Changes in liver function should be emphasized during long-term follow-up of COVID-19 patients after hospital discharge; the necessity of employing appropriate interventions for liver function repair should be emphasized.

#### Publication Type

Journal article.

<322>

#### Accession Number

20210014334

#### Author

Murdaca, G.; Pioggia, G.; Negrini, S.

#### Title

Vitamin D and COVID-19: an update on evidence and potential therapeutic implications.

#### Source

Clinical and Molecular Allergy; 2020. 18(23). 88 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

The world is now experiencing its third major epidemic of coronavirus (CoV) infections began in Wuhan, Hubei, China, in late 2019 and named COVID-19. After an initial explosive outbreak of pneumonia of unknown etiology in China, the disease spread first to neighboring Asian countries and then worldwide. Patients with COVID-19 presented with a constellation of symptoms such as fever, dry cough, dyspnea, sore throat, and nasal congestion and radiological findings showed bilateral lung glassy opacities. Vitamin D has

many mechanisms by which it reduces the risk of microbial infection and death, including physical barrier, cellular natural immunity, and adaptive immunity. Vitamin D supplementation has shown favorable effects in viral infections including influenza and HIV. The effects of vitamin D supplementation during covid 19 infection remain controversial. Looking ahead, clinical studies are needed to define better cut offs for vitamin D levels and, finally, which dosage is the best.

#### Publication Type

Journal article.

<323>

#### Accession Number

20210014251

#### Author

Williams, A. T.; Muller, C. R.; Govender, K.; Navati, M. S.; Friedman, A. J.; Friedman, J. M.; Cabrales, P.

#### Title

Control of systemic inflammation through early nitric oxide supplementation with nitric oxide releasing nanoparticles.

#### Source

Free Radical Biology & Medicine; 2020. 161:15-22.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

Amelioration of immune overactivity during sepsis is key to restoring hemodynamics, microvascular blood flow, and tissue oxygenation, and in preventing multi-organ dysfunction syndrome. The systemic inflammatory response syndrome that results from sepsis ultimately leads to degradation of the endothelial glycocalyx and subsequently increased vascular leakage. Current fluid resuscitation techniques only transiently improve outcomes in sepsis, and can cause edema. Nitric oxide (NO) treatment for sepsis has shown promise in the past, but implementation is difficult due to the challenges associated with delivery and the transient nature of NO. To address this, we tested the anti-inflammatory efficacy of sustained delivery of exogenous NO using i.v. infused NO releasing nanoparticles (NO-np). The impact of NO-np on microhemodynamics and immune response in a lipopolysaccharide (LPS) induced endotoxemia mouse model was evaluated. NO-np treatment significantly attenuated the pro-inflammatory response by promoting M2 macrophage repolarization, which reduced the presence of pro-inflammatory cytokines in the serum and slowed vascular extravasation. Combined, this resulted in significantly improved

microvascular blood flow and 72-h survival of animals treated with NO-np. The results from this study suggest that sustained supplementation of endogenous NO ameliorates and may prevent the morbidities of acute systemic inflammatory conditions. Given that endothelial dysfunction is a common denominator in many acute inflammatory conditions, it is likely that NO enhancement strategies may be useful for the treatment of sepsis and other acute inflammatory insults that trigger severe systemic pro-inflammatory responses and often result in a cytokine storm, as seen in COVID-19.

#### Publication Type

Journal article.

<324>

#### Accession Number

20210014146

#### Author

Mahmoud Kandeel; Kitade, Y.; Almubarak, A.

#### Title

Repurposing FDA-approved phytomedicines, natural products, antivirals and cell protectives against SARS-CoV-2 (COVID-19) RNA-dependent RNA polymerase.

#### Source

PeerJ; 2020. 8(10480). 20 ref.

#### Publisher

PeerJ

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

Following the recent emergence of SARS-CoV-2 or coronavirus disease 2019 (COVID-19), drug discovery and vaccine design to combat this fatal infection are critical. In this study, an essential enzyme in the SARS-CoV-2 replication machinery, RNA-dependent RNA polymerase (RDRP), is targeted in a virtual screening assay using a set of 1,664 FDA-approved drugs, including sets of botanical and synthetic derivatives. A set of 22 drugs showed a high docking score of >-7. Notably, approximately one-third of the top hits were either from natural products or biological molecules. The FDA-approved phytochemicals were sennosides, digoxin, asiaticoside, glycyrrhizin, neohesperidin, taxifolin, quercetin and aloin. These approved natural products and phytochemicals are used as general tonics, antioxidants, cell protectives, and immune stimulants (nadid, thymopentin, asiaticoside, glycyrrhizin) and in other miscellaneous systemic or topical applications. A comprehensive analysis was conducted on standard precision and extra precision docking, two-step molecular dynamics simulations, binding energy calculations and a post dynamics analysis. The

results reveal that two drugs, docetaxel and neohesperidin, showed strong binding profiles with SARS CoV-2 RdRP. These results can be used as a primer for further drug discovery studies in the treatment of COVID-19. This initiative repurposes safe FDA-approved drugs against COVID-19 RdRP, providing a rapid channel for the discovery and application of new anti-CoV therapeutics.

Publication Type

Journal article.

<325>

Accession Number

20210014140

Author

Lim, M. A.; Pranata, R.

Title

The danger of sedentary lifestyle in diabetic and obese people during the COVID-19 pandemic.

Source

Clinical Medicine Insights: Endocrinology and Diabetes; 2020. 13(1179551420964487). 25 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Publication Type

Journal article.

<326>

Accession Number

20210014118

Author

Shahin, S. Y.; Bugshan, A. S.; Almulhim, K. S.; Alsharief, M. S.; Al-Dulaijan, Y. A.; Intisar Siddiqui; Al-Qarni, F. D.

Title

Knowledge of dentists, dental auxiliaries, and students regarding the COVID-19 pandemic in Saudi Arabia: a cross-sectional survey.

Source

BMC Oral Health; 2020. 20(363). 18 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** This study aimed to assess the knowledge of dental professionals in Saudi Arabia regarding severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease 2019 (COVID-19). **Methods:** A questionnaire was developed to assess various dental professionals from both governmental and private sectors through online and social media outlets. **Results:** A total of 1,033 questionnaires were collected (273 dental students, 193 dental auxiliary personnel, 544 dentists). In all, 63.4% of the respondents worked in hospitals. Of all the respondents, 44.9%, 33.4%, and 21.7% worked in governmental clinics, academia, and the private sector, respectively. Overall knowledge of the incubation period and route of transmission of SARS-CoV-2 was consistent across all dental professions. Knowledge of hand-soap cleaning time was significantly different among dental professionals ( $p < 0.001$ ). Dental professionals displayed significant disagreement on the survival of SARS-CoV-2 outside the host ( $p < 0.001$ ). Furthermore, 75.1% of the respondents were reluctant to treat a suspected COVID-19 patient, and 92% of the participants believed that the mode of transmission was droplet inhalation. Fever, coughing, and shortness of breath were identified as the most common symptoms of COVID-19. Most standard methods of prevention in the dental office were selected by at least 50% of the participants. **Conclusions:** Dental professionals seem to be consistent regarding their knowledge of the incubation period of SARS-CoV-2. However, knowledge of viral survivability and recommended hand-soap washing time was significantly variable among the professionals. A high degree of apprehension toward suspected COVID-19 patients existed among all dental professionals. Pandemic-awareness campaigns are essential among healthcare providers.

Publication Type

Journal article.

<327>

Accession Number

20210014115

Author

Silalahi, F. E. S.; Hidayat, F.; Dewi, R. S.; Purwono, N.; Oktaviani, N.

Title

GIS-based approaches on the accessibility of referral hospital using network analysis and the spatial distribution model of the spreading case of COVID-19 in Jakarta, Indonesia.

Source

BMC Health Services Research; 2020. 20(1053).

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The outbreak of the novel coronavirus (COVID-19) has rapidly spread, causing million confirmed cases, thousands of deaths, and economic losses. The number of cases of COVID-19 in Jakarta is the largest in Indonesia. Furthermore, Jakarta is the capital city of Indonesia which has the densest population in the country. There is need for geospatial analysis to evaluate the demand in contrast to the capacity of Referral Hospitals and to model the spreading case of Covid-19 in order to support and organize an effective health service. Methods: We used the data from local government publicity for COVID-19 as trusted available sources. By using the verifiable data by observation from the local government, we estimated the spatial pattern of distribution of cases to estimate the growing cases. We performed service area and Origin-Destination (OD) Cost Matrix in support to existing referral hospital, and to create Standard Deviational Ellipse (SDE) model to determine the spatial distribution of COVID-19. Results: We identified more than 12.4 million people (86.7%) based on distance-based service area, live in the well served area of the referral hospital. A total 2637 positive-infected cases were identified and highly concentrated in West Jakarta (1096 cases). The results of OD cost matrix in a range of 10 km show a total 908 unassigned cases from 24 patient's centroid which was highly concentrated in West Jakarta. Conclusions: Our results indicate the needs for additional referral hospitals specializing in the treatment of COVID-19 and spatial illustration map of the growth of COVID-19' case in support to the implementation of social distancing in Jakarta.

Publication Type

Journal article.

<328>

Accession Number

20210014113

Author

Zhu Wei; Wei Yi; Meng XianDong; Li JiPing

Title

The mediation effects of coping style on the relationship between social support and anxiety in Chinese medical staff during COVID-19.

Source

BMC Health Services Research; 2020. 20(1007). 44 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 has been a pandemic around the world, which affirmatively brought mental health problems to medical staff. We aimed to investigate the prevalence of anxiety in Chinese medical staff and examine the mediation effects of coping styles on the relationship between social support and anxiety. Methods: A cross-sectional study via internet survey was conducted from 15 March to 30 March, 2020. The social demographic data, Self-rated Anxiety Scale, Social Support Rate Scale and Trait Coping Style Scale were collected. Pearson correlation and a structural equation model were performed to examine the relationships of these variables. The bootstrap analysis was conducted to evaluate the mediation effects. Results: A total of 453 medical staff participated in this study. The mean score of SAS was 46.1 (SD = 10.4). Up to 40.8% of the participants had anxiety symptoms. The participants lived with family members had lower SAS score (45.1 +or- 9.8 vs 49.6 +or- 11.8). Social support was negatively associated with anxiety, mediated by positive coping and negative coping partially significantly with an effect size of - 0.183. Conclusions: Chinese medical staff had a high level of anxiety during the COVID-19 pandemic. Coping styles had effects on the association between social support and anxiety. Sufficient social support and training on positive coping skills may reduce anxiety in medical staff.

Publication Type

Journal article.

<329>

Accession Number

20210014001

Author

Moradzadeh, R.; Jamalian, M.; Zamanian, M.

Title

Needs for further assessments of the effect of health policies on social interventions against COVID-19 in Iran. [Persian]

Source

Iranian Journal of Epidemiology; 2020. 16(3):274-276. 4 ref.

Publisher

Iranian Epidemiological Association

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

COVID-19 has now turned into a global crisis affecting all sections of economy and investment. Many interventions have been applied to control the COVID-19 epidemic. It seems that these measures and plans need to be assessed in the coming weeks and months to determine whether or not they have been effective. Each of these interventions started in their appropriate time during the epidemic; some of them are still in progress and some have been lifted. Nevertheless, improved public knowledge, attitude, and practice has played the most important role in controlling the COVID-19 epidemic. Future studies should take into account such interventions.

Publication Type

Journal article.

<330>

Accession Number

20210013933

Author

Geremia, D. S.; Vendruscolo, C.; Celuppi, I. C.; Adamy, E. K.; Toso, B. R. G. de O.; Souza, J. B. de

Title

200 years of Florence and the challenges of nursing practices management in the COVID-19 pandemic.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3358). 37 ref.

Publisher



Location of Publisher

Ribeirao Preto

Country of Publication

Brazil

Abstract

**Objective:** To analyze the main challenges of nursing in facing Coronavirus Disease-19 under the perspective of nurse managers in the west macro-region of Santa Catarina. **Method:** It consists of a qualitative study, whose data collection was done through interviews with nurses who represent the management of health care network in the region. The analysis technique used was the Discourse of the Collective Subject (DCS). **Results:** The legacy of Florence Nightingale to contemporary nursing practice; the weaknesses and the technical operational capacity with which nursing faces in the Unified Health System (Sistema Unico de Saude - SUS); the strategies for strengthening the Unified Health System and qualification of nursing practices; and the potentialities identified in the pandemic scenario were the main ideas that emerged. In the bicentennial year of Florence Nightingale, nurses recognize her legacy to public health practice and management. Several variables interfere in professional practice, such as epidemiological aspects, working conditions, and care management in a pandemic. **Conclusion:** The pandemic scenario has taken nursing to a position of practical and scientific protagonism as a result of its proactivity and leadership in the search for knowledge based on scientific evidence.

Publication Type

Journal article.

<331>

Accession Number

20210013832

Author

Guldaval, F.; Anar, C.; Gayaf, M.; Buyuksirin, M.; Polat, G.; Karadeniz, G.; Alpozen, A.; Ayranci, A.; Ucsular, F.; Seymenoglu, Z.; Batum, O.

Title

Clinical presentation of health care workers with symptoms of coronavirus disease 2019 at the Izmir tertiary education hospital, during an early phase of the pandemic.

Source

Tuberkuloz ve Toraks; 2020. 68(3):218-226. 19 ref.

Publisher

Turkish Association of Tuberculosis & Thorax

Location of Publisher

Ankara

Country of Publication

Turkey

Abstract

**Introduction:** The aim of this study is to investigate and report on the data regarding the clinical characteristics and outcomes of healthcare workers with COVID-19 at tertiary education hospitals from Turkey. **Materials and Methods:** This was a single center, retrospective, descriptive and observational study using cross-sectional data, which were collected from confirmed COVID-19 patients at a tertiary education hospital. Patients' demographic and clinical characteristics, mortality rates, and the factors associated with hospitalization were analyzed. **Results:** By May 15, 2020, 480 patients were diagnosed with COVID-19 in our hospital where 49 (10.2%) of whom were HCWs. The mean age was 40.0 +or- 8.45 (75.5% female). The most common symptoms were cough (32.7%), fever (30.6%), and myalgia (14.3%). Comorbidities were present in 32.7% of the patients. Most of the HCWs were nurses (53.1%) and physicians (18.4%), and the remaining 14 (28.6%) were cleaning and administrative staff. The severity of the disease was mild in 65.3% and severe in 34.7% HCWs. Leukocyte, neutrophil, lymphocyte and platelet values were statistically lower in hospitalized patients. There was a statistically significant relationship between the presence of infiltration on the chest X-ray, and the patient's symptoms with the severity of the disease (respectively p=0.002 and 0.009). **Conclusion:** In conclusion, the frequency of COVID-19 in healthcare workers is high. The study presents the characteristics of HCWs infected with coronavirus from a single center in Turkey.

Publication Type

Journal article.

<332>

Accession Number

20210013830

Author

Mascarenhas, V. H. A.; Caroci-Becker, A.; Venancio, K. C. M. P.; Baraldi, N. G.; Durkin, A. C.; Riesco, M. L. G.

Title

Care recommendations for parturient and postpartum women and newborns during the COVID-19 pandemic: a scoping review.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3359). 53 ref.

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 map the current knowledge on recommendations for labor, childbirth, and newborn (NB) care in the context of the novel coronavirus. Method: Scoping review of papers identified in databases, repositories, and reference lists of papers included in the study. Two researchers independently read the papers' full texts, extracted and analyzed data, and synthesized content. Results: 19 papers were included, the content of which was synthesized and organized into two conceptual categories: (1) Recommendations concerning childbirth with three subcategories - Indications to anticipate delivery, Route of delivery, and Preparation of the staff and birth room, and (2) Recommendations concerning postpartum care with four categories - Breastfeeding, NB care, Hospital discharge, and Care provided to NB at home. Conclusion: Prevent the transmission of the virus in the pregnancy-postpartum cycle, assess whether there is a need to interrupt pregnancies, decrease the circulation of people, avoid skin-to-skin contact and water births, prefer epidural over general anesthesia, keep mothers who tested positive or are symptomatic isolated from NB, and encourage breastfeeding. Future studies are needed to address directed pushing, instrumental delivery, delayed umbilical cord clamping, and bathing NB immediately after birth.

Publication Type

Journal article.

<333>

Accession Number

20210013818

Author

Rafael, R. de M. R.; Neto, M.; Depret, D. G.; Gil, A. C.; Fonseca, M. H. S.; Souza-Santos, R.

Title

Effect of income on the cumulative incidence of COVID-19: an ecological study.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3344). 35 ref.

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 the relationship between per capita income and the cumulative incidence of COVID-19 in the neighborhoods of the city of Rio de Janeiro, RJ, Brazil. Method an ecological study using neighborhoods as units of analysis. The cumulative incidence rate per 100,000 inhabitants and the median of potential confounding variables (sex, race, and age) were calculated. Multiple analysis included quantile regression, estimating the regression coefficients of the variable income for every five percentiles from the 10th to 90th percentiles to verify the relationship between income and incidence. Results the city's rate was 36.58 new cases per 100,000 inhabitants. In general, the highest rates were observed in the wealthiest regions. Multiple analysis was consistent with this observation since the per capita income affected all percentiles analyzed, with a median regression coefficient of 0.02 (p-value < 0.001; R2 32.93). That is, there is an increase of R\$ 0.02 in the neighborhood's per capita income for every unit of incidence. Conclusion cumulative incident rates of COVID-19 are influenced by one's neighborhood of residency, suggesting that access to testing is uneven.

#### Publication Type

Journal article.

<334>

#### Accession Number

20210013479

#### Author

Tola, M.; Ajibola, O.; Idowu, E. T.; Omidiji, O.; Awolola, S. T.; Amambua-Ngwa, A.

#### Title

Molecular detection of drug resistant polymorphisms in Plasmodium falciparum isolates from Southwest, Nigeria.

#### Source

BMC Research Notes; 2020. 13(497). 29 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Objective: Nigeria bears 25% of global malaria burden despite concerted efforts towards its control and elimination. The emergence of drug resistance to first line drugs, artemisinin combination therapies (ACTs), indicates an urgent need for continuous molecular surveillance of drug resistance especially in high burden countries where drug interventions are heavily relied on. This study describes mutations in Plasmodium falciparum genes associated with drug resistance in malaria; Pfk13, Pfmdr1, PfATPase6 and PfCRT in isolates

obtained from 83 symptomatic malaria patients collected in August 2014, aged 1-61 years old from South-west Nigeria. Results: Two Pfm<sup>dr</sup>1, N86 and Y184 variants were present at a prevalence of 56% and 13.25% of isolates respectively. There was one synonymous (S679S) and two non-synonymous (M699V, S769M) mutations in the PATPase6 gene, while Pfcr<sup>t</sup> genotype (CVIET), had a prevalence of 45%. The Pfk13 C580Y mutant allele was suspected by allelic discrimination in two samples with mixed genotypes although this could not be validated with independent isolation or additional methods. Our findings call for robust molecular surveillance of antimalarial drug resistance markers in west Africa especially with increased use of antimalarial drugs as prophylaxis for Covid-19.

#### Publication Type

Journal article.

<335>

#### Accession Number

20210013436

#### Author

Kazemi, M. A.; Ghanaati, H.; Moradi, B.; Chavoshi, M.; Hashemi, H.; Hemmati, S.; Rouzrokh, P.; Gity, M.; Ahmadinejad, Z.; Abdollahi, H.

#### Title

Prognostic factors of initial chest CT findings for ICU admission and mortality in patients with COVID-19 pneumonia.

#### Source

Iranian Journal of Radiology; 2020. 17(4). 21 ref.

#### Publisher

Kowsar Medical Publishing

#### Location of Publisher

Heerlen

#### Country of Publication

Netherlands

#### Abstract

Background: Studies have shown that CT could be valuable for prognostic issues in COVID-19. Objectives: To investigate the prognostic factors of early chest CT findings in COVID-19 patients. Methods: This retrospective study included 91 patients (34 women, and 57 men) of real-time reverse transcription polymerase chain reaction (RT-PCR) positive COVID-19 from three hospitals in Iran between February 25, 2020, to March 15, 2020. Patients were divided into two groups as good prognosis, discharged from the hospital and alive without symptoms (48 patients), and poor prognosis, died or needed ICU care (43 patients). The first CT images of both groups that were obtained during the first 8 days of the disease presentation were evaluated considering the pattern, distribution, and underlying disease. The total CT-

score was calculated for each patient. Univariate and multivariate analysis with IBM SPSS Statistics v.26 was used to find the prognostic factors. Results: There was a significant correlation between poor prognosis and older ages, dyspnea, presence of comorbidities, especially cardiovascular and comorbidities. Considering CT features, peripheral and diffuse distribution, anterior and paracardiac involvement, crazy paving pattern, and pleural effusion were correlated with poor prognosis. There was a correlation between total CT-score and prognosis and an 11.5 score was suggested as a cut-off with 67.4% sensitivity and 68.7% specificity in differentiation of poor prognosis patients (patients who needed ICU admission or died). Multivariate analysis revealed that a model consisting of age, male gender, underlying comorbidity, diffused lesions, total CT-score, and dyspnea would predict the prognosis better. Conclusions: Total chest CT-score and chest CT features can be used as prognostic factors in COVID-19 patients. A multidisciplinary approach would be more accurate in predicting the prognosis.

#### Publication Type

Journal article.

<336>

#### Accession Number

20210013264

#### Author

Ali, N. N.; Rahul Choudhari; Mahsh Phad; Varma, S. G.; Kailas Gadekar

#### Title

Study of correlation between hemoglobin, ferritin and lactate dehydrogenase in SARS-COVID 19 positive patients at tertiary care hospital.

#### Source

Indian Journal of Basic and Applied Medical Research; 2020. 9(4):446-453. 15 ref.

#### Publisher

Indian Journal of Basic and Applied Medical Research (IJBAMR)

#### Location of Publisher

Nashik

#### Country of Publication

India

#### Abstract

**Introduction:** Coronavirus disease-19 (COVID-19) has been regarded as an infective-inflammatory disease, affecting multiorgans. Anemia reduces oxygen delivery to the tissue and may thus play an important role in the development of multi-organ failure. Therefore, it is crucial to understand the relation between anemia and iron metabolism in COVID-19 infection. **Background:** 1. Quantify the mean levels of hemoglobin, ferritin and LDH of iron metabolism in COVID-19 patients. 2. To correlate level of hemoglobin, ferritin and LDH of iron metabolism in COVID 19 patients. **Material and Method:** Cross-sectional retrospective studies of 60

subjects i.e. 30 patients with COVID-19 disease and 30 covid negative subjects for a period of 1 month from 1/10/2020 to 31/10/2020. Result: Correlation between Hb and Ferritin was found to be -0.53 i.e. negative correlation, decrease in hemoglobin cause increase in ferritin level. This correlation is statistically significant. Correlation between Ferritin and LDH was found to be 0.44 i.e. positive correlation, increase in LDH is associated with increase in ferritin level. This correlation is statistically significant. Conclusion: In the present study, we investigated the correlation between hemoglobin, ferritin and LDH in covid 19 patients. We found that: It is found that there is correlation between decrease in serum hemoglobin and increase ferritin and Ldh level reason being (1) Increase hemolysis is associated with increase in LDH level. (2) The increased retention and storage of iron within ferritin in macrophages contribute to the characteristic fall in serum iron concentrations and an increase in serum ferritin concentrations, observed in an acute phase response.

#### Publication Type

Journal article.

<337>

#### Accession Number

20210013256

#### Author

Abhishek Kawatra; Singh, V. P.; Lunia, G.

#### Title

Diet, physical activity, and screen time among adolescent students during lockdown period in COVID-19 pandemic in Bikaner, Rajasthan.

#### Source

Indian Journal of Basic and Applied Medical Research; 2020. 9(4):50-57. 11 ref.

#### Publisher

Indian Journal of Basic and Applied Medical Research (IJBAMR)

#### Location of Publisher

Nashik

#### Country of Publication

India

#### Abstract

**Introduction:** The World Health Organization defines an adolescent as any person between the age group of 10 and 19 years. Globally, adolescents comprises about two-third of the population. In India, adolescents account for 20% of the country's population. **Methodology:** A cross-sectional study was conducted between March 22, 2020 and June 30, 2020 among Class XI and Class XII school students of Bikaner city of Rajasthan state. This study had been done after taking ethical clearance from institutional ethical board. Data was taken from the children or their parents by sending them google form on What's app social platform.

Adolescent whose Parents not responded and those who refused to participate were excluded from the study. Results: 794 (70.89%) participants has increased screen time during lockdown period. Nearly 29.6%, 36.4%, and 36.4% of the participants spent around 120-180 min watching TV, using the laptop/computer, and using the Internet (except for social media), respectively, whereas 810 students (72.32%) of them used their smartphones for a duration of >180 min. Conclusion: Due to lockdown during COVID 19 pandemic physical activity is decreased while overeating and screen time of study population is increased. Reason behind this was restriction of movement, curfew imposed in case area, starting of online classes, increased use of smartphone to pass time and entertainment.

Publication Type

Journal article.

<338>

Accession Number

20210013141

Author

Traore, F.; Couitchere, L.; Michon, J.; Hessissen, L.

Title

Patient management in pediatric oncology during the COVID-19 pandemic: report from Francophone Africa.

Source

Pediatric Blood & Cancer; 2021. 68(1). 4 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Publication Type

Correspondence.



<339>

Accession Number

20210012928

Author

Gokdemir, O.; Pak, H.; Bakola, M.; Sudip Bhattacharya; Hoedebecke, K.; Jelastopulu, E.

Title

Family physicians' knowledge about and attitudes towards COVID-19 - a cross-sectional multicentric study.

Source

Infection and Chemotherapy; 2020. 52(4):539-549. 40 ref.

Publisher

Korean Society of Infectious Diseases and Korean Society of Chemotherapy

Location of Publisher

Seoul

Country of Publication

Korea Republic

Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic has affected every country on earth, and family physicians (FPs) have helped patients at every stage. The first objective of our study was to study the FPs' knowledge about COVID-19 and second objective was to assess their attitudes, stress and death anxiety surrounding the current pandemic. Materials and Methods: An online questionnaire was prepared to collect responses from FPs between March-April 2020. A descriptive and correlational design was utilized. Results: 240 FPs from eight countries were evaluated. The majority reported that they received most information from medical journals (77%). Most of the respondents also noted that the most common symptoms were acute respiratory syndrome and fever - with the most effective treatment in most cases consisting of symptomatic treatment (41%). Although FPs generally had a positive attitude, most of them (68%) were concerned about contacting COVID-19 from patients and as a result, they experienced increased stress (64%). Conclusion: The research was conducted during the COVID-19 outbreak while the FPs were working on the frontline of the pandemic. This research revealed that most of the FPs had good knowledge of, and a positive attitude towards COVID-19 treatment. It was observed that participants who tended towards conscientiousness, emotional stability, and openness to experience, and who had higher life satisfaction, and lower levels of death anxiety also reported more positive attitudes towards COVID-19. While the main target population of COVID-19 disease were the older age groups, FPs' attitudes and fear levels were not associated with age, gender, or years of experience.

Publication Type

Journal article.

<340>

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Accession Number

20210012923

Author

Hathaway, D., III; Pandav, K.; Patel, M.; Riva-Moscoco, A.; Singh, B. M.; Patel, A.; Min, Z. C.; Singh-Makkar, S.; Sana, M. K.; Sanchez-Dopazo, R.; Desir, R.; Fahem, M. M. M.; Manella, S.; Rodriguez, I.; Alvarez, A.; Abreu, R.

Title

Omega 3 fatty acids and COVID-19: a comprehensive review.

Source

Infection and Chemotherapy; 2020. 52(4):478-495. 86 ref.

Publisher

Korean Society of Infectious Diseases and Korean Society of Chemotherapy

Location of Publisher

Seoul

Country of Publication

Korea Republic

Abstract

The rapid international spread of severe acute respiratory syndrome coronavirus 2 responsible for coronavirus disease 2019 (COVID-19) has posed a global health emergency in 2020. It has affected over 52 million people and led to over 1.29 million deaths worldwide, as of November 13th, 2020. Patients diagnosed with COVID-19 present with symptoms ranging from none to severe and include fever, shortness of breath, dry cough, anosmia, and gastrointestinal abnormalities. Severe complications are largely due to overdrive of the host immune system leading to "cytokine storm". This results in disseminated intravascular coagulation, acute respiratory distress syndrome, multiple organ dysfunction syndrome, and death. Due to its highly infectious nature and concerning mortality rate, every effort has been focused on prevention and creating new medications or repurposing old treatment options to ameliorate the suffering of COVID-19 patients including the immune dysregulation. Omega-3 fatty acids are known to be incorporated throughout the body into the bi-phospholipid layer of the cell membrane leading to the production of less pro-inflammatory mediators compared to other fatty acids that are more prevalent in the Western diet. In this article, the benefits of omega-3 fatty acids, especially eicosapentaenoic acid and docosahexaenoic acid, including their anti-inflammatory, immunomodulating, and possible antiviral effects have been discussed.

Publication Type

Journal article.

<341>

Accession Number

20210012922

Author

Mithila Farjana; Akhi Moni; Sohag, A. A.; Adeba Hasan; Hannan, M. A.; Hossain, M. G.; Uddin, Md. J.

Title

Repositioning vitamin C as a promising option to alleviate complications associated with COVID-19.

Source

Infection and Chemotherapy; 2020. 52(4):461-477. 119 ref.

Publisher

Korean Society of Infectious Diseases and Korean Society of Chemotherapy

Location of Publisher

Seoul

Country of Publication

Korea Republic

Abstract

Vitamin C, also known as L-ascorbic acid, is an essential vitamin with pleiotropic functions, ranging from antioxidant to anti-microbial functions. Evidence suggests that vitamin C acts against inflammation, oxidative stress, autophagy chaos, and immune dysfunction. The ability to activate and enhance the immune system makes this versatile vitamin a prospective therapeutic agent amid the current situation of coronavirus disease 2019 (COVID-19). Being highly effective against the influenza virus, causing the common cold, vitamin C may also function against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and its associated complications. Severe infections need higher doses of the vitamin to compensate for the augmented inflammatory response and metabolic demand that commonly occur during COVID-19. Compelling evidence also suggests that a high dose of vitamin C (1.5 g/kg body weight) in inflammatory conditions can result in effective clinical outcomes and thus can be employed to combat COVID-19. However, further studies are crucial to delineate the mechanism underlying the action of vitamin C against COVID-19. The current review aims to reposition vitamin C as an alternative approach for alleviating COVID-19-associated complications.

Publication Type

Journal article.

<342>

Accession Number

20210012904

Author

Zanardo, V.; Tortora, D.; Guerrini, P.; Garani, G.; Severino, L.; Soldera, G.; Straface, G.

Title

Infant feeding initiation practices in the context of COVID-19 lockdown.

Source

Early Human Development; 2021. 152. 23 ref.

Publisher

Elsevier Ireland

Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

**Objective:** Limited information is available regarding barriers to breastfeeding during the COVID-19 lockdown. **Study design:** This study was designed as a non-concurrent case-control study on breastfeeding initiation practices, defined according to WHO, in women giving birth during lockdown, between March 8 and May 18, 2020, in the COVID-19 'hotspot' in Northeastern Italy (study group), with an antecedent puerperae-matched group (control group). Exclusive, complementary, and formula feeding practices were collected from maternal charts at hospital discharge, on the second day post-partum, when puerperae filled out the Edinburg Postnatal Depression Scale (EPDS). **Results:** The COVID-19 study group presented significantly lower exclusive breastfeeding rates than the control group who members gave birth the previous year (-15%,  $p = 0.003$ ), as a consequence of the significantly higher prevalence of complementary feeding practices in the former (+20%,  $p = 0.002$ ). Conversely, the COVID-19 study group showed significantly higher EPDS scores (8.03 +or- 4.88 vs. 8.03 +or- 4.88,  $p < 0.005$ ) and higher anhedonia (0.56 +or- 0.65 vs. 0.18 +or- 0.38,  $p < 0.001$ ) and depression (0.62 +or- 0.60 vs. 0.39 +or- 0.44,  $<0.001$ ) subscale scores. In the general linear model analysis, women practicing exclusive breastfeeding showed significantly lower EPDS scores in comparison with those practicing complementary ( $p = 0.003$ ) and formula feedings ( $p = 0.001$ ). Furthermore, the highest EPDS scores were observed in women adopting formula feeding, mainly during the COVID-19 quarantine ( $p = 0.019$ ). **Conclusion:** This study indicates that hospital containment measures adopted during lockdown in the 'hotspot' COVID-19 epidemic area of Northeastern Italy have a detrimental effect on maternal emotions and on breastfeeding exclusivity practices.

Publication Type

Journal article.

<343>

Accession Number

20210012888

Author

Kaveh-Yazdy, F.; Zarifzadeh, S.

## Title

Track Iran's national COVID-19 response committee's major concerns using two-stage unsupervised topic modeling.

## Source

International Journal of Medical Informatics; 2021. 145.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

## Country of Publication

UK

## Abstract

**Background:** Since the World Health Organization (WHO) declared the COVID-19 as a Public Health Emergency of International Concern (PHEIC) on January 31, 2020, governments have been en faced with crisis for timely responses. The efficacy of these responses directly depends on the social behaviors of the target society. People react to these actions with respect to the information they received from different channels, such as news and social networks. Thus, analyzing news demonstrates a brief view of the information users received during the outbreak. **Methods:** The raw data used in this study is collected from official news channels of news wires and agencies in Telegram messenger, which exceeds 2,400,000 posts. The posts that are quoted by NCRC's members are collected, cleaned, and divided into sentences. The topic modeling and tracking are utilized in a two-stage framework, which is customized for this problem to separate miscellaneous sentences from those presenting concerns. The first stage is fed with embedding vectors of sentences where they are grouped by the Mapper algorithm. Sentences belonging to singleton nodes are labeled as miscellaneous sentences. The remained sentences are vectorized, adopting Tf-IDF weighting schema in the second stage and topically modeled by the LDA method. Finally, relevant topics are aligned to the list of policies and actions, named topic themes, that are set up by the NCRC. **Results:** Our results show that major concerns presented in about half of the sentences are (1) PCR lab. test, diagnosis, and screening, (2) Closure of the education system, and (3) awareness actions about washing hands and facial mask usage. Among the eight themes, intra-provincial travel and traffic restrictions, as well as briefing the national and provincial status, are under-presented. The timeline of concerns annotated by the preventive actions illustrates the changes in concerns addressed by NCRC. This timeline shows that although the announcements and public responses are not lagged behind the events, but cannot be considered as timely. Furthermore, the fluctuating series of concerns reveal that the NCRC has not a long-time response map, and members react to the closest announced policy/act. **Conclusion:** The results of our study can be used as a quantitative indicator for evaluating the availability of an on-time public response of Iran's NCRC during the first three months of the outbreak. Moreover, it can be used in comparative studies to investigate the differences between awareness acts in various countries. Results of our customized-design framework showed that about one-third of the discussions of the NCRC's members cover miscellaneous topics that must be removed from the data.

## Publication Type

Journal article.

<344>

Accession Number

20210012339

Author

Balci, A.; Cilekar, S.; Cosgun, I. G.

Title

The evaluation of the health care professionals' knowledge, prevention and the perceptions on the treatment of new coronavirus (COVID-19).

Source

Bezmialem Science; 2020. 8(Supplement 2):27-35. 32 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

**Objective:** The recent spread of new Coronavirus disease (COVID-19) pandemic which caused worldwide concern is a public health emergency situation. The risk of getting infected as well as the concern levels of the health professionals on this issue is very high due to their close contact with the infected patients. The aim of this study is to evaluate the concern level of being infected in the health professionals, as well as their view and perception of different applications used during the treatment of the COVID-19 cases together with their whole approach during this pandemic situation.: **Methods:** The study was conducted through an online survey that was sent to all the Health professionals of a pandemic hospital of a city in Turkey between 8 and 15 May 2020. This online survey was sent to all the professionals through social media platforms. The survey included both multiple-choice and true-false questions regarding COVID-19 diagnosis, clinical stage, treatment approach, concerns, knowledge, and awareness of the situation together with some social demographic characteristics of the health professionals. SPSS v20 program was used to evaluate the statistical analysis of the data collected. Data are shown through mean +or- and the standard deviation is shown through percentage.: **Results:** The study consisted of 250 (59.9%) doctors and 169 (41.1%) assistant healthcare professionals and the average age of the participants was 33.21+or-6.88 years. Seventy-six (18.1%) of 128 people who smoked during the pandemic wanted to quit smoking. 390 (93.1%) of the participants thought that they were in a high-risk group of being infected and were concerned about this matter. One hundred nine (26.01%) of the participants had positive COVID-19 tests of their relatives or friends. Sixty-four (15.3%) participants claimed to have a polymerase chain reaction (PCR) test, and 3 (0.7%) of them reported that their COVID-19 PCR tests were positive. Eighty-four (20.04%) stated that they used Hydroxychloroquine for prophylaxis.: **Conclusion:** The healthcare professionals working in the pandemic hospital during the pandemic stated that they generally had sufficient knowledge about COVID-19 and believed that our country would be successful with its fight against this pandemic. Moreover, our study proved the importance of knowledge levels in fighting communicable diseases.

Publication Type

Journal article.

<345>

Accession Number

20210012206

Author

Amir, L. R.; Tanti, I.; Maharani, D. A.; Wimardhani, Y. S.; Julia, V.; Sulijaya, B.; Puspitawati, R.

Title

Student perspective of classroom and distance learning during COVID-19 pandemic in the undergraduate dental study program Universitas Indonesia.

Source

BMC Medical Education; 2020. 20(392). 29 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic has become a global health issue and has had a major impact on education. Consequently, half way through the second semester of the academic year 2019/2020, learning methods were delivered through distance learning (DL). We aimed to evaluate the student perspective of DL compared to classroom learning (CL) in the undergraduate dentistry study program at the Faculty of Dentistry Universitas Indonesia. Methods: An online questionnaire was sent at the end of the semester. A total of 301 students participated in the study. Results: Duration of study influenced student preference. Higher number of first-year students preferred DL compared to their seniors ( $p < 0.001$ ). Students preferred CL for group discussion, as DL resulted in more difficult communication and gave less learning satisfaction. Only 44.2% students preferred DL over CL, although they agreed that DL gave a more efficient learning method (52.6%), it provided more time to study (87.9%) and to review study materials (87.3%). Challenges during DL included external factors such as unstable internet connection, extra financial burden for the internet quota and internal factors such as time management and difficulty to focus while learning online for a longer period of time. Conclusion: Despite some challenges, dental students could adapt to the new learning methods of full DL and the majorities agreed blended learning that combined classroom and distance learning can be implemented henceforth. This current COVID-19 pandemic, changes not only the utilization of technology in education but the pedagogy strategies in the future.

Publication Type

Journal article.

<346>

Accession Number

20210011969

Author

Bagheri, M.; Rashe, Z.; Ahur, M. H.; Eidizadeh, M.

Title

Is ocular toxicity expected in chloroquine/hydroxychloroquine prescription as a therapeutic or prophylactic option in COVID-19?

Source

Recent Patents on Anti-Infective Drug Discovery; 2020. 15(2):113-118.

Publisher

Bentham Science Publishers

Location of Publisher

Sharjah

Country of Publication

United Arab Emirates

Abstract

Background: On 11th March 2020, WHO announced novel coronavirus infectious (COVID-19) as a pandemic. New Coronavirus Pneumonia (NCP) that emerge on 31st December 2019 from China and quickly became a Public Health Emergency of International Concern (PHEIC). In the absence of evidence-based proven prophylactic or therapeutic options, chloroquine/hydroxychloroquine (CQ/HCQ) patented as first line choice in COVID- 19 treatment, which raised concerns about drug poisoning, especially ocular toxicity. Background: This study aims to investigate the possibility of ocular toxicity and the need for ophthalmic counseling to prescribing this therapeutic protocol. Methods: All the articles that were most relevant to the COVID-19 therapeutic or prophylactic options and CQ derivative ocular toxicity, were founded by a literature search and were thoroughly reviewed. Results: Anecdotal recent reports introduce CQ/HCQ as an effective therapeutic or prophylactic choice for COVID-19. Because of the short time prescribe and the insignificant cumulative dose of the drug on the one hand and a higher risk of cross-infection during an ophthalmic examination, on the other hand, an ophthalmologic consult is not recommended except in highrisk patients for retinal toxicity. Conclusion: This study recommended ophthalmic evaluation before CQ/HCQ prescription for treatment or prophylaxis of COVID-19 only in preexisting maculopathy.

Publication Type

Journal article.



<347>

Accession Number

20210011660

Author

Nwosu, C. O.; Oyenubi, A.

Title

Income-related health inequalities associated with the coronavirus pandemic in South Africa: a decomposition analysis.

Source

International Journal for Equity in Health; 2021. 20(21). 52 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) has resulted in an enormous dislocation of society especially in South Africa. The South African government has imposed a number of measures aimed at controlling the pandemic, chief being a nationwide lockdown. This has resulted in income loss for individuals and firms, with vulnerable populations (low earners, those in informal and precarious employment, etc.) more likely to be adversely affected through job losses and the resulting income loss. Income loss will likely result in reduced ability to access healthcare and a nutritious diet, thus adversely affecting health outcomes. Given the foregoing, we hypothesize that the economic dislocation caused by the coronavirus will disproportionately affect the health of the poor. Methods: Using the fifth wave of the National Income Dynamics Study (NIDS) dataset conducted in 2017 and the first wave of the NIDS-Coronavirus Rapid Mobile Survey (NIDS-CRAM) dataset conducted in May/June 2020, this paper estimated income-related health inequalities in South Africa before and during the COVID-19 pandemic. Health was a dichotomized self-assessed health measure, with fair and poor health categorized as "poor" health, while excellent, very good and good health were categorized as "better" health. Household per capita income was used as the ranking variable. Concentration curves and indices were used to depict the income-related health inequalities. Furthermore, we decomposed the COVID-19 era income-related health inequality in order to ascertain the significant predictors of such inequality. Results: The results indicate that poor health was pro-poor in the pre-COVID-19 and COVID-19 periods, with the latter six times the value of the former. Being African (relative to white), per capita household income and household experience of hunger significantly predicted income-related health inequalities in the COVID-19 era (contributing 130%, 46% and 9% respectively to the inequalities), while being in paid employment had a nontrivial but statistically insignificant contribution (13%) to health inequality. Conclusions: Given the significance and magnitude of race, hunger, income and employment in determining socioeconomic inequalities in poor health, addressing racial disparities and hunger, income inequality and unemployment will likely mitigate income-related health inequalities in South Africa during the COVID-19 pandemic.

Publication Type

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<348>

Accession Number

20210011207

Author

Lin ShaoWei; Wei DongHong; Sun Yi; Chen Kun; Yang Le; Liu Bang; Huang Qing; Paoliello, M. M. B.; Li HuangYuan; Wu SiYing

Title

Region-specific air pollutants and meteorological parameters influence COVID-19: a study from mainland China.

Source

Ecotoxicology and Environmental Safety; 2020. 204.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Coronavirus disease 2019 (COVID-19) was first detected in December 2019 in Wuhan, China, with 11,669,259 positive cases and 539,906 deaths globally as of July 8, 2020. The objective of the present study was to determine whether meteorological parameters and air quality affect the transmission of COVID-19, analogous to SARS. We captured data from 29 provinces, including numbers of COVID-19 cases, meteorological parameters, air quality and population flow data, between Jan 21, 2020 and Apr 3, 2020. To evaluate the transmissibility of COVID-19, the basic reproductive ratio (R0) was calculated with the maximum likelihood "removal" method, which is based on chain-binomial model, and the association between COVID-19 and air pollutants or meteorological parameters was estimated by correlation analyses. The mean estimated value of R0 was 1.79 +/- 0.31 in 29 provinces, ranging from 1.08 to 2.45. The correlation between R0 and the mean relative humidity was positive, with coefficient of 0.370. In provinces with high flow, indicators such as carbon monoxide (CO) and 24-h average concentration of carbon monoxide (CO\_24 h) were positively correlated with R0, while nitrogen dioxide (NO2), 24-h average concentration of nitrogen dioxide (NO2\_24 h) and daily maximum temperature were inversely correlated to R0, with coefficients of 0.644, 0.661, -0.636, -0.657, -0.645, respectively. In provinces with medium flow, only the weather factors were correlated with R0, including mean/maximum/minimum air pressure and mean wind speed, with coefficients of -0.697, -0.697, -0.697 and -0.841, respectively. There was no correlation with R0 and meteorological parameters or air pollutants in provinces with low flow. Our findings suggest that higher ambient CO concentration is a risk factor for increased transmissibility of the

novel coronavirus, while higher temperature and air pressure, and efficient ventilation reduce its transmissibility. The effect of meteorological parameters and air pollutants varies in different regions, and requires that these issues be considered in future modeling disease transmissibility.

#### Publication Type

Journal article.

<349>

#### Accession Number

20210010589

#### Author

Altuwayjiri, A.; Soleimani, E.; Moroni, S.; Palomba, P.; Borgini, A.; Marco, C. de; Ruprecht, A. A.; Sioutas, C.

#### Title

The impact of stay-home policies during coronavirus-19 pandemic on the chemical and toxicological characteristics of ambient PM<sub>2.5</sub> in the metropolitan area of Milan, Italy.

#### Source

Science of the Total Environment; 2021. 758.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The goal of this study was to characterize changes in components and toxicological properties of PM<sub>2.5</sub> during the nationwide 2019-Coronavirus (COVID-19) lockdown restrictions in Milan, Italy. Time-integrated PM<sub>2.5</sub> filters were collected at a residential site in Milan metropolitan area from April 11th to June 3rd at 2020, encompassing full-lockdown (FL), the followed partial-lockdown (PL2), and full-relaxation (FR) periods of COVID-19 restrictions. The collected filters were analyzed for elemental and organic carbon (EC/OC), water-soluble organic carbon (WSOC), individual organic species (e.g., polycyclic aromatic hydrocarbons (PAHs), and levoglucosan), and metals. According to online data, nitrogen dioxide (NO<sub>2</sub>) and benzene (C<sub>6</sub>H<sub>6</sub>) levels significantly decreased during the entire COVID-19 period compared to the same time span in 2019, mainly due to the government-backed shutdowns and curtailed road traffic. Similarly, with a few exceptions, surrogates of tailpipe emissions (e.g., traffic-associated PAHs) as well as re-suspended road dust (e.g., Fe, Mn, Cu, Cr, and Ti) were relatively lower during FL and PL2 periods in comparison with year 2019, whereas an increasing trend in mass concentration of mentioned species was observed from FL to PL2 and FR phases due to the gradual lifting of lockdown restrictions. In contrast, comparable

concentrations of ambient PM<sub>2.5</sub> and black carbon (BC) between lockdown period and the same time span in 2019 were attributed to the interplay between decreased road traffic and elevated domestic biomass burning as a result of adopted stay-home strategies. Finally, the curtailed road traffic during FL and PL2 periods led to ~25% drop in the PM<sub>2.5</sub> oxidative potential (measured via 2',7'-dichlorodihydrofluorescein (DCFH) and dithiothreitol (DTT) assays) with respect to the FR period as well as the same time span in 2019. The results of this study provide insights into the changes in components and oxidative potential of PM<sub>2.5</sub> in the absence of road traffic during COVID-19 restrictions.

#### Publication Type

Journal article.

<350>

#### Accession Number

20210010514

#### Author

Meng JingJing; Li Zheng; Zhou RuiWen; Chen Min; Li YuanYuan; Yi YanAn; Ding ZhiJian; Li HongJi; Yan Li; Hou ZhanFang; Wang GeHui

#### Title

Enhanced photochemical formation of secondary organic aerosols during the COVID-19 lockdown in Northern China.

#### Source

Science of the Total Environment; 2021. 758. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

To eliminate the spread of a novel coronavirus breaking out in the end of 2019 (COVID-19), the Chinese government has implemented a nationwide lockdown policy after the Chinese Lunar New Year of 2020, resulting in a sharp reduction in air pollutant emissions. To investigate the impact of the lockdown on aerosol chemistry, the number fraction, size distribution and formation process of oxalic acid (C<sub>2</sub>) containing particles and its precursors were studied using a single particle aerosol mass spectrometer (SPAMS) at the urban site of Liaocheng in the North China Plain (NCP). Our results showed that five air pollutants (i.e., PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, and CO) decreased by 30.0-59.8% during the lockdown compared to those before the lockdown, while O<sub>3</sub> increased by 63.9% during the lockdown mainly due to the inefficient titration effect of O<sub>3</sub> via NO reduction. The increased O<sub>3</sub> concentration can boost the

atmospheric oxidizing capacity and further enhance the formation of secondary organic aerosols, thereby significantly enhancing the C2 particles and its precursors as observed during the lockdown. Before the lockdown, C2 particles were significantly originated from biomass burning emissions and their subsequent aqueous-phase oxidation. The hourly variation patterns and correlation analysis before the lockdown suggested that relative humidity (RH) and aerosol liquid water content (ALWC) played a key role in the formation of C2 particles and the increased aerosol acidity can promote the conversion of precursors such as glyoxal (Gly) and methyglyoxal (mGly) into C2 particles in the aqueous phase. RH and ALWC decreased sharply but O3 concentration and solar radiation increased remarkably during the lockdown, the O3-dominated photochemical pathways played an important role in the formation of C2 particles in which aerosol acidity was ineffective. Our study indicated that air pollution treatment sponges on a joint-control and balanced strategy for controlling numerous pollutants.

#### Publication Type

Journal article.

<351>

#### Accession Number

20210010148

#### Author

Ren GuangXu; Cheng GuangYan; Wang JiaQi

#### Title

Understanding the role of milk in regulating human homeostasis in the context of the COVID-19 global pandemic.

#### Source

Trends in Food Science & Technology; 2021. 107:157-160.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Although data from clinical observation have directly shown that children aged 0-14 years are less susceptible to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection than those who are between 15 and 64 years old, due to a lack of biological evidence of differences in cell entry receptors between age groups, it remains debatable whether children are actually less susceptible than adults. To date, studies on COVID-19 have consistently shown that pediatric patients generally have relatively milder cytokine release syndrome and lower mortality rates than adults. Interestingly, similar phenomena of

relatively mild symptoms in children have been observed in previous outbreaks of coronaviruses, including SARS-CoV and MERS-CoV. In fact, in the early stage of life, there are many mechanisms that spontaneously regulate excessive inflammatory responses. Milk, as the main food of infants, not only provides necessary energy and nutrients but also plays an important role in regulating homeostasis related to the immune system, gut microecology and nutrition balance. This review discusses some roles of milk in regulating human homeostasis, especially in the disease states. These clues provide new insight and references for personal care at home and/or in the hospital during the global COVID-19 pandemic.

#### Publication Type

Journal article.

<352>

#### Accession Number

20210010118

#### Author

Halabowski, D.; Rzymiski, P.

#### Title

Taking a lesson from the COVID-19 pandemic: preventing the future outbreaks of viral zoonoses through a multi-faceted approach.

#### Source

Science of the Total Environment; 2021. 757. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The pandemic of the novel coronavirus disease 2019 (COVID-19) has caused a significant burden to healthcare systems, economic crisis, and public fears. It is also a lesson to be learned and a call-to-action to minimize the risk of future viral pandemics and their associated challenges. The present paper outlines selected measures (i.e., monitoring and identification of novel viral agents in animals, limitations to wildlife trade, decreasing hunting activities, changes to mink farming and meat production), the implementation of which would decrease such a risk. The role of viral surveillance systems and research exploring the virus strains associated with different animal hosts is emphasized along with the need for stricter wild trade regulations and changes to hunting activities. Finally, the paper suggests modifications to the meat production system, particularly through the introduction of cultured meat that would not only decrease the

risk of exposure to novel human viral pathogens but also strengthen food security and decrease the environmental impacts of food production.

Publication Type

Journal article.

<353>

Accession Number

20210010100

Author

Castillo-Zacarias, C.; Barocio, M. E.; Hidalgo-Vazquez, E.; Sosa-Hernandez, J. E.; Parra-Arroyo, L.; Lopez-Pacheco, I. Y.; Barcelo, D.; Iqbal, H. N. M.; Parra-Saldivar, R.

Title

Antidepressant drugs as emerging contaminants: occurrence in urban and non-urban waters and analytical methods for their detection.

Source

Science of the Total Environment; 2021. 757.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Antidepressants are drugs with a direct action on the brain's biochemistry through their interaction with the neurotransmitters, such as dopamine, norepinephrine, and serotonin. The increasing worldwide contamination from these drugs may be witnessed through their increasing presence in the urban water cycle. Furthermore, their occurrence has been detected in non-urban water, such as rivers and oceans. Some endemic aquatic animals, such as certain fish and mollusks, have bioaccumulated different antidepressant drugs in their tissues. This problem will increase in the years to come because the present COVID-19 pandemic has increased the general worldwide occurrence of depression and anxiety, triggering the consumption of antidepressants and, consequently, their presence in the environment. This work provides information on the occurrence of the most administrated antidepressants in urban waters, wastewater treatment plants, rivers, and oceans. Furthermore, it provides an overview of the analytical approaches currently used to detect each antidepressant presented. Finally, the ecotoxicological effect of antidepressants on several in vivo models are listed. Considering the information provided in this review, there is an urgent need to test the presence of antidepressant members of the MAOI and TCA groups.

Furthermore, incorporating new degradation/immobilization technologies in WWTPs will be useful to stop the increasing occurrence of these drugs in the environment.

Publication Type

Journal article.

<354>

Accession Number

20210010048

Author

Wang Ming; Lu SiHua; Shao Min; Zeng LiMin; Zheng Jun; Xie FangJian; Lin HaoTian; Hu Kun; Lu XingDong

Title

Impact of COVID-19 lockdown on ambient levels and sources of volatile organic compounds (VOCs) in Nanjing, China.

Source

Science of the Total Environment; 2021. 757. 35 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

A lot of restrictive measures were implemented in China during January-February 2020 to control rapid spread of COVID-19. Many studies reported impact of COVID-19 lockdown on air quality, but little research focused on ambient volatile organic compounds (VOCs) till now, which play important roles in production of ozone and secondary organic aerosol. In this study, impact of COVID-19 lockdown on VOCs mixing ratios and sources were assessed based on online measurements of VOCs in Nanjing during December 20, 2019-February 15, 2020 (P1-P2) and April 15-May 13, 2020 (P3). Average VOCs levels during COVID-19 lockdown period (P2) was 26.9 ppb, about half of value for pre-lockdown period (P1). Chemical composition of VOCs also showed significant changes. Aromatics contribution during decreased from 13% during P1 to 9% during P2, whereas alkanes contribution increased from 64% to 68%. Positive matrix factorization (PMF) was then applied for non-methane hydrocarbons (NMHCs) sources apportionment. Five sources were identified, including a source related to transport and background air masses, three sources related to petrochemical industry or chemical industry (petrochemical industry#1-propene/ethene, petrochemical industry#2-C7-C9 aromatics, and chemical industry-benzene), and a source attributed to gasoline evaporation and vehicular emission. During P2, NMHCs levels from petrochemical industry#2-C7-C9 aromatics showed the largest relative decline of 94%, followed by petrochemical industry#1-propene/ethene (67%), and gasoline



evaporation and vehicular emission (67%). Furthermore, ratios of OH reactivity of NMHCs versus NO<sub>2</sub> level (ROH, NMHCs/NO<sub>2</sub>) and total oxidant production rate (P (OX)) were calculated to assess potential influences of COVID-19 lockdown on O<sub>3</sub> formation.

#### Publication Type

Journal article.

<355>

#### Accession Number

20210009429

#### Author

Leng AnLi; Maitland, E.; Wang SiYuan; Nicholas, S.; Liu RuGang; Wang Jian

#### Title

Individual preferences for COVID-19 vaccination in China.

#### Source

Vaccine; 2021. 39(2):247-254. 27 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Background: Vaccinations are an effective choice to stop disease outbreaks, including COVID-19. There is little research on individuals' COVID-19 vaccination decision-making. Background: We aimed to determine individual preferences for COVID-19 vaccinations in China, and to assess the factors influencing vaccination decision-making to facilitate vaccination coverage. Methods: A D-efficient discrete choice experiment was conducted across six Chinese provinces selected by the stratified random sampling method. Vaccine choice sets were constructed using seven attributes: vaccine effectiveness, side-effects, accessibility, number of doses, vaccination sites, duration of vaccine protection, and proportion of acquaintances vaccinated. Conditional logit and latent class models were used to identify preferences. Results: Although all seven attributes were proved to significantly influence respondents' vaccination decision, vaccine effectiveness, side-effects and proportion of acquaintances vaccinated were the most important. We also found a higher probability of vaccinating when the vaccine was more effective; risks of serious side effects were small; vaccinations were free and voluntary; the fewer the number of doses; the longer the protection duration; and the higher the proportion of acquaintances vaccinated. Higher local vaccine coverage created altruistic herd incentives to vaccinate rather than free-rider problems. The predicted vaccination uptake of the optimal vaccination scenario in our study was 84.77%. Preference heterogeneity was substantial.

Individuals who were older, had a lower education level, lower income, higher trust in the vaccine and higher perceived risk of infection, displayed a higher probability to vaccinate. Conclusions: Preference heterogeneity among individuals should lead health authorities to address the diversity of expectations about COVID-19 vaccinations. To maximize COVID-19 vaccine uptake, health authorities should promote vaccine effectiveness; pro-actively communicate the absence or presence of vaccine side effects; and ensure rapid and wide media communication about local vaccine coverage.

#### Publication Type

Journal article.

<356>

#### Accession Number

20210009360

#### Author

Filimonau, V.; Archer, D.; Bellamy, L.; Smith, N.; Wintrip, R.

#### Title

The carbon footprint of a UK University during the COVID-19 lockdown.

#### Source

Science of the Total Environment; 2021. 756. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The COVID-19 pandemic has provided a unique opportunity to compare the carbon intensity of higher education delivered on- and off-campus. This is attributed to governmental lockdown orders that have forced Universities to close their campuses, ban business travel and move all teaching and learning activities online. This study represents the first known attempt to compare the carbon footprint of a mid-sized UK University produced during the COVID-19 lockdown (April-June 2020) against that generated within the respective time period in previous years. Although the overall carbon footprint of the University decreased by almost 30% during the lockdown, the carbon intensity of online teaching and learning was found to be substantial and almost equal to that of staff and student commute in the pre-lockdown period. The study contributed to an emerging academic discourse on the carbon (dis)benefits of different models of higher education provision in the UK and beyond. The study suggested that policy and management decisions on transferring education online should carefully consider the carbon implications of this transfer.

Publication Type

Journal article.

<357>

Accession Number

20210009355

Author

Sanjoy Roy; Monojit Saha; Bandhan Dhar; Pandit, S.; Rubaiya Nasrin

Title

Geospatial analysis of COVID-19 lockdown effects on air quality in the South and Southeast Asian region.

Source

Science of the Total Environment; 2021. 756. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The COVID-19 pandemic, induced by the novel Coronavirus worldwide outbreak, is causing countries to introduce different types of lockdown measures to curb the contagion. The implementation of strict lockdown policies has had unprecedented impacts on air quality globally. This study is an attempt to assess the effects of COVID-19 induced lockdown measures on air quality in both regional, country, and city scales in the South and Southeast Asian region using open-source satellite-based data and software frameworks. We performed a systematic review of the national lockdown measures of 19 countries of the study area based on publicly available materials. We considered two temporal settings over a period of 66 days to assess and compare the effects of lockdown measures on air quality levels between standard business as usual and current situation COVID-19 lockdown. Results showed that compared to the same period of 2019, atmospheric NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, and CO levels decreased by an average of 24.16%, 19.51%, 20.25%, and 6.88%, respectively during the lockdown, while O<sub>3</sub> increased by a maximum of 4.52%. Among the 19 studied cities, Dhaka, Kathmandu, Jakarta, and Hanoi experienced the highest reduction of NO<sub>2</sub> (40%-47%) during the lockdown period compared to the corresponding period of 2019. The methodological framework applied in this study can be used and extended to future research in the similar domain such as understanding long-term effects of COVID-19 mitigation measures on the atmospheric pollution at continental-scale or assessing the effects of the domestic emissions during the stay-at-home; a standard and effective COVID-19 lockdown measure applied in most of the countries.

Publication Type

Journal article.

<358>

Accession Number

20210009239

Author

Byrne, A. W.; Barrett, D.; Breslin, P.; Madden, J. M.; O'Keeffe, J.; Ryan, E.

Title

Post-mortem surveillance of bovine tuberculosis in Ireland: herd-level variation in the probability of herds disclosed with lesions at routine slaughter to have skin test reactors at follow-up test.

Source

Veterinary Research Communications; 2020. 44(3/4):131-136. 39 ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

Post-mortem surveillance in Ireland discloses skin-test negative cattle with presumptive evidence of infection of *Mycobacterium bovis* (lesions at routine slaughter (LRS)), the causative agent of bovine tuberculosis (bTB). Laboratory confirmation of lesions has impacts on trade restrictions for herds, therefore if laboratory capacity was diminished, how herds are treated would require an informed risk policy. Here we report the proportion of herds with subsequent evidence of within-herd transmission, based on skin-test results. We assess how herd-size, herd-type, and bTB-history affect the probability of additional reactors at follow-up test using univariable and multivariable random-effects models. The study represents a rapid response to developing an evidential base for policy demands during an extraordinary event, the COVID-19 epidemic in Ireland. A dataset from 2005 to 2019 of breakdowns were collated. Overall, 20,116 breakdowns were initiated by LRS cases. During the index tests of these breakdowns, 3931 revealed 1 skin-test reactor animals (19.54%; 1 standard reactors: 3827; 19.02%). Increasing herd-size was associated with reactor disclosure on follow-up. For small herds (137) disclosed 1 reactors. Beef (13.87%) and "other" (13%) herd production types had lower proportion of index tests with reactors in comparison with dairy (28.27%) or suckler (20.48%) herds. Historic breakdown size during the previous 3-years was associated reactor disclosure risk on follow-up. Our results are useful for rapid tailored policy development aimed at identifying higher risk herds.

Publication Type

Journal article.

<359>

Accession Number

20210009238

Author

Rubal Singla; Abhishek Mishra; Rupa Joshi; Sonali Jha; Sharma, A. R.; Sujata Upadhyay; Phulen Sarma; Ajay Prakash; Bikash Medhi

Title

Human animal interface of SARS-CoV-2 (COVID-19) transmission: a critical appraisal of scientific evidence.

Source

Veterinary Research Communications; 2020. 44(3/4):119-130. many ref.

Publisher

Springer

Location of Publisher

Dordrecht

Country of Publication

Netherlands

Abstract

Coronaviruses are a large family of viruses that are known to infect both humans and animals. However, the evidence of intertransmission of coronavirus between humans and companion animals is still a debatable issue. There is substantial evidence that the virus outbreak is fueled by zoonotic transmission because this new virus belongs to the same family of viruses as SARS-CoV associated with civet cats, and MERS-CoV associated with dromedary camels. While the whole world is investigating the possibility about the transmission of this virus, the transmission among humans is established, but the interface between humans and animals is not much evident. Not only are the lives of human beings at risk, but there is an equal potential threat to the animal world. With multiple reports claiming about much possibility of transmission of COVID-19 from humans to animals, there has been a significant increase in the number of pets being abandoned by their owners. Additionally, the risk of reverse transmission of COVID-19 virus from companion pets like cats and dogs at home is yet another area of concern. The present article highlights different evidence of human-animal interface and necessitates the precautionary measures required to combat with the consequences of this interface. The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) have suggested various ways to promote awareness and corroborate practices for helping people as well as animals to stay secure and healthy.

Publication Type

Journal article.

<360>

Accession Number

20210008644

Author

Orpin, P.; Judson, A.; Davis, R.

Title

Practical tips for managing change during the COVID-19 pandemic.

Source

In Practice; 2020. 42(5):297-302. 3 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

The global Covid-19 pandemic has resulted in monumental changes to our daily lives in an effort to reduce the spread of the disease; in the UK, the veterinary industry has been very actively involved in these events. This article focuses on some key areas of change that veterinary practices have had to accommodate, with tips on how to implement them effectively.

Publication Type

Journal article.

<361>

Accession Number

20210007454

Author

Marsh, O. J. R.; Freeman, J.; Dijk, J. van; Risio, L. de

## Title

Congenital sensorineural deafness in English setters in the United Kingdom: prevalence and association with phenotype and sex.

## Source

Veterinary Record; 2020. 186(17):e13-e13.

## Publisher

BMJ Publishing Group

## Location of Publisher

London

## Country of Publication

UK

## Abstract

**Background:** The English setter (ES) is predisposed to congenital sensorineural deafness (CSD). CSD prevalence and association with phenotype in the UK ES population are previously unreported. **Methods:** The database of the authors' institution was searched for ES puppies undergoing brainstem auditory evoked response (BAER) testing for CSD screening (2000-2018). Inclusion criteria were BAER performed at 5-10 weeks of age, testing of complete litters and available phenotypic data. The age, sex, presence of patches at birth, coat colour, iris colour, hearing status and BAER-determined parental hearing status of each puppy were recorded. Multivariable binary logistic regression was performed to determine the significance of these variables as predictors for the likelihood of puppies being unilaterally or bilaterally deaf. **Results:** Inclusion criteria were met for 447 puppies. Hearing was bilaterally normal in 427 (95.5 per cent) puppies. The prevalence of unilateral and bilateral CSD was 3.6 per cent and 0.9 per cent, respectively. Females were 3.3 times more likely to be deaf than males, and puppies with both parents of unknown hearing status were 4.6 times more likely to be deaf than those with at least one normal parent. **Conclusion:** The prevalence of CSD was 4.5 per cent, with female puppies and those with two parents of unknown hearing status at greatest risk. This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

## Publication Type

Journal article.

<362>

## Accession Number

20210001232

## Author

Bowen, J.; Garcia, E.; Darder, P.; Arguelles, J.; Fatjo, J.

Title

The effects of the Spanish COVID-19 lockdown on people, their pets, and the human-animal bond.

Source

Journal of Veterinary Behavior: Clinical Applications and Research; 2020. 40:75-91.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

The purpose of this study was to investigate the effects of the Spanish confinement for the control of the COVID-19 pandemic on the behavior of pet cats and dogs, and the support that pets provided to their owners. We found that the quality of life of owners was strongly influenced by the lifestyle and emotional effects of the confinement, and that pets provided them with substantial support to mitigate those effects. However, pets showed signs of behavioral change that were consistent with stress, with dogs that had pre-existing behavioral problems being the most affected.

Publication Type

Journal article.

<363>

Accession Number

20203601750

Author

D'Cruze, N.; Green, J.; Elwin, A.; Schmidt-Burbach, J.

Title

Trading tactics: time to rethink the global trade in wildlife.

Source

Animals; 2020. 10(12). 91 ref.

Publisher

MDPI AG

Location of Publisher

Basel



Country of Publication

Switzerland

Abstract

The Covid-19 outbreak has brought about fresh and intensified scrutiny of the wildlife trade, which substantively involves commerce in exotic pets. In response, major policy decisions involving trade bans have ensued, with calls for similar such action to be applied across the trade chain. Yet, these measures have been criticised, largely based on concerns that they risk exacerbating poverty, undermining human rights, damaging conservation incentives, and otherwise harming sustainable development and conservation efforts. Instead, many critics propose improved regulation of the status quo, with the intention of nurturing a legal, sustainable, safe, humane, and equitable wildlife trade. Herein, we provide a countering view that outlines how the risks presented by the wildlife trade are becoming increasingly recognised as being both manifold and severe; and raise concerns that the goal of a well-regulated wildlife trade is becoming increasingly exposed as a mirage. We conclude that while pursuing the United Nation's Sustainable Development Goals (with their focus on poverty alleviation, food security, public health, and conservation) is enduringly vital, a flourishing wildlife trade is not. Given that the exploitation of wildlife, including for the pet trade, has been identified as one of the dominant drivers of biodiversity loss, emergence of zoonotic infectious disease, animal suffering, and financial instability, perpetuating the concept of utilising a regulated wildlife trade as the default approach to protect people and planet is in urgent need of re-evaluation.

Publication Type

Journal article.

<364>

Accession Number

20203599940

Author

Lopes, L. R.; Cardillo, G. de M.; Paiva, P. B.

Title

Molecular evolution and phylogenetic analysis of SARS-CoV-2 and hosts ace2 protein suggest Malayan pangolin as intermediary host.

Source

Brazilian Journal of Microbiology; 2020. 51(4):1593-1599. 36 ref.

Publisher

Springer International Publishing AG

Location of Publisher

Cham

Country of Publication

Switzerland

## Abstract

An emergence of a novel coronavirus, causative agent of COVID19, named as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), occurred due to cross-species transmission. Coronaviruses are a large family of viruses able to infect a great number of hosts. Entrance of SARS-CoV-2 depends on the surface (S) protein interaction with host ACE2 protein and cleavage by TMPRSS2. ACE2 could be a species-specific barrier that interferes with bat-to-human coronavirus cross-species transmission. Molecular analysis supported bats as natural hosts for SARS-CoV and involved them in MERS-CoV origin. The genomic similarity between bat RaTG13 CoV strain and SARS-CoV-2 implicates bats in the origin of the new outbreak. Additionally, there is a hypothesis for the zoonotic transmission based on contact with Malayan pangolins by humans in Huanan seafood market in Wuhan, China. To investigate bats and pangolin as hosts in SARS-CoV-2 cross-species transmission, we perform an evolutionary analysis combining viral and host phylogenies and divergence of ACE2 and TMPRSS2 amino acid sequences between CoV hosts. Phylogeny showed SARS-like-CoV-2 strains that infected pangolin and bats are close to SARS-CoV-2. In contrast to TMPRSS2, pangolin ACE2 amino acid sequence has low evolutionary divergence compared with humans and is more divergent from bats. Comparing SARS-CoV with SARS-CoV-2 origins, pangolin has yet lower ACE2 evolutionary divergence with humans than civet-the main intermediary host of SARS-CoV. Thus, pangolin has become an opportune host to intermediates bat-to-human SARS-CoV-2 jump and entry.

## Publication Type

Journal article.

<365>

## Accession Number

20203595795

## Author

Lohse, A.; Bossert, M.; Bozgan, A. M.; Charpentier, A.; Guillochon, C.; Bourgoin, C.; Balblanc, J. C.; Conrozier, T.

## Title

Frequency and severity of COVID-19 in patients treated with biological disease-modifying anti-rheumatic drugs for inflammatory rheumatic disease: a cross-sectional study.

## Source

Clinical and Experimental Rheumatology; 2020. 38(6):1273-1273. 5 ref.

## Publisher

Clinical and Experimental Rheumatology

## Location of Publisher

Pisa

## Country of Publication

Italy

Publication Type

Correspondence.

<366>

Accession Number

20203595583

Author

Yang WenYi; Wang XueLi; Zhang KeKe; Ke ZiKan

Title

COVID-19, urbanization pattern and economic recovery: an analysis of Hubei, China.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In the context of the rapid development of urbanization and increasing population mobility in China, the outbreak of COVID-19 has had a significant impact on China's economy and society. This article uses China UnionPay transaction data and takes Hubei, the worst-hit region by COVID-19 in China, as an example, to conduct empirical analysis using the generalized method of moments (GMM) of the impact of current urbanization patterns on the spread of the epidemic and economic recovery from the perspectives of time, industry, and regional differences. The study found that during the different stages of COVID-19, including discovery, outbreak, and subsidence, the overall impact of urbanization on the economy in Hubei Province was first positive, then became negative, and finally gradually increased. This process had significant industrial and urban heterogeneity, which was mainly manifested in losses in tourism and catering industries that were significantly greater than those in the audio-visual entertainment and digital office industries. Similarly, the recovery speed of large cities was lower than that of small and medium-sized cities. The main reason for these differences is that the one-sided problem of urbanization is more obvious in areas with higher urbanization rates. COVID-19 has drawn attention to the development of urbanization in the future, that is, the development path of one-sided economic resource agglomeration and scale expansion should be abandoned, with greater attention paid to the improvement of service functions and the development of amenities. This transformation is necessary to enhance urban economic resilience and reduce public health risks.

Publication Type

Journal article.

<367>

Accession Number

20203595142

Author

Suarez, D. L.; Pantin-Jackwood, M. J.; Swayne, D. E.; Lee, S. A.; Deblois, S. M.; Spackman, E.

Title

Lack of susceptibility to SARS-CoV-2 and MERS-CoV in poultry.

Source

Emerging Infectious Diseases; 2020. 26(12):3074-3076. 10 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

We challenged chickens, turkeys, ducks, quail, and geese with severe acute respiratory syndrome coronavirus 2 or Middle East respiratory syndrome coronavirus. We observed no disease and detected no virus replication and no serum antibodies. We concluded that poultry are unlikely to serve a role in maintenance of either virus.

Publication Type

Journal article.

<368>

Accession Number

20203595141

Author

Barrs, V. R.; Peiris, M.; Tam, K. W. S.; Law, P. Y. T.; Brackman, C. J.; To, E. M. W.; Yu, V. Y. T.; Chu, D. K. W.; Perera, R. A. P. M.; Sit, T. H. C.

Title

SARS-CoV-2 in quarantined domestic cats from COVID-19 households or close contacts, Hong Kong, China.

Source

Emerging Infectious Diseases; 2020. 26(12):3071-3074. 8 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

We tested 50 cats from coronavirus disease households or close contacts in Hong Kong, China, for severe acute respiratory syndrome coronavirus 2 RNA in respiratory and fecal samples. We found 6 cases of apparent human-to-feline transmission involving healthy cats. Virus genomes sequenced from 1 cat and its owner were identical.

Publication Type

Journal article.

<369>

Accession Number

20203595119

Author

Ulrich, L.; Wernike, K.; Hoffmann, D.; Mettenleiter, T. C.; Beer, M.

Title

Experimental infection of cattle with SARS-CoV-2.

Source

Emerging Infectious Diseases; 2020. 26(12):2979-2981. 12 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

We inoculated 6 cattle with severe acute respiratory syndrome coronavirus 2 and kept them together with 3 uninoculated cattle. We observed viral replication and specific seroreactivity in 2 inoculated animals, despite high levels of preexisting antibody titers against a bovine betacoronavirus. The in-contact animals did not become infected.

Publication Type

Journal article.

<370>

Accession Number

20203594586

Author

Zheng HuiWen; Li Heng; Guo Lei; Liang Yan; Li Jing; Wang Xi; Hu YunGuang; Wang LiChun; Liao Yun; Yang FengMei; Li YanYan; Fan ShengTao; Li DanDan; Cui PingFang; Wang QingLing; Shi HaiJing; Chen YanLi; Yang ZeNing; Yang JinLing; Shen Dong; Cun Wei; Zhou XiaoFang; Dong XingQi; Wang YunChuan; Chen Yong; Dai Qing; Jin WeiHua; He ZhanLong; Li QiHan; Liu LongDing

Title

Virulence and pathogenesis of SARS-CoV-2 infection in rhesus macaques: a nonhuman primate model of COVID-19 progression.

Source

PLoS Pathogens; 2020. 16(11). 39 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

The COVID-19 has emerged as an epidemic, causing severe pneumonia with a high infection rate globally. To better understand the pathogenesis caused by SARS-CoV-2, we developed a rhesus macaque model to mimic natural infection via the nasal route, resulting in the SARS-CoV-2 virus shedding in the nose and stool up to 27 days. Importantly, we observed the pathological progression of marked interstitial pneumonia in the infected animals on 5-7 dpi, with virus dissemination widely occurring in the lower respiratory tract and lymph nodes, and viral RNA was consistently detected from 5 to 21 dpi. During the infection period, the kinetics response of T cells was revealed to contribute to COVID-19 progression. Our findings implied that the antiviral response of T cells was suppressed after 3 days post infection, which might be related to increases in the Treg cell population in PBMCs. Moreover, two waves of the enhanced production of cytokines (TGF- $\alpha$ , IL-4, IL-6, GM-CSF, IL-10, IL-15, IL-1 $\beta$ ), chemokines (MCP-1/CCL2, IL-8/CXCL8, and MIP-1 $\beta$ /CCL4) were detected in lung tissue. Our data collected from this model suggested that T cell response and cytokine/chemokine changes in lung should be considered as evaluation parameters for COVID-19 treatment and vaccine development, besides of observation of virus shedding and pathological analysis.

#### Publication Type

Journal article.

<371>

#### Accession Number

20203588269

#### Author

Huang XiaoQiang; Zhang ChengXin; Pearce, R.; Omenn, G. S.; Zhang Yang

#### Title

Identifying the zoonotic origin of SARS-CoV-2 by modeling the binding affinity between the spike receptor-binding domain and host ACE2.

#### Source

Journal of Proteome Research; 2020. 19(12):4844-4856.

#### Publisher

American Chemical Society

#### Location of Publisher

Washington

#### Country of Publication

USA

#### Abstract

Despite considerable research progress on SARS-CoV-2, the direct zoonotic origin (intermediate host) of the virus remains ambiguous. The most definitive approach to identify the intermediate host would be the detection of SARS-CoV-2-like coronaviruses in wild animals. However, due to the high number of animal

species, it is not feasible to screen all the species in the laboratory. Given that binding to ACE2 proteins is the first step for the coronaviruses to invade host cells, we propose a computational pipeline to identify potential intermediate hosts of SARS-CoV-2 by modeling the binding affinity between the Spike receptor-binding domain (RBD) and host ACE2. Using this pipeline, we systematically examined 285 ACE2 variants from mammals, birds, fish, reptiles, and amphibians, and found that the binding energies calculated for the modeled Spike-RBD/ACE2 complex structures correlated closely with the effectiveness of animal infection as determined by multiple experimental data sets. Built on the optimized binding affinity cutoff, we suggest a set of 96 mammals, including 48 experimentally investigated ones, which are permissive to SARS-CoV-2, with candidates from primates, rodents, and carnivores at the highest risk of infection. Overall, this work not only suggests a limited range of potential intermediate SARS-CoV-2 hosts for further experimental investigation, but also, more importantly, it proposes a new structure-based approach to general zoonotic origin and susceptibility analyses that are critical for human infectious disease control and wildlife protection.

#### Publication Type

Journal article.

<372>

#### Accession Number

20203585544

#### Author

Kang Yu; Wang Hui; Chen Hong; Wang Bo; Yang YingYing; Zhao Xuan; Ran QiHui; Wei JiaFu

#### Title

Suspected hydroxychloroquine-induced sinus bradycardia and QTc prolongation in a patient with COVID-19.

#### Source

International Heart Journal; 2020. 61(5):1056-1058. 8 ref.

#### Publisher

International Heart Journal Association

#### Location of Publisher

Tokyo

#### Country of Publication

Japan

#### Abstract

An 84-year-old woman with hypertension, Alzheimer's disease, and chronic kidney disease presented with fever and was diagnosed with corona virus disease 2019 (COVID-19). During the hospitalization, she experienced unexpected sinus bradycardia with prolonged QTc, which was thought to be closely related to the short-term use of hydroxychloroquine (HCQ), an old drug used to treat malaria and autoimmune



diseases, but now used against COVID-19. The cardiac side effects of HCQ were rare, seen with short-term and low-dose use. With the COVID-19 pandemic, this case alerts clinicians to be aware of the arrhythmogenic effects of HCQ when it is used as an antiviral drug, especially in patients with preexisting cardiovascular diseases.

#### Publication Type

Journal article.

<373>

#### Accession Number

20203583055

#### Author

Bao Linh Tran; Chen ChiChung; Tseng WeiChun; Liao ShuYi

#### Title

Tourism under the early phase of COVID-19 in four APEC economies: an estimation with special focus on SARS experiences.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(20). 52 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

This study examines how experience of severe acute respiratory syndrome (SARS) influences the impact of coronavirus disease (COVID-19) on international tourism demand for four Asia-Pacific Economic Cooperation (APEC) economies, Taiwan, Hong Kong, Thailand, and New Zealand, over the 1 January-30 April 2020 period. To proceed, panel regression models are first applied with a time-lag effect to estimate the general effects of COVID-19 on daily tourist arrivals. In turn, the data set is decomposed into two nation groups and fixed effects models are employed for addressing the comparison of the pandemic-tourism relationship between economies with and without experiences of the SARS epidemic. Specifically, Taiwan and Hong Kong are grouped as economies with SARS experiences, while Thailand and New Zealand are grouped as countries without experiences of SARS. The estimation result indicates that the number of confirmed COVID-19 cases has a significant negative impact on tourism demand, in which a 1% COVID-19 case increase causes a 0.075% decline in tourist arrivals, which is a decline of approximately 110 arrivals for every additional person infected by the coronavirus. The negative impact of COVID-19 on tourist arrivals for Thailand and New Zealand is found much stronger than for Taiwan and Hong Kong. In particular, the

number of tourist arrivals to Taiwan and Hong Kong decreased by 0.034% in response to a 1% increase in COVID-19 confirmed cases, while in Thailand and New Zealand, a 1% national confirmed cases increase caused a 0.103% reduction in tourism demand. Moreover, the effect of the number of domestic cases on international tourism is found lower than the effect caused by global COVID-19 mortality for the economies with SARS experiences. In contrast, tourist arrivals are majorly affected by the number of confirmed COVID-19 cases in Thailand and New Zealand. Finally, travel restriction in all cases is found to be the most influencing factor for the number of tourist arrivals. Besides contributing to the existing literature focusing on the knowledge regarding the nexus between tourism and COVID-19, the paper's findings also highlight the importance of risk perception and the need of transmission prevention and control of the epidemic for the tourism sector.

#### Publication Type

Journal article.

<374>

#### Accession Number

20203568699

#### Author

Abdelrheem, D. A.; Ahmed, S. A.; Abd El-Mageed, H. R.; Mohamed, H. S.; Rahman, A. A.; Elsayed, K. N. M.; Ahmed, S. A.

#### Title

The inhibitory effect of some natural bioactive compounds against SARS-CoV-2 main protease: insights from molecular docking analysis and molecular dynamic simulation.

#### Source

Journal of Environmental Science and Health. Part A, Toxic/Hazardous Substances & Environmental Engineering; 2020. 55(11):1373-1386. 60 ref.

#### Publisher

Taylor & Francis

#### Location of Publisher

Philadelphia

#### Country of Publication

USA

#### Abstract

This work aimed at evaluating the inhibitory effect of ten natural bioactive compounds (1-10) as potential inhibitors of SARS-CoV-2-3CL main protease (PDB ID: 6LU7) and SARS-CoV main proteases (PDB IDs: 2GTB and 3TNT) by molecular docking analysis. The inhibitory effect of all studied compounds was studied with compared to some proposed antiviral drugs which currently used in COVID-19 treatment such as chloroquine, hydroxychloroquine, azithromycin, remdesivir, baloxvir, lopinavir, and favipiravir. Homology

modeling and sequence alignment was computed to evaluate the similarity between the SARS-CoV-2-3CL main protease and other SARS-CoV receptors. ADMET properties of all studied compounds were computed and reported. Also, molecular dynamic (MD) simulation was performed on the compound which has the highest binding affinity inside 6LU7 obtained from molecular docking analysis to study its stability inside receptor in explicit water solvent. Based on molecular docking analysis, we found that caulerpin has the highest binding affinity inside all studied receptors compared to other bioactive compounds and studied drugs. Our homology modeling and sequence alignment showed that SARS-CoV main protease (PDB ID: 3TNT) shares high similarity with 3CLpro (96.00%). Also, ADMET properties confirmed that caulerpin obeys Lipinski's rule and passes ADMET property, which make it a promising compound to act as a new safe natural drug against SARS-CoV-2-3CL main protease. Finally, MD simulation confirmed that the complex formed between caulerpin and 3CLpro is stable in water explicit and had no major effect on the flexibility of the protein throughout the simulations and provided a suitable basis for our study. Also, binding free energy between caulerpin and 6LU7 confirmed the efficacy of the caulerpin molecule against SARS-CoV-2 main protease. So, this study suggested that caulerpin could be used as a potential candidate in COVID-19 treatment.

#### Publication Type

Journal article.

<375>

#### Accession Number

20203560910

#### Author

Panakorn, S.

#### Title

An initial assessment on farmed shrimp supply 2020: up to mid-August, the supply situation indicates a downward trend, as producers are pinned by lower prices amidst the second wave of the Covid-19 pandemic.

#### Source

Aqua Culture Asia Pacific; 2020. 16(5):35-38.

#### Publisher

Aqua Research Pte Ltd

#### Location of Publisher

Singapore

#### Country of Publication

Singapore

#### Publication Type

Journal article.

<376>

Accession Number

20203560476

Author

Mani Divya; Sekar Vijayakumar; Chen JingDi; Baskaralingam Vaseeharan; Duran-Lara, E. F.

Title

South Indian medicinal plants can combat deadly viruses along with COVID-19? - a review.

Source

Microbial Pathogenesis; 2020. 148.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

SARS-CoV-2 is a causative agent of Coronavirus disease-19 (COVID-19), which is considered as a fatal disease for public health apprehension worldwide. This pathogenic virus can present everywhere. As it is a virus it can extend easily and cause severe illness to humans. Hence, an efficient international attentiveness of plan is necessary to cure and prevent. In this review, epidemic outbreak, clinical findings, prevention recommendations of COVID-19 and suggestive medicinal value of south Indian plant sources have been discussed. Though the varieties of improved approaches have been taken in scientific and medicinal concern, we have to pay attention to the medicinal value of the plant-based sources to prevent these types of pandemic diseases. This is one of the suggestive and effective ways to control the spreading of viruses. In the future, it is required to provide medicinal plant-based clinical products (Masks, sanitizers, soap, etc.,) with better techniques by clinicians to contend the scarcity and expose towards the nature-based medicine rather than chemical drugs. This may be a benchmark for the economical clinical trials of specific plant material to treat the viral diseases in the future.

Publication Type

Journal article.

<377>

Accession Number

20203555349

Author

Utomo, R. Y.; Ikawati, M.; Putri, D. D. P.; Salsabila, I. A.; Meiyanto, E.

Title

The chemopreventive potential of diosmin and hesperidin for COVID-19 and its comorbid diseases.

Source

Indonesian Journal of Cancer Chemoprevention; 2020. 11(3):154-167. 103 ref.

Publisher

Indonesian Society for Cancer Chemoprevention

Location of Publisher

Yogyakarta

Country of Publication

Indonesia

Abstract

Supplementation with bioactive compounds capable of regulating energy homeostasis is a promising strategy to manage obesity. Here, we have screened the ability of different phenolic compounds (myricetin, kaempferol, naringin, hesperidin, apigenin, luteolin, resveratrol, curcumin, and epicatechin) and phenolic acids (p-coumaric, ellagic, ferulic, gallic, and vanillic acids) regulating *C. elegans* fat accumulation. Resveratrol exhibited the strongest lipid-reducing activity, which was accompanied by the improvement of lifespan, oxidative stress, and aging, without affecting worm development. Whole-genome expression microarrays demonstrated that resveratrol affected fat mobilization, fatty acid metabolism, and unfolded protein response of the endoplasmic reticulum (UPRER), mimicking the response to calorie restriction. Apigenin induced the oxidative stress response and lipid mobilization, while vanillic acid affected the unfolded-protein response in ER. In summary, our data demonstrates that phenolic compounds exert a lipid-reducing activity in *C. elegans* through different biological processes and signaling pathways, including those related with lipid mobilization and fatty acid metabolism, oxidative stress, aging, and UPR-ER response. These findings open the door to the possibility of combining them in order to achieve complementary activity against obesity-related disorders.

Publication Type

Journal article.

<378>

Accession Number

20203551294

Author

Zahedipour, F.; Hosseini, S. A.; Sathyapalan, T.; Majeed, M.; Jamialahmadi, T.; Al-Rasadi, K.; Banach, M.; Sahebkar, A.

Title

Potential effects of curcumin in the treatment of COVID-19 infection.

Source

Phytotherapy Research; 2020. 34(11):2911-2920. many ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

Coronavirus disease 2019 (COVID-19) outbreak is an ongoing pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with considerable mortality worldwide. The main clinical manifestation of COVID-19 is the presence of respiratory symptoms, but some patients develop severe cardiovascular and renal complications. There is an urgency to understand the mechanism by which this virus causes complications so as to develop treatment options. Curcumin, a natural polyphenolic compound, could be a potential treatment option for patients with coronavirus disease. In this study, we review some of the potential effects of curcumin such as inhibiting the entry of virus to the cell, inhibiting encapsulation of the virus and viral protease, as well as modulating various cellular signaling pathways. This review provides a basis for further research and development of clinical applications of curcumin for the treatment of newly emerged SARS-CoV-2.

Publication Type

Journal article.

<379>

Accession Number

20203533347

Author

Khamisse, E.; Dunoyer, C.; Gouilh, M. A.; Brown, P.; Meurens, F.; Meyer, G.; Monchatre-Leroy, E.; Pavio, N.; Simon, G.; Poder, S. le

Title

Opinion paper: Severe Acute Respiratory Syndrome Coronavirus 2 and domestic animals: what relation?

Source

Animal; 2020. 14(11):2221-2224. 13 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

This article describes the epidemiology, prevalence, transmission, pathogenesis and phylogenetics of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) in domestic animals and its zoonotic implications.

Publication Type

Journal article.

<380>

Accession Number

20203517131

Author

Elsahoryi, N.; Al-Sayyed, H.; Odeh, M.; McGrattan, A.; Hammad, F.

Title

Effect of COVID-19 on food security: a cross-sectional survey.

Source

Clinical Nutrition ESPEN; 2020. 40:171-178. 53 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

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Background: Novel coronavirus (COVID-19) and subsequent quarantine could raise the risk of food inadequacy and nutrition deficiency crises. Objectives: This study aimed to assess the impacts of COVID-19 on household food security in Jordan, determined the percentage of food security and the levels of food insecurity during the quarantine, determined the associated factor with food insecurity, and determined main food groups associated with FINS during the quarantine. Design: A cross-sectional study was conducted using a Web-based validated questionnaire. The Food Insecurity Experience Scale was used to measure the food insecurity during the first four weeks of the quarantine, and a modified food consumption score was used to determine the number of times the household consumes each food group. Univariate and multiple logistic regression models were used to describe, explore, and predict risk factors correlated with food insecurity among Jordanians, during the first four weeks of the quarantine. Results: A total of 3129 Jordanians had responded to the assessment and fully answered the questionnaire. 23.1% of the total participants were severe food insecure, while 36.1% were moderate food insecure, 40.7% were food secure. The regression model demonstrated the monthly income per capita below the poverty line and a number of the family member (1-4 and 5-7) associated significantly with moderate food insecurity (OR: 5.33; 95% CI: 4.44-6.40, OR: 0.64; 95% CI: 0.47-0.86, OR: 0.76; 95% CI: 0.58-0.98, respectively). As well as with the severe food insecurity (OR: 6.87; 95% CI: 5.542-8.512, OR: 0.52; 95% CI: 0.37-0.74, 0.64; 95% CI: 0.48-0.87, respectively. Age 18-30 years old (OR: 1.80; 95% CI: 1.23-2.65) and living in a rented house (OR: 1.30; 95% CI: 1.01-1.69) were associated significantly with severe food insecurity. Carbohydrates and the meat group were significantly related to food insecurity (p-value was <0.001 for both groups). Conclusion: Covid-19 and its subsequent quarantine have a tangible impact on food security levels for the populations. Awareness and strategies to support individuals at higher risks should be guided not only by the income but also by other risk factors identified in the present study as the number of persons in the family, younger adults (18-30 years old), and those who do not own their houses).

#### Publication Type

Journal article.

<381>

#### Accession Number

20203491829

#### Author

Halfmann, P. J.; Hatta, M.; Chiba, S.; Maemura, T.; Fan ShuFang; Takeda, M.; Kinoshita, N.; Hattori, S. I.; Sakai-Tagawa, Y.; Iwatsuki-Horimoto, K.; Imai, M.; Kawaoka, Y.

#### Title

Transmission of SARS-CoV-2 in domestic cats.

#### Source

New England Journal of Medicine; 2020. 383(6):592-594. 5 ref.

#### Publisher

Massachusetts Medical Society

#### Location of Publisher



Waltham

Country of Publication

USA

Abstract

To determine transmission of SARS-CoV-2 in cats, three domestic cats were inoculated with SARS-CoV-2 on day 0. One day after inoculation, a cat with no previous SARS-CoV-2 infection was cohoused with each of the inoculated cats to assess whether transmission of the virus by direct contact would occur between the cats in each of the three pairs. Nasal and rectal swab specimens were obtained daily and immediately assessed for infectious virus on VeroE6/TMPRSS2 cells. On day 1, we detected virus from two of the inoculated cats. By day 3, virus was detectable in all three inoculated cats, with continued detection of virus until day 5 in all cats and until day 6 in two of the three cats. The cats with no previous infection were cohoused with the inoculated cats on day 1. Two days later (day 3), one of the cats with no previous infection had infectious virus detected in a nasal swab specimen, and 5 days later, virus was detected in all three cats that were cohoused with the inoculated cats. Virus titers in the cats that were cohoused with the inoculated cats peaked at 4.5 log<sub>10</sub> plaque-forming units per milliliter, and virus shedding lasted 4 to 5 days. No virus was detected in any of the rectal swabs tested. Although there have been reports of symptomatic infected cats, none of the cats in the study showed any symptoms, including abnormal body temperature, substantial weight loss, or conjunctivitis. All the animals had IgG antibody titers between 1:5120 and 1:20,480 on day 24 after the initial inoculation. With reports of transmission of SARS-CoV-2 from humans to domestic cats and to tigers and lions at the Bronx Zoo, coupled with our data showing the ease of transmission between domestic cats, there is a public health need to recognize and further investigate the potential chain of human-cat-human transmission. This is of particular importance given the potential for SARS-CoV-2 transmission between family members in households with cats while living under "shelter-in-place" orders. In 2016, an H7N2 influenza outbreak in New York City cat shelters highlighted the public health implications of cat-to-human transmission to workers in animal shelters. Moreover, cats may be a silent intermediate host of SARS-CoV-2, because infected cats may not show any appreciable symptoms that might be recognized by their owners. The Centers for Disease Control and Prevention has issued guidelines for pet owners regarding SARS-CoV-2. Given the need to stop the coronavirus disease 2019 pandemic through various mechanisms, including breaking transmission chains, a better understanding of the role cats may play in the transmission of SARS-CoV-2 to humans is needed.

Publication Type

Journal article.

<382>

Accession Number

20203484160

Author

Danthua, P.; Simanjuntak, R.; Fawbush, F.; Tsy, J. M. L. P.; Razafimamonjison, G.; Abdillahi, M. M.; Jahiel, M.; Penot, E.

Title

The clove tree and its products (clove bud, clove oil, eugenol): prosperous today but what of tomorrow's restrictions?

Source

Fruits, The International Journal of Tropical and Subtropical Horticulture; 2020. 75(5):224-242. many ref.

Publisher

International Society for Horticultural Science (ISHS)

Location of Publisher

Leuven

Country of Publication

Belgium

Abstract

Context of the study - The clove tree, farmed primarily in Indonesia, Madagascar, the Comoros, Tanzania and Sri Lanka, produces two major commodities: the clove and the eugenol-rich essential oil. At the present time, the clove caters to the spice market, which is concentrated in India, as well as the market for the traditional Indonesian cigarette, the kretek, which accounts for 70% of world output. The essential oil extract is exploited for its various properties: plasticising, anaesthetic, antimicrobial and organoleptic, which are deployed in the cosmetics, dentistry and agro-food sectors. Several innovative, often cutting edge, applications are currently being researched, taking advantage of its profile as an organic product derived from green chemistry, implicated in the agroecology approach. The main areas concerned are medicine, agri-food and agronomy. Aim of the study - We are considering a series of plausible hypotheses of evolutions in demand on the international market, to assess how the development of current and potential applications might steer the market in the coming years and decades. We are exploring their impact on the offer of producing countries, and therefore, on the incomes of local farmers and distillers. Methodology - Our approach is based on an extensive bibliography. Remarkable results - The clove sector is under threat from various sources: American cigarette manufacturers' offensive to conquer the vast Indonesian market, disregard for quality, inter-annual variation of production, competition between clove producing countries, as well as substitute products, impact of oil extraction methods on firewood consumption. A few forward-looking elements are given, particularly concerning the impact of climate change and the COVID-19 pandemic. Conclusion - These threats need to be anticipated and taken into consideration by all actors of the sectors for the clove and its products to continue providing a reliable source of income to thousands of small farmers in the producing countries.

Publication Type

Journal article.

<383>

Accession Number

20203460885

Author

Oliva Alfonso, I.; Monleon Getino, A.; Rada Fernandez, de J. D.; Oteiza Larrechea, L.; Rodriguez Gomez, S.; Garramendiola Garay, J. K.; Villa Basterretxea, M.; Madrigal Hormaechea, M.; Jaio Senra, I.; Otero Sanz, L. del; Martin Villodre, J.

Title

A pilot study of efficacy and safety of *Plantago lanceolata* and *Primula veris*, in the treatment of the common cold.

Source

Archives of Pharmacy Practice; 2020. 11(3):1-7. 19 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The ongoing coronavirus disease (COVID-19) pandemic has raised the need for new therapies to treat respiratory infections. A bibliographic review based mainly on the databases of the European medication agency (E.M.A) and the Department of Environment and Territorial Policy of the Basque Government (Spain) was carried out. From both databases, it was observed that 14 plant species of the 408 reviewed plants (3%) are approved for medicinal use at European level and that their use, coincides with the most common reasons for consultation in Primary Care. One of these pathologies (common cold) and 2 medicinal plants (*Plantago lanceolata* and *Primula veris*) have been selected for the present study. We will determine the efficacy and safety of the two plant species using one randomized multicenter open clinical trial. In the clinical trials, three treatment groups will run in parallel; two treatment groups with medicinal plants and another group with conventional treatment. The of the clinical trial will be: To objectify the therapeutic effects of the medicinal plants using parameters of usual clinical practice in primary care, to evaluate the side effects and the safety of the use of medicinal plants and to rationalize the mechanism of action of the possible benefits.

Publication Type

Journal article.

<384>

Accession Number

20219905141

Author

Gregorio, G. B.; Ancog, R. C.

Title

Food security amid the COVID-19 pandemic: research and development priorities for higher education institutions in the Philippines and Southeast Asia.

Source

CMU Journal of Science; 2019. 23(2):5-7. 2 ref.

Publisher

Central Mindanao University

Location of Publisher

Bukidnon

Country of Publication

Philippines

Publication Type

Journal article.

<385>

Accession Number

20210013285

Author

Basera, E. N.; Temizb, S. A.; Atasevena, A.

Title

Dress syndrome case in COVID-19 patient: drug-induced or disease-related? [Turkish]

Source

Turkiye Klinikleri tip Bilimleri Dergisi; 2020. 40(4):475-479.

Publisher

Ortadogu Reklam Tanitum Yayıncılık Turizm

Location of Publisher

Balgat

Country of Publication

Turkey

Abstract

Drug rash with eosinophilia and systemic symptoms (DRESS) syndrome is one of the rare drug reactions with a mortality rate of approximately 10%. Clinically the DRESS syndrome is characterized by diffuse

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maculopapular exanthema, various hematological abnormalities, liver and kidney dysfunction, fever, and lymphadenopathy. There are many drugs in the etiology of DRESS syndrome, and Phenytoin, Carbamazepine, phenobarbital, Allopurinol, Abacavir and Sulfonamides are among the most reported. Hydroxychloroquine is used in the treatment of COVID-19 disease due to its antiviral effects shown in vitro. Some of the dermatological side effects of Hydroxychloroquine reported in the literature are alopecia, hyperpigmentation and itching of the skin, as well as Steven-Johnson syndrome/toxic epidermal necrolysis, acute generalized exantematous pustulosis, DRESS syndrome, which are hypersensitivity reactions. Here, we wanted to present a patient who was diagnosed as DRESS syndrome due to his widespread skin rash and systemic signs that developed during the treatment of COVID-19 disease in order to draw attention to the drug reactions that may develop during the pandemic and skin involvement due to COVID-19. At the same time, we wanted to draw attention to the complexity of drug reaction or skin involvement in the course of COVID-19 disease.

#### Publication Type

Journal article.

<386>

#### Accession Number

20210013283

#### Author

Ersen, O.; Gojayevev, A.; Mercan, U.; Unal, A. E.

#### Title

Evaluation of cancer patients' awareness and fear of COVID-19 and access to health services during the pandemic process. [Turkish]

#### Source

Turkiye Klinikleri tip Bilimleri Dergisi; 2020. 40(4):399-405.

#### Publisher

Ortadogu Reklam Tanitum Yayıncılık Turizm

#### Location of Publisher

Balgat

#### Country of Publication

Turkey

#### Abstract

**Objective:** Our study aimed to examine the awareness of cancer patients about coronavirus disease-2019 (COVID-19), their compliance with the measures and their access to health services in line with the information received from the patients. **Material and Methods:** In the 4-month period between December 1, 2019 and March 31, 2020, patients who were operated for the first time due to cancer were found in Ankara University Surgical Oncology Clinic and communication was established by phone. In order to apply

a short questionnaire with 13 questions, a questionnaire link made using Google forms (Google Inc, California, USA) was sent to their phones, their relatives' phones or e-mail addresses. Results: The population consisted of 58.4% (n=83) female and 41.5% (59) male patients. The mean age was 55.97±18.8 years. The patients stated that 73% (n=104) completely complied with the mask distance and hygiene rules, 20% (n=29) of them stated that they followed the rules frequently. 40.1% of the patients stated that they did not apply to the hospital unless an emergency occurred during this period. While 40.8% of the patients answered that they feared COVID-19 and epidemic diseases, 59.2% of the patients chose the option of cancer. Conclusion: Although most of the cancer patients in our study partially applied the mask distance and hygiene rules even before the pandemic, it was observed that these measures were more important during the pandemic process. However, it is obvious that this sensitivity in cancer patients may cause delays in hospital admissions and especially in the diagnosis stage.

Publication Type

Journal article.

<387>

Accession Number

20210012944

Author

Alimoglu, O.; Erol, C. I.; Kayali, A.; Acar, M.; Colapkulu, N.; Leblebici, M.; Ekinci, O.

Title

Emergency surgery during COVID-19 pandemic; what has changed in practice?

Source

British Journal of Surgery; 2020. 107(12):e581-e582. 4 ref.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Publication Type

Correspondence.

<388>

Accession Number

20210012887

Author

Abdulai, A. F.; Tiffere, A. H.; Adam, F.; Kabanunye, M. M.

Title

COVID-19 information-related digital literacy among online health consumers in a low-income country.

Source

International Journal of Medical Informatics; 2021. 145. 39 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The internet has become an important source of health information among people across the globe. However, the novel coronavirus outbreak has led to a broader dissemination of fake and misleading health information. While health professionals may be able to critically evaluate internet-based information, the skills at finding, appraising, and using COVID-19-related online information may be problematic for laypeople in low-income countries. The purpose of this study was to examine the digital literacy of lay consumers of online COVID-19-related information in Ghana. Method: A cross-sectional survey was conducted among online health consumers across five regions in Ghana. Participants were conveniently recruited through social media, and the survey was based on the eHealth Literacy Scale (eHeals) and administered through Qualtricsxm software. We calculated the overall mean eHeals score to determine the literacy levels and performed descriptive statistics to describe the characteristics of the sample. Linear regression analysis was performed to determine the factors associated with respondents' digital literacy. Result: Out of 700 respondents sent with a survey link, 325 responded (46.4% response rate). The majority of the respondents were: younger than 31 years ( $M = 28.42$ ,  $SD = 6.98$ ), males (59.7%), use the internet daily (94.4%), engaged in social media activities (65%), and frequently search the internet for information related to COVID-19. The overall eHealth literacy was quite high ( $M = 4.01$ ,  $SD = 0.95$ ), but respondents' scores on items 1 and 6 were relatively low. Sex, age, frequently searching the internet for COVID-19 information, using the internet for educational purposes, and having a little/adequate knowledge of COVID-19 was predictive of digital literacy. Conclusion: The study revealed a high overall digital literacy as well as sex and age differences in literacy levels among online health consumers in Ghana. However, respondents' ability to locate COVID-19 related information and their skills in differentiating scientific from unscientific internet-based information remain relatively low. These findings offer useful insight that can inform the design of inclusive internet-based preventive resources that would be accessible and understandable to laypeople across all age groups and sexes in low-income countries.

Publication Type

Journal article.

<389>

Accession Number

20210012406

Author

Abdollahi, A.; Labbaf, A.; Mafinejad, M.; Sotoodeh-Anvari, M.; Azmoodeh-Ardalan, F.

Title

Online assessment for pathology residents during the COVID-19 pandemic: report of an experience.

Source

Iranian Journal of Pathology; 2021. 16(1):75-78. 21 ref.

Publisher

Iranian Society of Pathology

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

**Background & Objective:** The world is facing COVID-19 pandemic, and medical education system and consequently the evaluation of students at different levels have been overshadowed. Residency students are among those affected. In the present study, we aim to share our experiences regarding holding exams for pathology residents before and during the pandemic. **Methods:** This cross-sectional study was carried out in Tehran University of Medical Sciences. The online exam, which consisted of 30 multiple-choice questions, was designed and held in April 2020 to evaluate pathology residents. To assess the quality of the exam, indices such as the number of questions, highest and lowest scores, the average score, the standard deviation, the variance, Cronbach's alpha reliability coefficient, standard error of measurement, discrimination index, difficulty index, number/percentage of questions on three difficulty levels of easy, normal, hard were reviewed and analyzed. **Results and Discussion:** The average score of the participants in the January exam which was held in the university's exam center was 16.23 (+or-5.03), while the average score in the online exam which was held after the onset of the pandemic was 20.86 (+or-5.18). The average discrimination indices in the first and second exams were 0.36 and 0.38, respectively, and the average difficulty indices in the first and second exams were 0.54 and 0.70, respectively. We found the administration of this online examination would be a positive experience. By sharing it, we hope to pave the way for similar ventures in the other departments.

Publication Type

Journal article.



<390>

Accession Number

20210012340

Author

Uyuklu, M.; Ozudogru, O.

Title

Relationship between ABO blood group and COVID-19: the case of Siirt.

Source

Bezmialem Science; 2020. 8(Supplement 2):36-40. 17 ref.

Publisher

Galenos Publishing House

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Objective: Epidemiological and clinical studies have shown that age and chronic diseases are important risk factors in the mortality of patients infected by Coronavirus disease 2019 (COVID-19). However, there is no biomarker identified yet for susceptibility to the disease. Some studies have reported that ABO blood groups are associated with a predisposition to Covid-19. In this study, it was aimed to investigate the relationship between ABO blood groups and COVID-19 susceptibility in Siirt province scale. Methods: In this study, the blood groups of 174 patients, all of whom were in Siirt, were confirmed retrospectively at the Siirt State Hospital, all confirmed by revers-transcriptase chain reaction. For comparison, data from 36394 patients whose blood group was detected in the Siirt State Hospital were used. Results: In Siirt provincial normal population; while blood groups A, B, AB and O were 40%, 19.5%, 8.5% and 32% respectively, the blood groups of COVID-19 positive patients were 42.5%, 19.5%, 8%, and 30%. No statistically significant difference was found in blood group distribution rates between healthy and COVID-19 patient groups ( $> 0.05$ ). The distribution of blood group rates of patients hospitalized in the intensive care unit was not different from healthy individuals ( $> 0.05$ ). No significant difference could be calculated between the duration of hospitalization in the intensive care unit and blood groups. Conclusion: As a result, unlike studies showing that the risk of COVID-19 infection was higher in the A blood group and lower in the O blood group, no relationship was found between the blood group and the risk of COVID-19 infection and intensive care therapy. Combining the results of this study with data from other regions, it is thought that only if the relationship between blood group COVID-19 can be confirmed, it may be a guide for diagnosis, follow-up and treatment.

Publication Type

Journal article.

<391>

Accession Number

20210012209

Author

Savi, D.; Valente, G.; Iacovelli, A.; Olmati, F.; Bezzi, M.; Palange, P.

Title

Uncommon presentation of allergic bronchopulmonary aspergillosis during the COVID-19 lockdown: a case report.

Source

BMC Pulmonary Medicine; 2020. 20(325). 10 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: During the ongoing pandemic of coronavirus disease 2019 (COVID-19), lockdown periods have changed the way that people and communities live, work and interact. Case presentation: This case report describes an uncommon but important presentation of allergic bronchopulmonary aspergillosis (ABPA) in a previously healthy male, who decided to live in the basement of his house when Italy entered a nationwide lockdown during the COVID-19 pandemic. As high resolution computed tomography (HRCT) of the chest on admission showed diffuse miliary nodules, a miliary tuberculosis was initially suspected. However, further investigations provided a diagnosis of unusual presentation of ABPA. Conclusions: This case highlights the importance of maintaining awareness of Aspergillus-associated respiratory disorders during the COVID-19 pandemic, especially because lifestyle changes associated with home isolation carry an increased risk of exposure to mold spores present in some indoor environments.

Publication Type

Journal article.

<392>

Accession Number

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20210012202

Author

Gulik, T. M. van

Title

Isolation and distancing during the plague epidemics. [Dutch]

Source

Nederlands Tijdschrift voor Geneeskunde; 2020. 164(50).

Publisher

Bohn Stafleu Van Loghum

Location of Publisher

Houten

Country of Publication

Netherlands

Abstract

The plague epidemics wiped out large parts of the city population from the 15th to the 17th century in the Netherlands. The plague bacterium (*Yersinia pestis*) is transmitted to humans through infected rats and fleas and has been transferred from China to Europe via the trade routes over land and sea. Meetings were banned, plague victims were isolated at home or in pest houses, and ships quarantined. In the densely populated, poor neighborhoods of the cities, however, isolation and keeping distance were not feasible, which allowed the plague to rapidly spread. The lessons we have learned from the plague epidemics are timeless. Isolation, keeping your distance and quarantine were key principles and now apply again in the approach to the current Covid-19 pandemic. How effective these measures are depends on the social context in which they are applied.

Publication Type

Journal article.

<393>

Accession Number

20210011740

Author

Viteri, G.; Diaz Mera, Y. de; Rodriguez, A.; Rodriguez, D.; Tajuelo, M.; Escalona, A.; Aranda, A.

Title

Impact of SARS-CoV-2 lockdown and de-escalation on air-quality parameters.

Source

Chemosphere; 2021. 265. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The SARS-CoV-2 health crisis has temporarily forced the lockdown of entire countries. This work reports the short-term effects on air quality of such unprecedented paralysis of industry and transport in different continental cities in Spain, one of the countries most affected by the virus and with the hardest confinement measures. The study takes into account sites with different sizes and diverse emission sources, such as traffic, residential or industrial emissions. This work reports new field measurement data for the studied pandemic period and assesses the air quality parameters within the historic trend of each pollutant and site. Thus, 2013-2020 data series from ground-air quality monitoring networks have been analysed to find out statistically significant changes in atmospheric pollutants during March-June 2020 due to this sudden paralysis of activity. The results show substantial concentration drops of primary pollutants, including NO<sub>x</sub>, CO, BTX, NMHC and NH<sub>3</sub>. Particulate matter changes were smaller due to the existence of other natural sources. During the lockdown the ozone patterns were different for each studied location, depending on the VOCs-NO<sub>x</sub> ratios, with concentration changes close to those expected from the historical series in each site and not statistically attributable to the health crisis effects. Finally, the gradual de-escalation and progressive increase of traffic density within cities reflects a slow recovery of primary pollutants. The results and conclusions for these cities, with different sizes and population, and specific emission sources, may serve as a behavioural model for other continental sites and help understand future crises.

Publication Type

Journal article.

<394>

Accession Number

20210011715

Author

Maiti, A. K.

Title

The African-American population with a low allele frequency of SNP rs1990760 (T allele) in IFIH1 predicts less IFN-beta expression and potential vulnerability to COVID-19 infection.

Source

Immunogenetics; 2020. 72(6/7):387-391. 22 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

Covid-19 has caused worldwide devastation. IFIH1 is a pattern recognition receptor that senses coronavirus RNA and triggers interferon production as a first line of viral immune defense. The role of IFIH1 polymorphism, rs1990760 (C>T; aaA946T) in the epidemiology of viral infection is well studied, and the minor allele T resists viral infection. Knock-in mice with mutated IFIH1 protein (946T) for this allele have enhanced interferon production and protection from lethal viral infection. The minor allele frequency (Tmaf) varies widely from Africans (0.06 to 0.35) to Chinese (0.19 to 0.23) to Caucasians (0.56 to 0.69). During the initial days of infection when the social restrictions were not imposed, I show that the infection rate in Italy was lower as expected from its higher Tmaf (0.56) than that in China (Tmaf for southern China, 0.23). The infection rate in the USA and Spain was intermediate between those two countries despite higher Caucasian overall Tmaf (0.69), perhaps due to a more admixed African population in these countries. These analyses suggest that African-Americans and Chinese with low Tmaf of rs1990760 are more vulnerable to SARS-COV2 infection, apart from other genetic factors or socioeconomic conditions in these population. Taken together, an IFN-beta supplement might aid in preventing COVID-19 infection and help in development of herd immunity.

Publication Type

Journal article.

<395>

Accession Number

20210011676

Author

Neupane, K.; Munshi, S.; Zhao Meng; Ritchie, D. B.; Ileperuma, S. M.; Woodside, M. T.

Title

Anti-frameshifting ligand active against SARS coronavirus-2 is resistant to natural mutations of the frameshift-stimulatory pseudoknot.

Source

Journal of Molecular Biology; 2020. 432(21):5843-5847.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

SARS-CoV-2 uses -1 programmed ribosomal frameshifting (-1 PRF) to control expression of key viral proteins. Because modulating -1 PRF can attenuate the virus, ligands binding to the RNA pseudoknot that stimulates -1 PRF may have therapeutic potential. Mutations in the pseudoknot have occurred during the pandemic, but how they affect -1 PRF efficiency and ligand activity is unknown. Studying a panel of six mutations in key regions of the pseudoknot, we found that most did not change -1 PRF levels, even when base-pairing was disrupted, but one led to a striking 3-fold decrease, suggesting SARS-CoV-2 may be less sensitive to -1 PRF modulation than expected. Examining the effects of a small-molecule -1 PRF inhibitor active against SARS-CoV-2, it had a similar effect on all mutants tested, regardless of basal -1 PRF efficiency, indicating that anti-frameshifting activity can be resistant to natural pseudoknot mutations. These results have important implications for therapeutic strategies targeting SARS-CoV-2 through modulation of -1 PRF.

Publication Type

Journal article.

<396>

Accession Number

20210011569

Author

Wormser, G. P.; Jacobson, E.; Shanker, E. M.

Title

Negative impact of the COVID-19 pandemic on the timely diagnosis of tick-borne infections.

Source

Diagnostic Microbiology and Infectious Disease; 2021. 99(1).

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

## Abstract

We describe 3 adult patients who did not have COVID-19 but instead had a treatable tick-borne infection. In each case, however, the duration of time until diagnosis was delayed due to issues that have arisen because of the COVID-19 pandemic. These issues need to be addressed to preserve patient well-being.

## Publication Type

Journal article.

<397>

## Accession Number

20210010490

## Author

Perez-Cataluna, A.; Cuevas-Ferrando, E.; Randazzo, W.; Falco, I.; Allende, A.; Sanchez, G.

## Title

Comparing analytical methods to detect SARS-CoV-2 in wastewater.

## Source

Science of the Total Environment; 2021. 758. 38 ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

## Country of Publication

UK

## Abstract

Wastewater based epidemiology (WBE) has emerged as a reliable strategy to assess the coronavirus disease 2019 (COVID-19) pandemic. Recent publications suggest that SARS-CoV-2 detection in wastewater is technically feasible; however, many different protocols are available and most of the methods applied have not been properly validated. To this end, different procedures to concentrate and extract inactivated SARS-CoV-2 and surrogates were initially evaluated. Urban wastewater seeded with gamma-irradiated SARS-CoV-2, porcine epidemic diarrhea virus (PEDV), and mengovirus (MgV) was used to test the concentration efficiency of an aluminum-based adsorption-precipitation method and a polyethylene glycol (PEG) precipitation protocol. Moreover, two different RNA extraction methods were compared in this study: a commercial manual spin column centrifugation kit and an automated protocol based on magnetic silica beads. Overall, the evaluated concentration methods did not impact the recovery of gamma-irradiated SARS-CoV-2 nor MgV, while extraction methods showed significant differences for PEDV. Mean recovery rates of 42.9 +/- 9.5%, 27.5 +/- 14.3% and 9.0 +/- 2.2% were obtained for gamma-irradiated SARS-CoV-2, PEDV and MgV, respectively. Limits of detection (LoD95%) for five genomic SARS-CoV-2 targets

(N1, N2, gene E, IP2 and IP4) ranged from 1.56 log genome equivalents (ge)/mL (N1) to 2.22 log ge/mL (IP4) when automated system was used; while values ranging between 2.08 (N1) and 2.34 (E) log ge/mL were observed when using column-based extraction method. Different targets were also evaluated in naturally contaminated wastewater samples with 91.2%, 85.3%, 70.6%, 79.4% and 73.5% positivity, for N1, N2, E, IP2 and IP4, respectively. Our benchmarked comparison study suggests that the aluminum precipitation method coupled with the automated nucleic extraction represents a method of acceptable sensitivity to provide readily results of interest for SARS-CoV-2 WBE surveillance.

#### Publication Type

Journal article.

<398>

#### Accession Number

20210010414

#### Author

White, H. R.; Stevens, A. K.; Hayes, K.; Jackson, K. M.

#### Title

Changes in alcohol consumption among college students due to COVID-19: effects of campus closure and residential change.

#### Source

Journal of Studies on Alcohol and Drugs; 2020. 81(6):725-730. 26 ref.

#### Publisher

Alcohol Research Documentation Inc, Rutgers University

#### Location of Publisher

Piscataway

#### Country of Publication

USA

#### Abstract

**Objective:** It is well established that college students increase their drinking when they leave home. This study examined changes in drinking as a result of campus closure due to coronavirus disease 2019 (COVID-19), focusing on the influence of living situation. **Method:** A sample of 312 college students (mean age = 21.2 years; 62% female; 67% White) responded to an online survey regarding their drinking behavior before and after university closures because of COVID-19. Those participants who lived with peers pre-closure and moved home to live with parents post-closure were compared with those who remained living with peers or remained living with parents in terms of changes in frequency and quantity of drinking. **Results:** A comparison of pre- to post-closure drinking indicated significant decreases in the typical number of drinks per week (from 11.5 to 9.9) and maximum drinks per day (from 4.9 to 3.3) and a slight increase in typical drinking days per week (from 3 to 3.2). Patterns of change significantly varied across groups. Those who



moved from peers to parents showed significantly greater reductions in drinking days (from 3.1 to 2.7), number of drinks per week (from 13.9 to 8.5), and maximum drinks in one day (from 5.4 to 2.9) than those who remained living with peers or with parents. In contrast, the latter two groups significantly increased their frequency (from 3.0 to 3.7 days and 2.0 to 3.3 days, respectively). Conclusions: Participants reduced their quantity of drinking during the COVID-19 pandemic. Returning to live with parents during emerging adulthood may be protective for heavy drinking.

#### Publication Type

Journal article.

<399>

#### Accession Number

20210010106

#### Author

Meo, S. A.; Abukhalaf, A. A.; Al-Omar, A. A.; Al-Essa, O. M.; Waqas Sami; Klonoff, D. C.

#### Title

Effect of environmental pollutants PM-2.5, carbon monoxide, and ozone on the incidence and mortality of SARS-CoV-2 infection in ten wildfire affected counties in California.

#### Source

Science of the Total Environment; 2021. 757. 32 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Various regions of California have experienced a large number of wildfires this year, at the same time the state has been experiencing a large number of cases and deaths from Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The present study aimed to investigate the relationship of wildfire allied pollutants, including particulate matter (PM-2.5 m), carbon monoxide (CO), and Ozone (O3) with the dynamics of new daily cases and deaths due to SARS-COV 2 infection in 10 counties, which were affected by wildfire in California. The data on COVID-19 pertaining to daily new cases and deaths was recorded from Worldometer Web. The daily PM-2.5 m, CO, and O3 concentrations were recorded from three metrological websites: BAAQMD- Air Quality Data; California Air Quality Index-AQI; and Environmental Protection Agency- EPA. The data recorded from the date of the appearance of first case of (SARS-CoV-2) in California region to the onset of wildfire, and from the onset of wildfire to September 22, 2020. After the wildfire, the PM2.5 concentration increased by 220.71%; O3 by 19.56%; and the CO concentration increased by

151.05%. After the wildfire, the numbers of cases and deaths due to COVID-19 both increased respectively by 56.9% and 148.2%. The California wildfire caused an increase in ambient concentrations of toxic pollutants which were temporally associated with an increase in the incidence and mortality of COVID-19.

#### Publication Type

Journal article.

<400>

#### Accession Number

20210010069

#### Author

Guo Cui; Bo YaCong; Lin ChangQing; Li HaoBi; Zeng YiQian; Zhang YuMiao; Hossain, M. S.; Chan, J. W. M.; Yeung, D. W.; Kwok KinOn; Wong, S. Y. S.; Lau, A. K. H.; Lao XiangQian

#### Title

Meteorological factors and COVID-19 incidence in 190 countries: an observational study.

#### Source

Science of the Total Environment; 2021. 757. 48 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Novel corona virus disease 2019 (COVID-19), which first emerged in December 2019, has become a pandemic. This study aimed to investigate the associations between meteorological factors and COVID-19 incidence and mortality worldwide. This study included 1,908,197 confirmed cases of and 119,257 deaths from COVID-19 from 190 countries between 23 January and 13 April, 2020. We used a distributed lag non-linear model with city-/country-level random intercept to investigate the associations between COVID-19 incidence and daily temperature, relative humidity, and wind speed. A series of confounders were considered in the analysis including demographics, socioeconomic, geographic locations, and political strategies. Sensitivity analyses were performed to examine the robustness of the associations. The COVID-19 incidence showed a stronger association with temperature than with relative humidity or wind speed. An inverse association was identified between the COVID-19 incidence and temperature. The corresponding 14-day cumulative relative risk was 1.28 [95% confidence interval (CI), 1.20-1.36] at 5 degrees C, and 0.75 (95% CI, 0.65-0.86) at 22 degrees C with reference to the risk at 11 degrees C. An inverse J-shaped association was observed between relative humidity and the COVID-19 incidence, with the highest risk at 72%. A higher wind speed was associated with a generally lower incidence of COVID-19,

although the associations were weak. Sensitivity analyses generally yielded similar results. The COVID-19 incidence decreased with the increase of temperature. Our study suggests that the spread of COVID-19 may slow during summer but may increase during winter.

Publication Type

Journal article.

<401>

Accession Number

20210009672

Author

Sanchez-De Cruz, J. P. Ia; Tovilla-Zarate, C. A.; Gonzalez-Morales, D. L.; Gonzalez-Castro, T. B.

Title

Risk of a syndemic between COVID-19 and dengue fever in southern Mexico.

Source

Gaceta Medica de Mexico; 2020. 156(5):460-464. 25 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

A syndemic is the convergence of two or more diseases in the same space and time. In Mexico, the dengue epidemic is active and predominates in areas of the Pacific and the Gulf of Mexico; in turn, the COVID-19 epidemic severely affects the same areas as dengue fever. Given that both these diseases share many clinical manifestations, in areas where tropical diseases are endemic, it is important to make careful evaluations of the patient who consults for fever in order to establish a timely diagnosis. Laboratory diagnostic tests are necessary to take the pertinent measures for each patient. In Mexico, the risk of a syndemic between COVID-19 and dengue fever is high, and thus it that can collapse health systems. The states of southeastern Mexico and the Pacific region require special attention, since they have geographic, environmental and climatic conditions that favor the rapid spread of dengue and COVID-19. Simultaneous infection will worsen the epidemiological situation, and complicate the diagnosis, control and treatment of both diseases.

Publication Type

Journal article.

<402>

Accession Number

20210009671

Author

Guzman-Olea, E.; Agis-Juarez, R. A.; Bermudez-Morales, V. H.; Torres-Poveda, K.; Madrid-Marina, V.; Lopez-Romero, D.; Maya-Perez, E.

Title

Health status and gerontological evaluation in Mexican older adults in the face of the COVID-19 pandemic.

Source

Gaceta Medica de Mexico; 2020. 156(5):412-417. 33 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Introduction: Older adults constitute the most vulnerable population group to the COVID-19 pandemic. In Mexico, their biopsychosocial conditions might intensify their vulnerability. Method: Affiliation to health systems, health conditions and gerontological evaluation of 3,218 older adults were analyzed following the methodology of the PAHO-Mexico Health, Well-being and Aging Survey. Results: 88.6% of older adults referred being affiliated to health systems; 30.2%, 52.4%, 10.3%, 4.1% and 5.6% referred suffering from diabetes mellitus, high blood pressure, chronic obstructive pulmonary disease, heart disease and cerebrovascular disease, respectively; 15.6% reported urinary incontinence, and 11.3%, fecal incontinence; 12.1% of the women referred having suffered from breast cancer at some point, and 6.3%, cervical cancer. The habit of smoking tobacco was observed in 11.1%, risk of malnutrition in 32.8%, established malnutrition in 4.1%, functional dependence for basic and instrumental activities of daily life in 16.3% and 17.6%, respectively. Conclusion: Comprehensive gerontological evaluation is essential for efficient care of older adults who suffer from COVID-19, and for adequate care of the effects or health conditions at the conclusion of the confinement imposed by the pandemic.

Publication Type

Journal article.

<403>

Accession Number

20210009662

Author

Peng ZhengHong; Wang Ru; Liu LingBo; Wu Hao

Title

Exploring urban spatial features of COVID-19 transmission in Wuhan based on social media data.

Source

ISPRS International Journal of Geo-Information; 2020. 9(6). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

During the early stage of the COVID-19 outbreak in Wuhan, there was a short run of medical resources, and Sina Weibo, a social media platform in China, built a channel for novel coronavirus pneumonia patients to seek help. Based on the geo-tagging Sina Weibo data from February 3rd to 12th, 2020, this paper analyzes the spatiotemporal distribution of COVID-19 cases in the main urban area of Wuhan and explores the urban spatial features of COVID-19 transmission in Wuhan. The results show that the elderly population accounts for more than half of the total number of Weibo help seekers, and a close correlation between them has also been found in terms of spatial distribution features, which confirms that the elderly population is the group of high-risk and high-prevalence in the COVID-19 outbreak, needing more attention of public health and epidemic prevention policies. On the other hand, the early transmission of COVID-19 in Wuhan could be divide into three phrases: Scattered infection, community spread, and full-scale outbreak. This paper can help to understand the spatial transmission of COVID-19 in Wuhan, so as to propose an effective public health preventive strategy for urban space optimization.

Publication Type

Journal article.

<404>

Accession Number

20210009640

Author

Hoong WeiShan [Hoong, W. S. C.]; Koh HuiLin; Cho, S.; Aravamudan, V. M.; Lin HuiXian [Lin, H. X. J.]

Title

Are adequate vitamin D levels helpful in fighting COVID-19? A look at the evidence.

Source

Hormone and Metabolic Research; 2020. 52(11):775-783. 96 ref.

Publisher

Georg Thieme Verlag KG

Location of Publisher

Stuttgart

Country of Publication

Germany

Abstract

COVID-19 is a global pandemic with high mortality in vulnerable groups. Given the current lack of definitive treatment or vaccine that significantly reduces mortality rate, governments, researchers and healthcare providers are racing to find possible solutions to the crisis. Vitamin D and its analogues have been previously studied for their non-skeletal benefits. In particular, questions regarding their role in the modulation of immunity have re-surfaced, in view of possible epidemiological links observed between COVID-19 and vitamin D levels in selected populations. In this review, we highlight potential mechanisms and summarise the evidence for and against the potential role of vitamin D supplementation in our fight against COVID-19.

Publication Type

Journal article.

<405>

Accession Number

20210009584

Author

Noghabi, A. D.; Yoshany, N.; Mohammadzadeh, F.; Javanbakht, S.

Title

Predictors of COVID-19 preventive behaviors in Iranian population over 15 years old: an application of health belief model. [Persian]

Source

Publisher

Mazandaran University of Medical Sciences

Location of Publisher

Sari

Country of Publication

Iran

Abstract

**Background and purpose:** Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the new corona virus. The aim of this study was to determine the predictors of COVID-19 prevention behaviors in an Iranian population based on the health belief model. **Materials and methods:** This descriptive analytical (cross-sectional) study was performed in 1020 people older than 15 years of age in Iran in 2020 selected via convenience sampling. Data were collected through an online survey using a researcher-made questionnaire based on the health belief model. Data analysis was done in SPSS applying correlation coefficients and linear regression tests. **Results:** Frequent prevention behaviors of COVID-19 included using personal items at home and work (83.7%), following the precautionary measures presented in mass media (80.2%), and not leaving the house except in necessary cases (67.6%). There were significant correlations between all constructs of health belief model and performance, except for perceived barriers and perceived severity ( $P<0.01$ ). **Conclusion:** According to the predictive role of prevention behaviors of COVID-19 based on health belief model, this model can be used in educational and interventional programs.

Publication Type

Journal article.

<406>

Accession Number

20210009575

Author

Demopoulos, C.; Antonopoulou, S.; Theoharides, T. C.

Title

COVID-19, microthromboses, inflammation, and platelet activating factor.

Source

BioFactors; 2020. 46(6):927-933. 104 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Recent articles report elevated markers of coagulation, endothelial injury, and microthromboses in lungs from deceased COVID-19 patients. However, there has been no discussion of what may induce intravascular coagulation. Platelets are critical in the formation of thrombi and their most potent trigger is platelet activating factor (PAF), first characterized by Demopoulos and colleagues in 1979. PAF is produced by cells involved in host defense and its biological actions bear similarities with COVID-19 disease manifestations. PAF can also stimulate perivascular mast cell activation, leading to inflammation implicated in severe acute respiratory syndrome (SARS). Mast cells are plentiful in the lungs and are a rich source of PAF and of inflammatory cytokines, such as IL-1beta and IL-6, which may contribute to COVID-19 and especially SARS. The histamine-1 receptor antagonist rupatadine was developed to have anti-PAF activity, and also inhibits activation of human mast cells in response to PAF. Rupatadine could be repurposed for COVID-19 prophylaxis alone or together with other PAF-inhibitors of natural origin such as the flavonoids quercetin and luteolin, which have antiviral, anti-inflammatory, and anti-PAF actions.

Publication Type

Journal article.

<407>

Accession Number

20210009513

Author

Pate, B. S.; Yeola, M. E.; Atul Gawande; Singh, A. K.; Tayade, H. A.

Title

Best practices for endoscopic procedures in COVID-19 pandemic.

Source

Journal of Evolution of Medical and Dental Sciences; 2020. 9(49):3760-3766. 9 ref.

Publisher

Akshantala Enterprises

Location of Publisher

Mysore

Country of Publication

India

Abstract



The corona pandemic has affected the health system of whole world. In India, this potentially long winding pandemic is overwhelming the capacity of outpatient and inpatient facilities, emergency as well as high dependency units of hospitals lead to severe shortage of resources, beds and staff. This has resulted in compromise in patient safety and outcomes. Endoscopic procedures have diagnostic as well as therapeutic importance and can aid in settling down acute illness following which definitive surgery can be planned later. Being aerosol generating procedures (AGPs), safe practices need to be adopted at both institutional and personal level. There is tremendous impact on health care settings due to the COVID-19 situation in a very short span of time. In this COVID-19 pandemic scenario, while performing flexible endoscopic procedures. Elective endoscopies should be stopped. Flexible endoscopic and therapeutic interventions to be done only when absolutely necessary emergency and urgent cases. Proper PPE kits and N95 masks should be provided to all involved personnel in every endoscopic procedure. All patients undergoing emergency procedures should be considered Covid-19 positive and treated accordingly with every precaution to avoid infection transmission. Comprehensive and well-designed written-informed consent with inclusion of all necessary information of the Covid-19 situation should be taken from the patient and relative before all endoscopies. Urgent and Emergency endoscopic procedures must preferably be done under GA with very careful endotracheal intubation. High level of disinfection is required in endoscopies and the accessories used should either be disposable or thoroughly sterilized if reusable. As the fight against COVID-19 pandemic seems to be long-lasting we have to learn to live with it, prioritise resources and facilities keeping in mind patient needs in endoscopy departments. Protocols need to be introduced to encourage "new best practises" in the Endoscopy Department to ensure successful preventive measures against COVID-19 infection. This article addresses best practices to be followed and our experience of gastrointestinal endoscopy procedures during ongoing COVID-19 pandemic.

#### Publication Type

Journal article.

<408>

#### Accession Number

20210009507

#### Author

Isha Srivastava; Lal, A. K.; Mahima Pandey; Ashish Jaiswal; Ishank Jaiswal

#### Title

Transforming healthcare in rural India by telemedicine during COVID-19 pandemic.

#### Source

Journal of Evolution of Medical and Dental Sciences; 2020. 9(49):3703-3705. 10 ref.

#### Publisher

Akshantala Enterprises

#### Location of Publisher

Mysore

#### Country of Publication

India

## Abstract

COVID-19 is a novel coronavirus, declared a global pandemic by World Health Organization (WHO) Emergency Committee. Coronavirus became a household name and the well-being of every health care worker is the cornerstone for proper functioning of health care systems in rural hospitals. The melancholy affecting the rural healthcare emerges from various vectors. Sparse population, equipment underuse and the absence of high margin specialty services, geographical locations desolate the economic outlook. When rural hospitals started using telemedicine, then there are more chances to get bypassed for the treatment at the urban facility, get remote consultation, in home monitoring, outsourced diagnostics analysis. It also reduces unnecessary footfalls to hospitals and clinics as it reduces cost by reducing readmissions and cut down on the time for specialty care and allow health care workers to enable "healing at distance". Rural hospitals with the help of telemedicine can change the landscape of rural physicians practice. A global pandemic emerges and wreaks devastation on a susceptible world population once in a lifetime which leads to limited personal experience with such events. In the present scenario, there is an outbreak of coronavirus disease identified with intense respiratory illness called COVID-19 which was first announced in Wuhan, Hubei province in China in December 2019. On 11th March 2020, World Health Organization (WHO) Emergency committee declared COVID-19 as a worldwide pandemic. COVID-19 is rapidly expanding and has surpassed 26,121,999 confirmed cases and global death exceeds 864,618 worldwide. In India, total confirmed cases are 3,948,594 and death exceeds to 68,682. Since, it is a respiratory virus, patients who are suffering from asthma, chronic obstructive pulmonary disease, hypertension, diabetes and with immunodeficiency are the vulnerable groups at increased risk of morbidity. In this global pandemic, medical system is on the verge of a devastating collapse because of the over burden of the physicians and psychological distress including long work hours, sleep disturbances, debilitating fatigue which leads to caregiver burnout and shortage of medical practitioners. To overcome this situation, the world has woken up from its slumber and introduced the concept of "Forward Triage", the process of diagnosing the patient condition before their arrival in emergency department. To reduce unnecessary footfalls to hospitals and clinics and provide more manpower to healthcare systems, telemedicine became a critical asset as a valuable tool against this pandemic. A key factor to slow the transmission of virus is social distancing- "Healing at Distance" decreasing person to person contact.

## Publication Type

Journal article.

<409>

## Accession Number

20210009380

## Author

Wu XiaoXu; Yin Jie; Li ChenLu; Xiang HongXu; Lv Meng; Guo ZhiYi

## Title

Natural and human environment interactively drive spread pattern of COVID-19: a city-level modeling study in China.

## Source

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Science of the Total Environment; 2021. 756.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

A novel Coronavirus COVID-19 has caused high morbidity and mortality in China and worldwide. A few studies have explored the impact of climate change or human activity on the disease incidence in China or a city. The integrated study concerning environment impact on the emerging disease is rarely reported. Therefore, based on the two-stage modeling study, we investigate the effect of both natural and human environment on COVID-19 incidence at a city level. Besides, the interactive effect of different factors on COVID-19 incidence is analyzed using Geodetector; the impact of effective factors and interaction terms on COVID-19 is simulated with Geographically Weighted Regression (GWR) models. The results find that mean temperature (MeanT), destination proportion in population flow from Wuhan (WH), migration scale (MS), and WH\*MeanT, are generally promoting for COVID-19 incidence before Wuhan's shutdown (T1); the WH and MeanT play a determinant role in the disease spread in T1. The effect of environment on COVID-19 incidence after Wuhan's shutdown (T2) includes more factors (including mean DEM, relative humidity, precipitation (Pre), travel intensity within a city (TC), and their interactive terms) than T1, and their effect shows distinct spatial heterogeneity. Interestingly, the dividing line of positive-negative effect of MeanT and Pre on COVID-19 incidence is 8.5 degrees C and 1 mm, respectively. In T2, WH has weak impact, but the MS has the strongest effect. The COVID-19 incidence in T2 without quarantine is also modeled using the developed GWR model, and the modeled incidence shows an obvious increase for 75.6% cities compared with reported incidence in T2 especially for some mega cities. This evidences national quarantine and traffic control take determinant role in controlling the disease spread. The study indicates that both natural environment and human factors integratedly affect the spread pattern of COVID-19 in China.

Publication Type

Journal article.

<410>

Accession Number

20210009379

Author

Lopez-Feldman, A.; Heres, D.; Marquez-Padilla, F.

Title

Air pollution exposure and COVID-19: a look at mortality in Mexico City using individual-level data.

Source

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Science of the Total Environment; 2021. 756.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

We use individual-level data to estimate the effects of long- and short-term exposure to air pollution (PM<sub>2.5</sub>) on the probability of dying from COVID-19. To the best of our knowledge, our study is the first to look at this relationship using individual-level data. We find that for Mexico City there is evidence of a positive relationship between pollution and mortality that significantly grows with age and that appears to be mostly driven by long- rather than short-term exposure. By using a rich set of individual- and municipal-level covariates we are able to isolate the effect of exposure to pollution from other crucial factors, thus alleviating endogeneity concerns related to selection. Our results provide yet another reason for the need to implement environmental strategies that will reduce the exposure to air pollution: it is a key element to improve the general population's health. In addition, and considering that at this moment we do not know when the pandemic will stop or if SARS-CoV-2 will become a recurrent threat, the relationship that we uncovered suggests that financial resources should be allocated to improve medical services in those areas where PM<sub>2.5</sub> concentrations tend to be high.

Publication Type

Journal article.

<411>

Accession Number

20210009353

Author

Gatti, R. C.; Menendez, L. P.; Laciny, A.; Rodriguez, H. B.; Bravo Morante, G.; Carmen, E.; Dorninger, C.; Fabris, F.; Grunstra, N. D. S.; Schnorr, S. L.; Stuhltrager, J.; Villanueva Hernandez, L. A.; Jakab, M.; Sarto-Jackson, I.; Caniglia, G.

Title

Diversity lost: COVID-19 as a phenomenon of the total environment.

Source

Science of the Total Environment; 2021. 756. many ref.

Publisher

Elsevier Ltd

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Location of Publisher

Oxford

Country of Publication

UK

Abstract

If we want to learn how to deal with the COVID-19 pandemic, we have to embrace the complexity of this global phenomenon and capture interdependencies across scales and contexts. Yet, we still lack systematic approaches that we can use to deal holistically with the pandemic and its effects. In this Discussion, we first introduce a framework that highlights the systemic nature of the COVID-19 pandemic from the perspective of the total environment as a self-regulating and evolving system comprising of three spheres, the Geosphere, the Biosphere, and the Anthroposphere. Then, we use this framework to explore and organize information from the rapidly growing number of scientific papers, preprints, preliminary scientific reports, and journalistic pieces that give insights into the pandemic crisis. With this work, we point out that the pandemic should be understood as the result of preconditions that led to depletion of human, biological, and geochemical diversity as well as of feedback that differentially impacted the three spheres. We contend that protecting and promoting diversity, is necessary to contribute to more effective decision-making processes and policy interventions to face the current and future pandemics.

Publication Type

Journal article.

<412>

Accession Number

20210009319

Author

Tirkolaee, E. B.; Abbasian, P.; Weber, G. W.

Title

Sustainable fuzzy multi-trip location-routing problem for medical waste management during the COVID-19 outbreak.

Source

Science of the Total Environment; 2021. 756. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

## Abstract

The performance of waste management system has been recently interrupted and encountered a very serious situation due to the epidemic outbreak of the novel Coronavirus (COVID-19). To this end, the handling of infectious medical waste has been particularly more vital than ever. Therefore, in this study, a novel mixed-integer linear programming (MILP) model is developed to formulate the sustainable multi-trip location-routing problem with time windows (MTLRP-TW) for medical waste management in the COVID-19 pandemic. The objectives are to concurrently minimize the total traveling time, total violation from time windows/service priorities and total infection/environmental risk imposed on the population around disposal sites. Here, the time windows play a key role to define the priority of services for hospitals with a different range of risks. To deal with the uncertainty, a fuzzy chance-constrained programming approach is applied to the proposed model. A real case study is investigated in Sari city of Iran to test the performance and applicability of the proposed model. Accordingly, the optimal planning of vehicles is determined to be implemented by the municipality, which takes 19.733 h to complete the processes of collection, transportation and disposal. Finally, several sensitivity analyses are performed to examine the behavior of the objective functions against the changes of controllable parameters and evaluate optimal policies and suggest useful managerial insights under different conditions.

## Publication Type

Journal article.

<413>

## Accession Number

20210009302

## Author

Torii, S.; Furumai, H.; Katayama, H.

## Title

Applicability of polyethylene glycol precipitation followed by acid guanidinium thiocyanate-phenol-chloroform extraction for the detection of SARS-CoV-2 RNA from municipal wastewater.

## Source

Science of the Total Environment; 2021. 756. 39 ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

## Country of Publication

UK

## Abstract

The primary concentration and molecular process are critical to implement wastewater-based epidemiology for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). However, the previously developed methods were optimized for nonenveloped viruses. Few studies evaluated if the methods are applicable to the efficient recovery of enveloped viruses from various types of raw sewage. This study aims (1) to compare the whole process recovery of Pseudomonas phage 6, a surrogate for enveloped viruses, among combinations of primary concentration [ultrafiltration (UF), electronegative membrane vortex (EMV), and polyethylene glycol precipitation (PEG)] and RNA extraction methods (spin column-based method using QIAamp Viral RNA Mini Kit and acid guanidinium thiocyanate-phenol-chloroform extraction using TRIzol reagent) for three types of raw sewage and (2) to test the applicability of the method providing the highest 6 recovery to the detection of SARS-CoV-2 RNA. Among the tested combinations, PEG+TRIzol provided the highest 6 recovery ratio of 29.8% to 49.8% (geometric mean). UF + QIAamp Viral RNA Mini Kit provided the second highest 6 recovery of 6.4% to 35.8%. The comparable 6 recovery was observed for UF + TRIzol (13.8-30.0%). PEG + QIAamp Viral RNA Mini Kit provided only 1.4% to 3.0% of 6 recovery, while coliphage MS2, a surrogate for nonenveloped viruses, was recovered comparably with PEG + TRIzol. This indicated that the nonenveloped surrogate (MS2) did not necessarily validate the efficient recovery for enveloped viruses. EMV + QIAamp Viral RNA Mini Kit provided significantly different 6 recovery (1.6-21%) among the types of raw sewage. Then, the applicability of modified PEG + TRIzol was examined for the raw sewage collected in Tokyo, Japan. Of the 12 grab samples, 4 were positive for SARS-CoV-2 CDC N1 and N3 assay. Consequently, PEG + TRIzol provided the highest 6 recovery and allowed for the detection of SARS-CoV-2 RNA from raw sewage.

## Publication Type

Journal article.

<414>

## Accession Number

20210009281

## Author

Barril, P. A.; Pianciola, L. A.; Mazzeo, M.; Ousset, M. J.; Jaureguiberry, M. V.; Alessandrello, M.; Sanchez, G.; Oteiza, J. M.

## Title

Evaluation of viral concentration methods for SARS-CoV-2 recovery from wastewaters.

## Source

Science of the Total Environment; 2021. 756. 40 ref.

## Publisher

Elsevier Ltd

## Location of Publisher

Oxford

Country of Publication

UK

Abstract

Wastewater-based epidemiology (WBE) is a useful tool that has the potential to act as a complementary approach to monitor the presence of SARS-CoV-2 in the community and as an early alarm system for COVID-19 outbreak. Many studies reported low concentrations of SARS-CoV-2 in sewage and also revealed the need for methodological validation for enveloped viruses concentration in wastewater. The aim of this study was to evaluate different methodologies for the concentration of viruses in wastewaters and to select and improve an option that maximizes the recovery of SARS-CoV-2. A total of 11 concentration techniques based on different principles were evaluated: adsorption-elution protocols with negatively charged membranes followed by polyethylene glycol (PEG) precipitation (Methods 1-2), PEG precipitation (Methods 3-7), aluminum polychloride (PAC) flocculation (Method 8), ultrafiltration (Method 9), skim milk flocculation (Method 10) and adsorption-elution with negatively charged membrane followed by ultrafiltration (Method 11). To evaluate the performance of these concentration techniques, feline calicivirus (FCV) was used as a process control in order to avoid the risk associated with handling SARS-CoV-2. Two protocols, one based on PEG precipitation and the other on PAC flocculation, showed high efficiency for FCV recovery from wastewater (62.2% and 45.0%, respectively). These two methods were then tested for the specific recovery of SARS-CoV-2. Both techniques could recover SARS-CoV-2 from wastewater, PAC flocculation showed a lower limit of detection ( $4.3 \times 10^2$  GC/mL) than PEG precipitation ( $4.3 \times 10^3$  GC/mL). This work provides a critical overview of current methods used for virus concentration in wastewaters and the analysis of sensitivity for the specific recovery of SARS-CoV-2 in sewage. The data obtained here highlights the viability of WBE for the surveillance of COVID-19 infections in the community.

Publication Type

Journal article.

<415>

Accession Number

20210009277

Author

Curovic, L.; Jeram, S.; Murovec, J.; Novakovic, T.; Rupnik, K.; Prezelj, J.

Title

Impact of COVID-19 on environmental noise emitted from the port.

Source

Science of the Total Environment; 2021. 756. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

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## Country of Publication

UK

## Abstract

Identification of noise sources and their ranking is a crucial part of any noise abatement program. This is a particularly difficult task when a complex source, such as a seaport, is considered. COVID-19 epidemic has had a significant impact on environmental noise related to road, rail, air and ship traffic and provided a unique opportunity to observe immediate noise reduction. In order to identify the noise sources, whose reduction was most effective in reducing noise from the port area, this study compared and quantified noise emissions between the historical and epidemic periods. Environmental noise measurements from three noise monitoring stations at the port boundary were analysed. In addition, noise emissions from ship, road, rail and industry as well as meteorological data in the historical pre - COVID-19 (January 2018-February 2020) and COVID-19 (April 2020) period were analysed in detail. The characteristics of the noise sources mentioned, geographical data and noise measurements were used to develop and validate a noise model of the port area, which was used to calculate noise contour maps. Our results show that the reduction in noise levels observed at all monitoring stations coincides with the reduced shipping traffic. The A weighted equivalent sound pressure levels in the day, evening and night periods were reduced by 2.2 dB to 5.7 dB compared to the long-term averages, and the area of the 55 dB day-evening-night noise contour was reduced by 23%. Compared to the historical period, the number of people exposed to noise levels above 55 dB(A) in the day-evening-night period due to shipping and industrial activities was reduced by 20% in the COVID-19 period. Such results show that environmental noise generated by moored ships is a problem for port cities that should be regulated internationally. In addition, this paper provides precise guidance on noise emission characteristics, ship categorisation and the post-processing of long-term measurement data, taking into account wind conditions and undesired sound events, which can be applied to future research at other locations near shipping ports and used to prepare strategies for noise reduction in ports.

## Publication Type

Journal article.

<416>

## Accession Number

20210009276

## Author

Wang SiYu; Zhang YanLi; Ma JinLong; Zhu ShengQiang; Shen JuanYong; Wang Peng; Zhang HongLiang

## Title

Responses of decline in air pollution and recovery associated with COVID-19 lockdown in the Pearl River Delta.

## Source

Science of the Total Environment; 2021. 756. many ref.

## Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The Guangdong government implemented lockdown measures on January 23, 2020, to ease the spread of the coronavirus disease 2019 (COVID-19). These measures prohibit a series of human activities and lead to a great reduction in anthropogenic emissions. Starting on February 20, all companies resumed work and production, and emissions gradually recovered. To investigate the response of air pollutants in the Pearl River Delta (PRD) to the emission reduction and recovery related to COVID-19 lockdown, we used the Community Multi-scale Air Quality (CMAQ) model to estimate the changes in air pollutants, including three periods: Period I (January 10 to January 22, 2020), Period II (January 23 to February 19, 2020), Period III (February 20 to March 9, 2020). During Period II, under the concurrent influence of emissions and meteorology, air quality improved significantly with PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> decreased by 52%, 67%, and 25%, respectively. O<sub>3</sub> had no obvious changes in most cities, which mainly due to the synergetic effects of emissions and meteorology. In Period III, with the recovery of emissions and the changes in meteorology, the increase of secondary components was faster than that of primary PM<sub>2.5</sub> (PPM), which indicated that changes in PPM concentration were more sensitive to emissions reduction. O<sub>3</sub> concentration increased as emission and temperature rising. Our findings elucidate that more effective emission control strategies should be implemented in PRD to alleviate the increasingly serious pollution situation.

Publication Type

Journal article.

<417>

Accession Number

20210009273

Author

Richards, R.; Meynecke, J. O.; Sahin, O.

Title

Addressing dynamic uncertainty in the whale-watching industry under climate change and system shocks.

Source

Science of the Total Environment; 2021. 756.

Publisher

Elsevier Ltd

Location of Publisher

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Oxford

Country of Publication

UK

Abstract

Whale-watching is a global tourism industry whose annual revenue exceeds two billion dollars. Australia is a key player in this industry, especially on the east and west coast where humpback whales migrate each year between their breeding and feeding grounds. However, the global whale-watching industry faces uncertainty from changing whale migration patterns, with whales progressively 'arriving' at the traditional whale-watching areas earlier than in previous years/decades. If the whale-watching industry cannot evolve with these changing dynamics then the arrival of the whales might be missed resulting in a potential loss of revenue. This social-ecological issue has suddenly been exacerbated by the disruption to tourism caused by the global pandemic COVID-19. In this study, we use a systems modelling framework, which combines qualitative and quantitative processes, to evaluate the social-ecological system behaviour of the whale-watching industry. We apply this systems approach to the Gold Coast, one of Australia's premier tourist destinations and home to a vibrant whale-watching industry. The outcome of this systems assessment is that the efficacy of the whale-watching industry is affected through determinants of both supply (ability to respond to changes in whale behaviour) and demand (attractiveness of whale-watching). Furthermore, the recovery time of all tourism after COVID-19 will take years if not decades.

Publication Type

Journal article.

<418>

Accession Number

20210009185

Author

Ahmad Habeeb, H. D. A. A. A.; Noordin Othman; Al-Ani, S. H. H.

Title

Antimalarial use in managing COVID-19 in the context of glucose-6-phosphate-dehydrogenase G6PD deficiency.

Source

Australasian Medical Journal; 2020. 13(12):304-309. 31 ref.

Publisher

Australasian Medical Journal Pty Ltd.

Location of Publisher

Melbourne

Country of Publication

Australia

## Abstract

**Background:** The use of certain medications in G6PD deficient patients can trigger an oxidative stress which can lead to haemolytic anaemia. Recently, in a few countries, Chloroquine and Hydroxychloroquine; drugs that are indicated for prevention and treating malaria have been used in the management of COVID-19 patients. Evidently, the use of chloroquine and hydroxychloroquine can cause negative impact to the haemolytic status of COVID-19 G6PD deficient patients. **Aims:** The aim of this mini review was to provide an overview of the use of antimalarial agents in the management of COVID-19 G6PD deficient patients. **Methods:** We conducted a review of the literature that has examined the use of antimalarial agents in the management of COVID-19 G6PD deficient patients. **Results:** Chloroquine and hydroxychloroquine have been found to exhibit an antiviral activity against several viral infections including human coronaviruses. Many countries have implemented the use of Chloroquine and Hydroxychloroquine in managing COVID-19 patients. However, according to published case reports, the use of Chloroquine and hydroxychloroquine have been shown to worsen the haemolytic status in G6PD deficient patients. **Conclusion:** COVID-19 infection can trigger severe acute haemolytic crisis in G6PD-deficient patients which can be worsened by chloroquine and hydroxychloroquine. Thus, physicians should be aware to this possible adverse event particularly in countries with high prevalence of G6PD deficiency.

## Publication Type

Journal article.

<419>

## Accession Number

20210008987

## Author

Marzo, F. di; Gemmi, F.; Cennamo, R.; Forni, S.; Bachini, L.; Collini, F.; Cardi, M.

## Title

Impact of SARS-CoV-2 on elective surgical volume in Tuscany: effects on local planning and resource prioritization.

## Source

British Journal of Surgery; 2020. 107(10):e391-e392. 5 ref.

## Publisher

Wiley

## Location of Publisher

Chichester

## Country of Publication

UK

Publication Type

Correspondence.

<420>

Accession Number

20210008724

Author

Swift, W.

Title

How to run successful meetings in person and virtually.

Source

In Practice; 2020. 42(8):466-468.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Running successful meetings is an essential operation for all businesses and team building exercises. The Covid-19 pandemic has further highlighted the need for effective communication within and between teams, as many have been forced to work apart. Although many teams are now returning to practices full-time, being able to adapt and switch between in-person, and virtual communication is essential. This article discusses what successful meetings look like and highlights some key meeting rules that help to ensure specific targets are met.

Publication Type

Journal article.

<421>

Accession Number

20210008672

Author

Harwood, M.

Title

Cash flow, forecasting and future action plans post COVID-19.

Source

In Practice; 2020. 42(6):357-360.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

To ensure practices are set up to return to a 'new normal', thorough planning and forecasting are essential. Using short- and long-term forecasting helps to predict what impact the coming months may have on a practice's finances. Likewise, taking action now and creating an action plan ensures that you are positioning your practice to be in good stead for whatever comes next.

Publication Type

Journal article.

<422>

Accession Number

20210008546

Author

Baquedano, L.; Espiau, A.; Fasero, M.; Ortega, S.; Ramirez, I.; Mendoza, N.

Title

Beliefs, knowledge and the impact of COVID19 on menopause therapies in Spanish women: COMEM-treatment study.

Source

BMC Women's Health; 2020. 20(277). 31 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Objective:** To study what women think about menopause treatments and assess their knowledge about them. To analyze adherence to treatment during COVID-19 confinement as a secondary objective.  
**Methods:** A multi-center cross-sectional observational study was conducted using a survey of 2500 women between January and June 2019. This was administered following a non-probability sampling procedure including women between 35 and 75 years. An extension study was conducted during the coronavirus pandemic, between March and June 2020. **Results:** The responses of 2355 surveyed women were analyzed. Of this sample, 42% knew about menopause hormone therapy (MHT). The most frequently identified indication was the treatment of hot flashes (65.6%). The MHT risks most frequently perceived were weight gain (24.2%) and breast cancer (21.7%); the main reason for rejecting MHT was a lack of information (96.1%). Comparative analyses were conducted according to age, menopausal status, type of menopause, place of residence, type of health care and level of education. During the coronavirus confinement period, 85 women using MHT were located, of which 84.7% continued it. **Conclusions:** Women hold certain false beliefs about menopause, and their knowledge of the available treatments is somewhat limited. Adherence to MHT during the COVID-19 confinement in Spain has been high.

Publication Type

Journal article.

<423>

Accession Number

20210008503

Author

Zhao SuLi; Cao Jing; Sun RongCan; Zhang Lin; Liu BeiBei

Title

Analysis of anxiety-related factors amongst frontline dental staff during the COVID-19 pandemic in Yichang, China.

Source

BMC Oral Health; 2020. 20(342). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Dental staff were characterized with the tolerance of enduring stress and they are at a high risk to respiratory infectious disease. This study compared the anxiety level of the frontline dental staff (FDS) to the general public in Yichang during the coronavirus disease of 2019 (COVID-19) pandemic and examined potential explanatory factors to the differences. Methods: Two online questionnaires were used separately to collect data from FDS and the general public. The Chinese version of Beck Anxiety Inventory (BAI) was included for the assessment of anxiety. Firstly, a Chi-square test was conducted to compare the anxiety state between these two groups. Then, a bivariate analysis using Cramer's V and Eta squared was conducted to find the potential factors. Lastly, a binary logistic regression was performed to examine the association between potential factors and the anxiety state of FDS. Results: In general, FDS were 4.342 (95% CI: 2.427-7.768) times more likely to suffer from anxiety disorders than the general public. The bivariate analysis showed that age, Level Three Protective Measures (PM-3), conflicts with patients and/or colleagues were moderately associated with the anxiety state of FDS. But the knowledge of COVID-19, the treatment to suspected or confirmed cases both had a weak association with the anxiety among FDS. Conversely, workload, the exposure to potential infectious substance and conducting aerosol generated performance were not significantly related to the anxiety of FDS. As the model indicated, an elder age and PM-3 protective measures could lower the anxiety state of FDS, whereas the conflict with patients or/and colleagues would worsen it. Conclusions: During the COVID-19 pandemic, FDS were more likely to suffer from anxiety disorders than the general public. An elder age, sufficient personal protective measures and good relationships with colleagues and patients would help them to maintain good mental health.

Publication Type

Journal article.

<424>

Accession Number

20210008472

Author

Rizzi, S.; Wensink, M. J.; Lindahl-Jacobsen, R.; Tian Lu; Lu Ying; Eisenberg, M. L.

Title

Risk of pre-term births and major birth defects resulting from paternal intake of COVID-19 medications prior to conception.

Source

BMC Research Notes; 2020. 13(509). 12 ref.

Publisher



BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: With the ongoing COVID-19 pandemic, large numbers of people will receive one of the several medications proposed to treat COVID-19, including patients of reproductive age. Given that some medications have shown adverse effects on sperm quality, there might be a transgenerational concern. We aim at examining the association between drugs proposed to treat COVID-19 when taken by the father around conception and any pre-term birth or major birth defects in offspring in a nation-wide cohort study using Danish registry data. Offspring whose father filled at least one prescription of the following medications in the 3 months preceding conception were considered exposed: chloroquine, hydroxychloroquine, losartan, azithromycin, naproxen, dexamethasone and prednisone. Results: For azithromycin and naproxen, large numbers of offspring were exposed (> 1800 offspring), and we found no association with adverse birth outcomes. For chloroquine, losartan and dexamethasone, exposure was intermediate (~ 900 offspring), and there was no statistically significant association with birth defects. For hydroxychloroquine and prednisone, exposure was limited (< 300 offspring). Our evidence suggests that azithromycin and naproxen are safe with respect to pre-term birth and birth defects. For the other drugs investigated larger exposures are needed for conclusive statements.

Publication Type

Journal article.

<425>

Accession Number

20210007964

Author

Ayesheshim Muluneh Kassa; Getahun Gebre Bogale; Asnakew Molla Mekonen

Title

Level of perceived attitude and practice and associated factors towards the prevention of the COVID-19 epidemic among residents of Dessie and Kombolcha town administrations: a population-based survey.

Source

Research and Reports in Tropical Medicine; 2020. 11(129-139):129-139. 29 ref.

Publisher

Dove Medical Press Ltd

Location of Publisher

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Macclesfield

Country of Publication

UK

Abstract

Purpose: COVID-19 has been declared a pandemic by the World Health Organization. The unprecedented global health crisis we are facing is affecting all parts of society and changing lives and livelihoods. International efforts have been applied to prevent the spread of the virus through personal hygiene, masks and social distancing as prevention measures. The aim of this study is to assess the level of perceived attitude and practice and associated factors among Dessie and Kombolcha Town administrations, north-east Ethiopia. Patients and Methods: A cross-sectional population-based survey was conducted using a structured interview-administered questionnaire from June 7 to 14, 2020, among Dessie and Kombolcha town residents. The data were entered to Epi Info-7.1 and exported to SPSS-23. Bivariable logistic regression was done, and variables with  $p < 0.25$  were entered a multivariable logistic regression analysis model. Statistically significant level was declared at 95% CI and a  $p$ -value  $< 0.05$ . Results: A total of 828 participants were involved with a response rate of 98%. Of the total participants, 29.35% (95% CI: 26.3, 32.5) had poor attitude and 41.79% (95% CI: 38.5, 45.3) had poor practice towards COVID-19 prevention. Multivariable regression results showed a significant association with being male, unable to read and write, and mass media with attitude and rural residence, being widowed, a merchant, family size 4-6, spring water source and information heard from social media with practice. Conclusion: Our findings revealed that there are inappropriate practices and poor attitudes towards COVID-19 prevention among Dessie and Kombolcha residents.

Publication Type

Journal article.

<426>

Accession Number

20210007762

Author

Shi BenYun; Zheng JinXin; Xia Shang; Lin Shan; Wang XinYi; Liu Yang; Zhou XiaoNong; Liu JiMing

Title

Assessing the syndemic of COVID-19 and malaria intervention in Africa.

Source

Infectious Diseases of Poverty; 2021. 10(5). 35 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

## Country of Publication

UK

## Abstract

**Background:** The pandemic of the coronavirus disease 2019 (COVID-19) has caused substantial disruptions to health services in the low and middle-income countries with a high burden of other diseases, such as malaria in sub-Saharan Africa. The aim of this study is to assess the impact of COVID-19 pandemic on malaria transmission potential in malaria-endemic countries in Africa. **Methods:** We present a data-driven method to quantify the extent to which the COVID-19 pandemic, as well as various non-pharmaceutical interventions (NPIs), could lead to the change of malaria transmission potential in 2020. First, we adopt a particle Markov Chain Monte Carlo method to estimate epidemiological parameters in each country by fitting the time series of the cumulative number of reported COVID-19 cases. Then, we simulate the epidemic dynamics of COVID-19 under two groups of NPIs: (1) contact restriction and social distancing, and (2) early identification and isolation of cases. Based on the simulated epidemic curves, we quantify the impact of COVID-19 epidemic and NPIs on the distribution of insecticide-treated nets (ITNs). Finally, by treating the total number of ITNs available in each country in 2020, we evaluate the negative effects of COVID-19 pandemic on malaria transmission potential based on the notion of vectorial capacity. **Results:** We conduct case studies in four malaria-endemic countries, Ethiopia, Nigeria, Tanzania, and Zambia, in Africa. The epidemiological parameters (i.e., the basic reproduction number  $R_0$  and the duration of infection  $DI$ ) of COVID-19 in each country are estimated as follows: Ethiopia ( $R_0=1.57$ ,  $DI=5.32$ ), Nigeria ( $R_0=2.18$ ,  $DI=6.58$ ), Tanzania ( $R_0=2.47$ ,  $DI=6.01$ ), and Zambia ( $R_0=2.12$ ,  $DI=6.96$ ). Based on the estimated epidemiological parameters, the epidemic curves simulated under various NPIs indicated that the earlier the interventions are implemented, the better the epidemic is controlled. Moreover, the effect of combined NPIs is better than contact restriction and social distancing only. By treating the total number of ITNs available in each country in 2020 as a baseline, our results show that even with stringent NPIs, malaria transmission potential will remain higher than expected in the second half of 2020. **Conclusions:** By quantifying the impact of various NPI response to the COVID-19 pandemic on malaria transmission potential, this study provides a way to jointly address the syndemic between COVID-19 and malaria in malaria-endemic countries in Africa. The results suggest that the early intervention of COVID-19 can effectively reduce the scale of the epidemic and mitigate its impact on malaria transmission potential.

## Publication Type

Journal article.

<427>

## Accession Number

20210007724

## Author

Kang Min; Wei JianJian; Yuan Jun; Guo JuXuan; Zhang YingTao; Hang Jian; Qu YaBin; Qian Hua; Zhuang YaLi; Chen XuGuang; Peng Xin; Shi TongXing; Wang Jun; Wu Jie; Song Tie; He JianFeng; Li YuGuo; Zhong NanShan

## Title

Probable evidence of fecal aerosol transmission of SARS-CoV-2 in a high-rise building.

Source

Annals of Internal Medicine; 2020. 173(12):974-980. 23 ref.

Publisher

American College of Physicians

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

**Background:** The role of fecal aerosols in the transmission of severe acute respiratory syndrome coronavirus 2 has been suspected. **Background:** To investigate the temporal and spatial distributions of 3 infected families in a high-rise apartment building and examine the associated environmental variables to verify the role of fecal aerosols. **Design:** Epidemiologic survey and quantitative reverse transcriptase polymerase chain reaction analyses on throat swabs from the participants; 237 surface and air samples from 11 of the 83 flats in the building, public areas, and building drainage systems; and tracer gas released into bathrooms as a surrogate for virus-laden aerosols in the drainage system. **Setting:** A high-rise apartment building in Guangzhou, China. **Participants:** 9 infected patients, 193 other residents of the building, and 24 members of the building's management staff. **Measurements:** Locations of infected flats and positive environmental samples, and spread of virus-laden aerosols. **Results:** 9 infected patients in 3 families were identified. The first family had a history of travel to the coronavirus disease 2019 (COVID-19) epicenter Wuhan, whereas the other 2 families had no travel history and a later onset of symptoms. No evidence was found for transmission via the elevator or elsewhere. The families lived in 3 vertically aligned flats connected by drainage pipes in the master bathrooms. Both the observed infections and the locations of positive environmental samples are consistent with the vertical spread of virus-laden aerosols via these stacks and vents. **Limitation:** Inability to determine whether the water seals were dried out in the flats of the infected families. **Conclusion:** On the basis of circumstantial evidence, fecal aerosol transmission may have caused the community outbreak of COVID-19 in this high-rise building.

Publication Type

Journal article.

<428>

Accession Number

20210007502

Author

Olayanju, O.; Bamidele, O.; Edem, F.; Eseile, B.; Amoo, A.; Nwaokenye, J.; Udeh, C.; Oluwole, G.; Odok, G.; Awah, N.

Title

SARS-CoV-2 seropositivity in asymptomatic frontline health workers in Ibadan, Nigeria.

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Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):91-94. 28 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Global health has been thrown into turmoil by the COVID-19 pandemic, which has caused devastating morbidity and unprecedented loss of life in almost all continents of the world. It was predicted that the magnitude of the pandemic in Africa will be high because of poor health structure and intensely poor living condition, but that has not happened, surprisingly. It was hypothesized that the youthful population and a vastly primed immune system were protective, and many people may have been exposed without coming down with the severe disease. Most of them would have presented in hospitals with other medical conditions and possibly transmit COVID-19 to health workers inadvertently. This study is designed to measure serum SARS-CoV-2 IgG levels in health workers as a marker of latent exposure. Asymptomatic frontline health workers were randomly selected from the University College Hospital Ibadan, Nigeria; venous blood samples were obtained from them, and the serum SARS-CoV-2 IgG level was determined using ELISA techniques. A proportion of participants with seropositivity were obtained, and factors associated with seropositivity were determined. A total of 133 participants were recruited for this study, and 60 (45.1%) of them were seropositive for SARS-CoV-2. Among the seropositive participants were doctors, nurses, health assistants, laboratory scientists and technicians, and nonmedical staff. Obstetrics, gynecology, and emergency departments had higher odds of seropositivity. Seroprevalence of SARS-CoV-2 is very high among frontline health workers, though asymptomatic. This calls for a more stringent precaution against further spread within the hospital environment.

Publication Type

Journal article.

<429>

Accession Number

20210007501

Author

Narayanasamy Krishnasamy; Murugan Natarajan; Arunkumar Ramachandran; Thangaraj, J. W. V.; Theranirajan Etherajan; Jayanthi Rengarajan; Meenakshi Shanmugasundaram; Anuradha Kandasamy; Ramesh Ramamoorthy; Arul Velusamy; Lakshmanamoorthy, N. B. O.; Prabhuraman Kanagaraman; Rahamathula, M. I.; Geetha Devadas; Babu Peter Sathyanathan; Poonguzhali Rajaji; Karthick Rajendran; Priyadarshini Panneerselvam; Muthukumaran Rajaram; Mohan Panjacharam

Title

Clinical outcomes among asymptomatic or mildly symptomatic COVID-19 patients in an isolation facility in Chennai, India.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):85-90. 16 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Globally, India has reported the third highest number of COVID-19 cases. Chennai, the capital of Tamil Nadu state, witnessed a huge surge in COVID-19 cases, resulting in the establishment of isolation facilities named COVID Care Center (CCC). In our study, we describe the demographic, epidemiological, and clinical characteristics; clinical progression; and outcome of 1,263 asymptomatic/mildly symptomatic COVID-19 patients isolated in one such CCC between May 4, 2020 and June 4, 2020. Around 10.5% of the patients progressed to moderate/severe illness, requiring referral for tertiary care, and three died. Nearly half (49.5%) of the patients were symptomatic at the time of admission, 2.2% of the patients developed symptoms post-testing, and 48.5% patients remained asymptomatic during the entire course of illness. Most common presenting symptoms were fever (69.9%) and cough (29.6%), followed by generalized body pain, breathlessness, and loss of smell and taste. On multivariate analysis, we identified that symptomatic patients with comorbidities and higher neutrophil-lymphocyte ratio (NLR) were more likely to progress to severe illness warranting referral for tertiary care. COVID Care Center ensured case isolation and monitoring of asymptomatic/mildly symptomatic patients, thereby providing hospital beds for sick patients. COVID Care Center isolation facilities are safe alternatives for medical institutions to isolate and monitor COVID-19 patients. Older symptomatic patients with comorbidities and a high NLR admitted in an isolation facility must be frequently monitored for prompt identification of clinical progression and referral to higher center for advanced medical care.

Publication Type

Journal article.

<430>

Accession Number

20210007500

Author

Hasan, H.; Raigangar, V.; Osaili, T.; Neinavaei, N. E.; Olaimat, A. N.; Aolymat, I.

Title

A cross-sectional study on university students' knowledge, attitudes, and practices toward COVID-19 in the United Arab Emirates.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):75-84. 31 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

The unprecedented coronavirus pandemic is hitting the whole world, including the United Arab Emirates. Public awareness and adherence to the recommendations play a major role in managing a crisis of this magnitude which is largely affected by knowledge, attitudes, and practices (KAP). Hence, the aim of this study was to assess COVID-19-related KAP of the University of Sharjah (UOS) students and compare between health-related (HR) and non-HR (NHR) majors. A cross-sectional study was conducted in May 2020 in which 1,012 (481 health-related and 531 NHR) students participated via an online KAP questionnaire. The students' sociodemographic characteristics and sources of information were also recorded, and data were analyzed. Students were aged 20-25 years, with an overall knowledge score of 72.4%, and the main source of their information was the Internet and social media (85.2%). Those in HR majors had a higher knowledge score (76%) than those in NHR students (69%). Regarding attitudes, both HR and NHR students demonstrated comparable and positive attitudes to curb the spread. With respect to practices, more NHR students used masks (92.3%), almost all the time than HR students (88.4%). HR students (99.4%) avoided crowded places and practiced social distancing more than NHR students (99.4% versus 97.4% and 97.7% versus 93.2%, respectively). In conclusion, UOS students demonstrated adequate knowledge, and possessed good attitudes and low-risk practices toward prevention of COVID-19. It is recommended that universities including UOS continue to use digital university communication platforms to regularly disseminate vital information in such emergencies.

Publication Type

Journal article.

<431>

Accession Number

20210007493

Author

Lee, Z.; Rayner, C. R.; Forrest, J. I.; Nachege, J. B.; Senchaudhuri, E.; Mills, E. J.

Title

The rise and fall of hydroxychloroquine for the treatment and prevention of COVID-19.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):35-38. 31 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

The efficacy and safety of hydroxychloroquine (HCQ) for the prevention and treatment of COVID-19 has received great attention, and most notably, the enthusiasm for HCQ has been one of politicization rather than science. Laboratory studies and case series published early in the pandemic supported its efficacy. The scientific community raced to conduct observational and randomized evaluations of the drug in all stages of the disease, including prophylaxis, early treatment, and advanced disease. Yet a divisive media response affected recruitment, funding, and subsequent enthusiasm for continuing scientific investigations. Of the more than 300 HCQ trials registered, fewer than 50% report having recruited any patients, and most trials might fail to achieve any useful portions of their intended sample size. Multiple observational studies and two large randomized trials have demonstrated HCQ does not offer efficacy against COVID-19 in hospitalized patients. Prophylaxis studies and early treatment studies provided heterogeneous results and are plagued by low event rates and poor study outcome monitoring. Emerging high-quality evaluations of prophylaxis and early treatment do not support a role for HCQ in these populations. The story of HCQ for COVID-19 has followed a pattern of initial enthusiasm supported by poor quality evidence, followed by disappointment based on more rigorous evaluations. The experience of HCQ in the COVID-19 era calls for the depoliticization of science away from media glare.

Publication Type

Journal article.

<432>

Accession Number

20210007491

Author

Aborode, A. T.; Oguniola, S. O.; Adeyemo, A. O.

Title

A crisis within a crisis: COVID-19 and hunger in African children.



Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):30-31. 10 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

The WHO recently expressed concern at the potential impact of COVID-19 on hunger, which is likely to exacerbate the already considerable burden of malnutrition of Africa. The impact of the disease is expected to be greater among those grappling with malnutrition, whereas widespread hunger and malnutrition will likely increase because of movement restrictions. COVID-19 is unfolding in Africa against a backdrop of worrying levels of hunger and undernourishment which could worsen as the virus threatens livelihoods and household economies. The perspective piece addresses the crisis within crisis of COVID-19 and hunger on the well-being of children in Africa.

Publication Type

Journal article.

<433>

Accession Number

20210007490

Author

Aborode, A. T.; David, K. B.; Uwishema, O.; Nathaniel, A. L.; Imisioluwa, J. O.; Onigbinde, S. B.; Farooq, F.

Title

Fighting COVID-19 at the expense of malaria in Africa: the consequences and policy options.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 104(1):26-29. 49 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Malaria remains a major global health burden, killing hundreds of thousands annually, especially in sub-Saharan Africa. In December 2019, a novel illness termed COVID-19, caused by SARS-CoV-2, was reported in China. This disease soon spread around the world and was declared a pandemic by the WHO on March 11, 2020. Considering that the malaria burden is high in many low-income tropical countries with little capacity to fund malaria control and eradication programs, the fight against malaria in these regions is likely to be hindered by COVID-19. Indeed, access to health care has generally been limited during the pandemic, whereas malaria interventions, such as seasonal malaria chemoprevention, and distribution of long-lasting insecticide-treated bed nets, have been suspended because of lockdowns. Likewise, the repurposing of antimalarials for the treatment of COVID-19 and a shift in focus from the production of malaria rapid diagnostic tests to COVID-19 rapid diagnostic tests are causes for concern in malaria-endemic regions. COVID-19 has disproportionately affected developed countries, threatening their capacity to aid in malaria control efforts. Here, we address impacts of the COVID-19 pandemic on the management and control of malaria in Africa.

Publication Type

Journal article.

<434>

Accession Number

20210007444

Author

Tian Ting; Zhang JingWen; Hu LiYuan; Jiang YuKang; Duan CongYuan; Li ZhongFei; Wang XueQin; Zhang HePing

Title

Risk factors associated with mortality of COVID-19 in 3125 counties of the United States.

Source

Infectious Diseases of Poverty; 2021. 10(3). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The number of cumulative confirmed cases of COVID-19 in the United States has risen sharply since March 2020. A county health ranking and roadmaps program has been established to identify factors associated with disparity in mobility and mortality of COVID-19 in all counties in the United States. The risk factors associated with county-level mortality of COVID-19 with various levels of prevalence are not well understood. Methods: Using the data obtained from the County Health Rankings and Roadmaps program, this study applied a negative binomial design to the county-level mortality counts of COVID-19 as of August 27, 2020 in the United States. In this design, the infected counties were categorized into three levels of infections using clustering analysis based on time-varying cumulative confirmed cases from March 1 to August 27, 2020. COVID-19 patients were not analyzed individually but were aggregated at the county-level, where the county-level deaths of COVID-19 confirmed by the local health agencies. Clustering analysis and Kruskal-Wallis tests were used in our statistical analysis. Results: A total of 3125 infected counties were assigned into three classes corresponding to low, median, and high prevalence levels of infection. Several risk factors were significantly associated with the mortality counts of COVID-19, where higher level of air pollution (0.153,  $P < 0.001$ ) increased the mortality in the low prevalence counties and elder individuals were more vulnerable in both the median (0.049,  $P < 0.001$ ) and high (0.114,  $P < 0.001$ ) prevalence counties. The segregation between non-Whites and Whites (low: 0.015,  $P < 0.001$ ; median: 0.025,  $P < 0.001$ ; high: 0.019,  $P = 0.005$ ) and higher Hispanic population (low and median: 0.020,  $P < 0.001$ ; high: 0.014,  $P = 0.009$ ) had higher likelihood of risk of the deaths in all infected counties. Conclusions: The mortality of COVID-19 depended on sex, race/ethnicity, and outdoor environment. The increasing awareness of the impact of these significant factors may help decision makers, the public health officials, and the general public better control the risk of pandemic, particularly in the reduction in the mortality of COVID-19.

#### Publication Type

Journal article.

<435>

#### Accession Number

20210007442

#### Author

Ayat Zawawi; Maimonah Alghanmi; Isra Alsaady; Hattan Gattan; Haytham Zakai; Couper, K.

#### Title

The impact of COVID-19 pandemic on malaria elimination.

#### Source

Parasite Epidemiology and Control; 2020. 11. many ref.

#### Publisher

Elsevier

#### Location of Publisher

Oxford

#### Country of Publication

UK

Abstract

SARS-CoV-2 has spread throughout the world and become the cause of the infectious coronavirus disease 2019 (COVID-19). As low- and middle-income countries shift increasingly to focus on identifying and treating COVID-19, questions are emerging about the impact this shift in focus will have on ongoing efforts to control other infectious diseases, such as malaria. This review discusses how the spread of SARS-CoV-2 in low- and middle-income countries might impact these efforts, focusing in particular on the effects of co-infection and the use of antimalarial drugs used to treat malaria as therapeutic interventions for COVID-19.

Publication Type

Journal article.

<436>

Accession Number

20210007304

Author

Palafox, B.; Renedo, A.; Lasco, G.; Palileo-Villanueva, L.; Balabanova, D.; McKee, M.

Title

Maintaining population health in low- and middle-income countries during the COVID-19 pandemic: why we should be investing in community health workers.

Source

Tropical Medicine and International Health; 2021. 26(1):20-22. 22 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Community health workers in low- and middle-income country primary health care systems are well suited to perform essential functions on the frontlines of Covid-19 pandemic responses. However, clear and coordinated guidance, updated infection control training, and reliable access to personal protective equipment must be ensured in order to deploy them safely and effectively. With these additional responsibilities, community health workers must also be supported to ensure that hard-fought gains in population health, including progress on non-communicable diseases, are sustained throughout the pandemic.

Publication Type

Journal article.

<437>

Accession Number

20210007302

Author

Anjorin, A. A.; Abioye, A. I.; Asowata, O. E.; Soipe, A.; Kazeem, M. I.; Adesanya, I. O.; Raji, M. A.; Adesanya, M.; Oke, F. A.; Lawal, F. J.; Kasali, B. A.; Omotayo, M. O.

Title

Comorbidities and the COVID-19 pandemic dynamics in Africa.

Source

Tropical Medicine and International Health; 2021. 26(1):2-13. 126 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The debate around the COVID-19 response in Africa has mostly focused on effects and implications of public health measures, in light of the socio-economic peculiarities of the continent. However, there has been limited exploration of the impact of differences in epidemiology of key comorbidities, and related healthcare factors, on the course and parameters of the pandemic. We summarise what is known about (a) the pathophysiological processes underlying the interaction of coinfections and comorbidities in shaping prognosis of COVID-19 patients, (b) the epidemiology of key coinfections and comorbidities, and the state of related healthcare infrastructure that might shape the course of the pandemic, and (c) implications of (a) and (b) for pandemic management and post-pandemic priorities. There is a critical need to generate empirical data on clinical profiles and the predictors of morbidity and mortality from COVID-19. Improved protocols for acute febrile illness and access to diagnostic facilities, not just for SARS-CoV-2 but also other viral infections, are of urgent importance. The role of malaria, HIV/TB and chronic malnutrition on pandemic dynamics should be further investigated. Although chronic non-communicable diseases account for a relatively lighter burden, they have a significant effect on COVID-19 prognosis, and the fragility of care delivery systems implies that adjustments to clinical procedures and re-organisation of care delivery that have been useful in other regions are unlikely to be feasible. Africa is a large region with local variations in factors that can shape pandemic dynamics. A one-size-fits-all response is not optimal, but there are broad lessons relating to differences in epidemiology and healthcare delivery factors, that should be considered as part of a regional COVID-19 response framework.

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Publication Type

Journal article.

<438>

Accession Number

20210007237

Author

George, C. E.; Inbaraj, L. R.; Shon Rajukutty; Witte, L. P. de

Title

Challenges, experience and coping of health professionals in delivering healthcare in an urban slum in India during the first 40 days of COVID-19 crisis: a mixed method study.

Source

BMJ Open; 2020. 10(11). 54 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** To describe the initial dilemmas, mental stress, adaptive measures implemented and how the healthcare team collectively coped while providing healthcare services in a large slum in India, during the COVID-19 pandemic. **Setting:** Community Health Division, Bangalore Baptist Hospital, Bangalore. **Study design:** We used mixed methods research with a quantitative (QUAN) paradigm nested in the primary qualitative (QUAL) design. QUAL methods included ethnography research methods, in-depth interviews and focus group discussions. **Participants:** A healthcare team of doctors, nurses, paramedical and support staff. Out of 87 staff, 42 participated in the QUAL methods and 64 participated in the QUAN survey. **Results:** Being cognizant of the extreme vulnerability of the slums, the health team struggled with conflicting thoughts of self-preservation and their moral obligation to the marginalised section of society. Majority (75%) of the staff experienced fear at some point in time. Distracting themselves with hobbies (20.3%) and spending more time with family (39.1%) were cited as a means of emotional regulation by the participants in the QUAN survey. In the QUAL interviews, fear of death, the guilt of disease transmission to their loved ones, anxiety about probable violence and stigma in the slums and exhaustion emerged as the major themes causing stress among healthcare professionals. With positive cognitive reappraisal, the health team collectively designed and implemented adaptive interventions to ensure continuity of care. They dealt with the new demands by positive reframing, peer support, distancing, information seeking, response efficacy, self-efficacy, existential goal pursuit, value adherence and religious coping. **Conclusion:** The novel threat of the COVID-19 pandemic threw insurmountable challenges potentiating disastrous consequences; slums

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becoming a threat to themselves, threat to the health providers and a threat for all. Perhaps, a lesson we could learn from this pandemic is to incorporate 'slum health' within universal healthcare.

#### Publication Type

Journal article.

<439>

#### Accession Number

20210007232

#### Author

Vindrola-Padros, C.; Andrews, L.; Dowrick, A.; Djellouli, N.; Fillmore, H.; Gonzalez, E. B.; Javadi, D.; Lewis-Jackson, S.; Manby, L.; Mitchinson, L.; Symmons, S. M.; Martin, S.; Regenold, N.; Robinson, H.; Sumray, K.; Singleton, G.; Syversen, A.; Vanderslott, S.; Johnson, G.

#### Title

Perceptions and experiences of healthcare workers during the COVID-19 pandemic in the UK.

#### Source

BMJ Open; 2020. 10(11). 36 ref.

#### Publisher

BMJ Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Objective:** The COVID-19 pandemic has set unprecedented demand on the healthcare workforce around the world. The UK has been one of the most affected countries in Europe. The aim of this study was to explore the perceptions and experiences of healthcare workers (HCWs) in relation to COVID-19 and care delivery models implemented to deal with the pandemic in the UK. **Methods:** The study was designed as a rapid appraisal combining: (1) a review of UK healthcare policies (n=35 policies), (2) mass media and social media analysis of front-line staff experiences and perceptions (n=101 newspaper articles, n=1 46 000 posts) and (3) in-depth (telephone) interviews with front-line staff (n=30 interviews). The findings from all streams were analysed using framework analysis. **Results:** Limited personal protective equipment (PPE) and lack of routine testing created anxiety and distress and had a tangible impact on the workforce. When PPE was available, incorrect size and overheating complicated routine work. Lack of training for redeployed staff and the failure to consider the skills of redeployed staff for new areas were identified as problems. Positive aspects of daily work reported by HCWs included solidarity between colleagues, the establishment of well-being support structures and feeling valued by society. **Conclusion:** Our study highlighted the importance of taking into consideration the experiences and concerns of front-line staff during a pandemic. Staff working

in the UK during the COVID-19 pandemic advocated clear and consistent guidelines, streamlined testing of HCWs, administration of PPE and acknowledgement of the effects of PPE on routine practice.

Publication Type

Journal article.

<440>

Accession Number

20210007211

Author

Okeahalam, C.; Williams, V.; Otwombe, K.

Title

Factors associated with COVID-19 infections and mortality in Africa: a cross-sectional study using publicly available data.

Source

BMJ Open; 2020. 10(11). 28 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Introduction:** The current COVID-19 pandemic is a global threat. This elicits questions on the level of preparedness and capacity of health systems to respond to emergencies relative to other parts of the world. **Methods:** This cross-sectional study uses publicly available core health data for 53 African countries to determine risk factors for cumulative COVID-19 deaths and cases per million in all countries in the continent. Descriptive statistics were determined for the indicators, and a negative binomial regression was used for modelling the risk factors. **Results:** In sub-Saharan Africa, an increase in the number of nursing and midwifery personnel decreased the risk of COVID-19 deaths ( $p=0.0178$ ), while a unit increase in universal healthcare (UHC) index of service coverage and prevalence of insufficient physical activity among adults increased the risk of COVID-19 deaths ( $p=0.0432$  and  $p=0.0127$ ). An increase in the proportion of infants initiating breast feeding reduced the number of cases per million ( $p<0.0001$ ), while an increase in higher healthy life expectancy at birth increased the number of cases per million ( $p=0.0340$ ). **Conclusion:** Despite its limited resources, Africa's preparedness and response to the COVID-19 pandemic can be improved by identifying and addressing specific gaps in the funding of health services delivery. These gaps impact negatively on service delivery in Africa, which requires more nursing personnel and increased UHC coverage to mitigate the effects of COVID-19.



Publication Type

Journal article.

<441>

Accession Number

20210007199

Author

Ayesheshim Muluneh Kassa; Asnakew Molla Mekonen; Kedir Abdu Yesuf; Abay Woday Tadesse; Getahun Gebre Bogale

Title

Knowledge level and factors influencing prevention of COVID-19 pandemic among residents of Dessie and Kombolcha City administrations, North-East Ethiopia: a population-based cross-sectional study.

Source

BMJ Open; 2020. 10(11). 37 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objective:** In Ethiopia, community-level knowledge about the current COVID-19 pandemic has not been well studied. This study is aimed to assess knowledge level and factors influencing the prevention of the COVID-19 pandemic among residents of Dessie and Kombolcha city administrations, Ethiopia. **Design:** Community-based cross-sectional study. **Settings:** Dessie and Kombolcha city administrations. **Participants:** Participants were household heads or members (n=828, >18 years) who have lived in the study area for at least 2 months preceding the survey. **Methods:** Binary logistic regression was used for a single outcome and multiple response variables. In the multivariable regression model, a value of p<0.05 and adjusted OR (AOR) with 95% CI were used to identify factors associated with knowledge level of the community. Epi Info V.7.2 and SPSS V.20 software were used for data entry and analysis, respectively. **Outcome:** Knowledge level. **Results:** A total of 828 participants was involved with a response rate of 98%. Women were 61.7%. Participants' mean (+or-SD) age was 39 (+or-14) years. Of the total participants 54.11% (95% CI 50.6% to 57.6%) had inadequate knowledge about COVID-19 prevention. Significant associations were reported among women (AOR=1.41; 95% CI 1.03 to 1.92); age 65 years (AOR=2.72; 95% CI 1.45 to 5.11); rural residence (AOR=2.69; 95% CI 1.78 to 4.07); unable to read and write (AOR=1.60; 95% CI 1.02 to 2.51); information not heard from healthcare workers, mass media and social media (AOR=1.95; 95% CI 1.35 to 2.82), (AOR=2.5; 95% CI 1.58 to 4.19) and (AOR=2.13; 95% CI 1.33 to 3.42), respectively, with inadequate knowledge. **Conclusion:** These findings revealed that more than 50% of participants had inadequate

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knowledge about COVID-19. It highlights the need for widespread awareness campaigns about COVID-19 through mass media, healthcare professionals and social media as sources of information. House-to-house awareness creation is recommended to address older adults who are more vulnerable to the pandemic.

#### Publication Type

Journal article.

<442>

#### Accession Number

20210007193

#### Author

Chen MiaoMiao; Liu XiYao; Zhang Jun; Sun GuoQiang; Gao Ying; Shi Yuan; Baker, P.; Zeng Jing; Zheng YangXi; Luo Xin; Qi HongBo

#### Title

Characteristics of online medical care consultation for pregnant women during the COVID-19 outbreak: cross-sectional study.

#### Source

BMJ Open; 2020. 10(11). 34 ref.

#### Publisher

BMJ Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Objectives:** This study described the needs of pregnant women and the contents of online obstetric consultation in representative areas with various severity of the epidemic in China. **Design:** This was a cross-sectional study. **Setting:** Yue Yi Tong (YYT), a free online communication platform that allows pregnant women to consult professional obstetricians. **Participants:** All the pregnant women who used the YYT platform. **Intervention:** From 10 to 23 February, we collected data on online obstetric consultations and participants' satisfaction through the YYT platform in the mild, moderate and severe epidemic areas which were defined according to the local confirmed cases. The primary outcomes were the reasons for online consultations by the severity of the epidemic. All the comparisons were performed using X2 test. **Statistical analysis** was performed using SPSS V.24. **Results:** A total of 2599 pregnant women participated in this study, of whom 448 (17.24%), 1332 (51.25%) and 819 (31.51%) were from the mild, moderate and severe epidemic areas, respectively. The distribution of the amount of online consultations was significantly different not only in different areas ( $p < 0.001$ ) but also in different trimesters ( $p < 0.001$ ). A total of 957 participants completed the satisfaction part of the survey. In this study, 77.95% of the participants used e-

health for the first time, and 94.63% of the participants were completely or mostly satisfied with the online consultations. Conclusions: The distribution of the amount of online consultations was significantly different not only in different areas but also in different trimesters. In any trimester, the amount of consultations on the second category (obstetric care-seeking behaviour) was the highest in the severe epidemic areas. The needs for online consultations were substantial. In order to prevent irreversible obstetric adverse events, an appropriate antenatal care contingency plan with e-health services is highly recommended during the Public Health Emergency of International Concern.

#### Publication Type

Journal article.

<443>

#### Accession Number

20210007192

#### Author

Chan, E. Y. Y.; Lo, E. S. K.; Huang Zhe; Kim, J. H.; Hung HeiDi; Hung, K. K. C.; Wong, E. L. Y.; Wong, S. Y. S.; Gobat, N.

#### Title

Characteristics and well-being of urban informal home care providers during COVID-19 pandemic: a population-based study.

#### Source

BMJ Open; 2020. 10(11). 33 ref.

#### Publisher

BMJ Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Objectives:** Globally, the COVID-19 pandemic has overwhelmed many healthcare systems, which has hampered access to routine clinical care during lockdowns. Informal home care, care provided by non-healthcare professionals, increases the community's healthcare capacity during pandemics. There is, however, limited research about the characteristics of informal home care providers and the challenges they face during such public health emergencies. **Design:** A random, cross-sectional, population-based, RDD, telephone survey study was conducted to examine patterns of home care, characteristics of informal home care providers and the challenges experienced by these care providers during this pandemic. **Setting:** Data were collected from 22 March to 1 April 2020 in Hong Kong, China. **Participants:** A population representative study sample of Chinese-speaking adults (n=765) was interviewed. **Primary and secondary**

outcome measures: The study examined the characteristics of informal home care providers and self-reported health requirements of those who needed care. The study also examined providers' self-perceived knowledge to provide routine home care as well as COVID-19 risk reduction care. Respondents were asked of their mental health status related to COVID-19. Results: Of the respondents, 25.1% of 765 provided informal home care during the studied COVID-19 pandemic period. Among the informal home care providers, 18.4% of respondents took leave from school/work during the epidemic to provide care for the sick, fragile elderly and small children. Care providers tended to be younger aged, female and housewives. Approximately half of care providers reported additional mental strain and 37.2% reported of challenges in daily living during epidemic. Although most informal home care providers felt competent to provide routine care, 49.5% felt inadequately prepared to cope with the additional health risks of COVID-19. Conclusion: During public health emergencies, heavy reliance on informal home healthcare providers necessitates better understanding of their specific needs and increased government services to support informal home care.

#### Publication Type

Journal article.

<444>

#### Accession Number

20210007143

#### Author

Molyneux, D.; Bush, S.; Bannerman, R.; Downs, P.; Shu'Aibu, J.; Boko-Collins, P.; Radvan, I.; Wohlgemuth, L.; Boyton, C.

#### Title

Neglected tropical diseases activities in Africa in the COVID-19 era: the need for a "hybrid" approach in COVID-endemic times.

#### Source

Infectious Diseases of Poverty; 2021. 10(1). 27 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

With the coronavirus disease 2019 (COVID-19) pandemic showing no signs of abating, resuming neglected tropical disease (NTD) activities, particularly mass drug administration (MDA), is vital. Failure to resume activities will not only enhance the risk of NTD transmission, but will fail to leverage behaviour change

messaging on the importance of hand and face washing and improved sanitation—a common strategy for several NTDs that also reduces the risk of COVID-19 spread. This so-called "hybrid approach" will demonstrate best practices for mitigating the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by incorporating physical distancing, use of masks, and frequent hand-washing in the delivery of medicines to endemic communities and support action against the transmission of the virus through water, sanitation and hygiene interventions promoted by NTD programmes. Unless MDA and morbidity management activities resume, achievement of NTD targets as projected in the WHO/NTD Roadmap (2021-2030) will be deferred, the aspirational goal of NTD programmes to enhance universal health coverage jeopardised and the call to 'leave no one behind' a hollow one. We outline what implementing this hybrid approach, which aims to strengthen health systems, and facilitate integration and cross-sector collaboration, can achieve based on work undertaken in several African countries.

#### Publication Type

Journal article.

<445>

#### Accession Number

20210007089

#### Author

Ammendolia, J.; Saturno, J.; Brooks, A. L.; Jacobs, S.; Jambeck, J. R.

#### Title

An emerging source of plastic pollution: environmental presence of plastic personal protective equipment (PPE) debris related to COVID-19 in a metropolitan city.

#### Source

Environmental Pollution; 2021. 269. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The COVID-19 pandemic has resulted in an unprecedented surge of production, consumption, and disposal of personal protective equipment (PPE) including face masks, disposable gloves, and disinfectant wipes, which are often made of single use plastic. Widespread public use of these items has imposed pressure on municipalities to properly collect and dispose of potentially infectious PPE. There has been a lack of structured monitoring efforts to quantify the emerging trend of improperly disposed of PPE debris. In this study, we present a baseline monitoring survey to describe the spatial distribution of PPE debris

during the COVID-19 pandemic from the metropolitan city of Toronto, Canada. Our objectives were to: (1) quantify PPE debris types among surveyed areas and; (2) identify PPE debris densities and accumulation of surveyed areas. A total of 1306 PPE debris items were documented, with the majority being disposable gloves (44%), followed by face masks (31%), and disinfecting wipes (25%). Of the face masks, 97% were designed for single use while only 3% were reusable. Of the surveyed locations, the highest daily average densities of PPE debris were recorded in the large and medium-sized grocery store parking lots and the hospital district (0.00475 items/m<sup>2</sup>, 0.00160 items/m<sup>2</sup>, and 0.00133 items/m<sup>2</sup> respectively). The two surveyed residential areas had the following highest PPE densities (0.00029 items/m<sup>2</sup> and 0.00027 items/m<sup>2</sup>), while the recreational trail had the lowest densities (0.00020 items/m<sup>2</sup>). Assuming a business-as-usual accumulation, an estimated 14,298 PPE items will be leaked as debris in just the surveyed areas annually. To facilitate proper disposal of PPE debris by the public we recommend development of municipal efforts to improve PPE collection methods that are informed by the described PPE waste pathways.

#### Publication Type

Journal article.

<446>

#### Accession Number

20210006689

#### Author

Gungor, S.; Oner, B.

#### Title

The change in recreational activity usage in the normalization process after COVID-19 and individuals' cravings for urban green areas. [Turkish]

#### Source

Turkish Journal of Agriculture - Food Science and Technology; 2020. 8(Special Issue 1):8-12. 20 ref.

#### Publisher

Turkish Science and Technology

#### Location of Publisher

Sivas

#### Country of Publication

Turkey

#### Abstract

In this study, we examined how the new type of coronavirus (COVID-19), which originated in Wuhan, China, affected the whole world in a short time, affected individuals' recreational activities and how much these activities changed after the normalization process. After the first case was announced in our country on March 10, 2020, many measures were taken, and within the scope of these measures, bans and partial bans occurred. The coronavirus, which has been declared a pandemic by the World Health Organization

and has become a deadly virus all over the world, has also directly affected the recreational activities of people. The study, the longing of individuals to green areas during this epidemic period was evaluated by comparing the conditions before and after the normalization process of recreational activities. In addition, the findings obtained in accordance with the survey conducted in the study indicate that the new coronavirus affects both the recreational activities and psychological conditions of people.

#### Publication Type

Journal article

Conference paper.

<447>

#### Accession Number

20210006668

#### Author

Uzzaman, M. N.; Jackson, T.; Uddin, A.; Rowa-Dewar, N.; Chisti, M. J.; Habib, G. M. M.; Pinn, H.

#### Title

Continuing professional education for general practitioners on chronic obstructive pulmonary disease: feasibility of a blended learning approach in Bangladesh.

#### Source

BMC Family Practice; 2020. 21(203). 44 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Background: Continuing medical education (CME) is essential to developing and maintaining high quality primary care. Traditionally, CME is delivered face-to-face, but due to geographical distances, and pressure of work in Bangladesh, general practitioners (GPs) are unable to relocate for several days to attend training. Using chronic obstructive pulmonary disease (COPD) as an exemplar, we aimed to assess the feasibility of blended learning (combination of face-to-face and online) for GPs, and explore trainees' and trainers' perspectives towards the blended learning approach. Methods: We used a mixed-methods design. We trained 49 GPs in two groups via blended (n = 25) and traditional face-to-face approach (n = 24) and assessed their post-course knowledge and skills. The COPD Physician Practice Assessment Questionnaire (COPD-PPAQ) was administered before and one-month post-course. Verbatim transcriptions of focus group discussions with 18 course attendees and interviews with three course trainers were translated into English

and analysed thematically. Results: Forty GPs completed the course (Blended: 19; Traditional: 21). The knowledge and skills post course, and the improvement in self-reported adherence to COPD guidelines was similar in both groups. Most participants preferred blended learning as it was more convenient than taking time out of their busy work life, and for many the online learning optimised the benefits of the subsequent face-to-face sessions. Suggested improvements included online interactivity with tutors, improved user friendliness of the e-learning platform, and timing face-to-face classes over weekends to avoid time-out of practice. Conclusions: Quality improvement requires a multifaceted approach, but adequate knowledge and skills are core components. Blended learning is feasible and, with a few caveats, is an acceptable option to GPs in Bangladesh. This is timely, given that online learning with limited face-to-face contact is likely to become the norm in the on-going COVID-19 pandemic.

#### Publication Type

Journal article.

<448>

#### Accession Number

20210006662

#### Author

Dhanani, J.; Pang, G.; Pincus, J.; Ahern, B.; Goodwin, W.; Cowling, N.; Whitten, G.; Abdul-Aziz, M. H.; Martin, S.; Corke, P.; Laupland, K. B.

#### Title

Increasing ventilator surge capacity in COVID 19 pandemic: design, manufacture and in vitro-in vivo testing in anaesthetized healthy pigs of a rapid prototyped mechanical ventilator.

#### Source

BMC Research Notes; 2020. 13(421). 18 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Objective:** The advent of new technologies has made it possible to explore alternative ventilator manufacturing to meet the worldwide shortfall for mechanical ventilators especially in pandemics. We describe a method using rapid prototyping technologies to create an electro-mechanical ventilator in a cost effective, timely manner and provide results of testing using an in vitro-in vivo testing model. **Results:** Rapid prototyping technologies (3D printing and 2D cutting) were used to create a modular ventilator. The artificial manual breathing unit (AMBU) bag connected to wall oxygen source using a flow meter was used



as air reservoir. Controlled variables include respiratory rate, tidal volume and inspiratory: expiratory (I:E) ratio. In vitro testing and In vivo testing in the pig model demonstrated comparable mechanical efficiency of the test ventilator to that of standard ventilator but showed the material limits of 3D printed gears. Improved gear design resulted in better ventilator durability whilst reducing manufacturing time (< 2-h). The entire cost of manufacture of ventilator was estimated at 300 Australian dollars. A cost-effective novel rapid prototyped ventilator for use in patients with respiratory failure was developed in < 2-h and was effective in anesthetized, healthy pig model.

Publication Type

Journal article.

<449>

Accession Number

20210006549

Author

Wang, C. Y. T.; Buckley, C.; Bletchly, C.; Harris, P.; Whiley, D.

Title

Contamination of SARS-CoV-2 RT-PCR probes at the oligonucleotide manufacturer. (Special Issue: Focus on SARS-CoV-2 and COVID-19.)

Source

Pathology; 2020. 52(7):814-816.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<450>

Accession Number

20210006544

Author

Kaufer, A. M.; Theis, T.; Lau, K. A.; Gray, J. L.; Rawlinson, W. D.

Title

Laboratory biosafety measures involving SARS-CoV-2 and the classification as a Risk Group 3 biological agent. (Special Issue: Focus on SARS-CoV-2 and COVID-19.)

Source

Pathology; 2020. 52(7):790-795.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The current public health emergency surrounding the COVID-19 pandemic, that is the illness caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has resulted in thousands of cases in Australia since 25 January 2020 when the first case was diagnosed. This emerging virus presents particular hazards to researchers and laboratory staff in a clinical setting, highlighted by rapid and widespread global transmission. Based on the epidemiological and clinical data that have become available in mid-2020, we propose the interim classification of SARS-CoV-2 as a Risk Group 3 organism is reasonable, and discuss establishing Biosafety Level 3 (BSL-3) regulations accordingly. Despite its global spread, the reported mortality rate of SARS-CoV-2 ranging from 0.13% to 6.22% is considerably less than that of other Risk Group 4 agents including Ebola and Marburg viruses with fatality rates as high as 90%. In addition, studies have demonstrated that approximately 86% of patients presenting with severe courses of the disease are aged 70 years or above, with the presence of comorbid conditions such as cardiovascular and respiratory system diseases in the majority of all fatal cases. In contrary to recent discussions surrounding the protective and administrative measures needed in a laboratory, the emerging evidence surrounding mortality rate, distinct demographics of severe infections, and the presence of underlying diseases does not justify the categorisation of SARS-CoV-2 as a Risk Group 4 organism. This article summarises biosafety precautions, control measures and appropriate physical containment facilities required to minimise the risk of laboratory-acquired infections with SARS-CoV-2.

Publication Type

Journal article.

<451>

Accession Number

20210006466

Author

Ghasemnejad-Berenji, M.; Pashapour, S.; Ghasemnejad-Berenji, H.

Title

Therapeutic potential for clomiphene, a selective estrogen receptor modulator, in the treatment of COVID-19.

Source

Medical Hypotheses; 2020. 145.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Publication Type

Correspondence.

<452>

Accession Number

20210006459

Author

Regidor, P. A.; Santos, F. G.; Rizo, J. M.; Egea, F. M.

Title

Pro resolving inflammatory effects of the lipid mediators of omega 3 fatty acids and its implication in SARS COVID-19.

Source

Medical Hypotheses; 2020. 145. 38 ref.

Publisher

Elsevier Ltd

Location of Publisher

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Oxford

Country of Publication

UK

Abstract

COVID-19 is a new disease caused by coronavirus SARS-CoV-2. It was first described in 2019, developed into an epidemic in January 2020 and has spread the global to the present COVID-19 pandemic. Specialized pro-resolving mediators (SPMs) may play a new role in the management of this lung disease because SPM actively stimulate the resolution of infectious inflammation and are organ protective in animal disease models. Many tissues have been suitable targets for treating inflammation with SPMs or their active precursors 18-HEPE, 17-HDHA and the 14-HDHA, in order to elicit dynamic resolution of inflammation. Here we discuss the possible mode of action of these substances in the management of SARS Covid 19.

Publication Type

Journal article.

<453>

Accession Number

20210006455

Author

Hoang BaX.; Han, B.

Title

A possible application of hinokitiol as a natural zinc ionophore and anti-infective agent for the prevention and treatment of COVID-19 and viral infections.

Source

Medical Hypotheses; 2020. 145.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Zinc and the combination with zinc ionophore have been reported in basic research and several clinical investigations as a potentially viable and economical preventive and therapeutic options for COVID-19 treatment. Zinc is a vital microelement that actively supports respiratory epithelium barrier integrity, innate and adaptive immune functions, and inflammatory regulations. Moreover, zinc may also prevent viral

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entry, suppress viral replication, and mitigate the damages due to oxidative stress and hyperinflammatory reaction in patients with respiratory infections. Hinokitiol (beta-thujaplicin) is a natural monoterpenoid and is considered as a safe zinc ionophore to help zinc transport into cells. It has been widely used in skin and oral care, and therapeutic products for its potent antiviral, antimicrobial, antifungal, anti-inflammatory, and anticancer applications. The ongoing COVID-19 pandemic and the significant morbidity and mortality exist in the high-risk group of patients associated with other respiratory infections such as influenza, respiratory syncytial virus, and dengue fever. There is an urgent need for the development of inexpensive, safe, and effective therapeutics to prevent and treat these viral infections. Considering that hydroxychloroquine (HCQ), the most studied zinc ionophore drug for COVID-19, is linked to potentially serious side effects, we propose the implementation of hinokitiol as a zinc ionophore and anti-infective agent for the prevention and treatment of COVID-19 and other viral infections.

#### Publication Type

Journal article.

<454>

#### Accession Number

20210006451

#### Author

Deek, S. A.

#### Title

Chronic exposure to air pollution implications on COVID-19 severity.

#### Source

Medical Hypotheses; 2020. 145.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Populations in areas with higher levels of air pollution both indoors and outdoors show increased mortality rates when infected with coronavirus disease 2019 (COVID-19). The association between air quality and COVID-19 is commonly attributed to the risk of transmission. Although controlled transmission is crucial, further investigation into air quality traits that contribute to the lethality of COVID-19 in infected persons enables risk stratification and optimization of the allocation of resources. There is a need for a valid basis for the proactive identification of indicators of COVID-19 severity in air quality that allow for the implementation of systematic environmental improvements aimed at preventing COVID-19 mortality. In

this paper, chronic exposure to fine particulate matter (PM) is identified as a source of disrupted activation of the hypothalamic-pituitary-adrenal (HPA) axis; it is therefore, a contributable variable to COVID-19 mortality.

Publication Type

Journal article.

<455>

Accession Number

20210006404

Author

Urzua, A.; Samaniego, A.; Caqueo-Urizar, A.; Zapata Pizarro, A.; Irrrazaval Dominguez, M.

Title

Mental health problems among health care workers during the COVID-19 pandemic. [Spanish]

Source

Revista Medica de Chile; 2020. 148(8):1121-1127. 34 ref.

Publisher

Sociedad Medica de Santiago

Location of Publisher

Santiago

Country of Publication

Chile

Abstract

Background: COVID-19 has effects on the mental health of health care workers. Aim: To explore the presence of symptoms associated with mental health problems and associated risk factors in health workers. Material and Methods: The questionnaires PHQ-9 for depression, GAD-7 for anxiety, ISI-7 for insomnia and IES-R-22 for psychological distress were applied to 125 health care workers aged 18 to 67 years (32 physicians, 22 nurses and 71 of other professions) laboring in hospitals and primary care facilities along Chile. Results: Sixty five percent reported depression symptoms, 74% anxiety, 65% insomnia and 57% distress. Physicians had lower median scores in all scales than nurses and other health professionals. Professionals attending patients with respiratory infections or with COVID-19 had higher median scores in the scales that their counterparts. Conclusions: The frequency of mental health problems among these professionals is high and preventive measures should be taken.

Publication Type

Journal article.

<456>

Accession Number

20210006328

Author

Albert, L.; Capel, I.; Garcia-Saez, G.; Martin-Redondo, P.; Hernando, M. E.; Rigla, M.

Title

Managing gestational diabetes mellitus using a smartphone application with artificial intelligence (SineDie) during the COVID-19 pandemic: much more than just telemedicine.

Source

Diabetes Research and Clinical Practice; 2020. 169.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

We describe our experience in the remote management of women with gestational diabetes mellitus during the COVID-19 pandemic. We used a mobile phone application with artificial intelligence that automatically classifies and analyses the data (ketonuria, diet transgressions, and blood glucose values), making adjustment recommendations regarding the diet or insulin treatment.

Publication Type

Journal article.

<457>

Accession Number

20210005829

Author

Khalid Bajunaid; Abdullah Alatar; Ashwag Alqurashi; Mohammad Alkutbi; Alzahrani, A. H.; Sabbagh, A. J.; Abdullah Alobaid; Abdulwahed Barnawi; Alferayan, A. A.; Alkhani, A. M.; Ali Salamah; Sheikh, B. Y.; Alotaibi, F. E.; Faisal Alabbas; Faisal Farrash; Al-Jehani, H. M.; Husam Alhabib; Ibrahim Alnaami; Ikhlass Altweijri; Isam Khoja; Mahmoud Taha; Moajeb Alzahrani; Bafaquh, M. S.; Mohammed Binmahfoodh; Algahtany, M. A.; Al-Rashed, S.; Raza, S. M.; Sherif Elwatidy; Alomar, S. A.; Al-Issawi, W.; Khormi, Y. H.; Ahmad Ammar; Al-Habib, A.; Baeesa, S. S.; Abdulrazag Aylan

#### Title

The longitudinal impact of COVID-19 pandemic on neurosurgical practice.

#### Source

Clinical Neurology and Neurosurgery; 2020. 198.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

**Objective:** This observational cross-sectional multicenter study aimed to evaluate the longitudinal impact of the coronavirus disease 2019 (COVID-19) pandemic on neurosurgical practice. **Methods:** We included 29 participating neurosurgeons in centers from all geographical regions in the Kingdom of Saudi Arabia. The study period, which was between March 5, 2020 and May 20, 2020, was divided into three equal periods to determine the longitudinal effect of COVID-19 measures on neurosurgical practice over time. **Results:** During the 11-week study period, 474 neurosurgical interventions were performed. The median number of neurosurgical procedures per day was 5.5 (interquartile range [IQR]: 3.5-8). The number of cases declined from 72 in the first week and plateaued at the 30's range in subsequent weeks. The most and least number of performed procedures were oncology (129 [27.2%]) and functional procedures (6 [1.3%]), respectively. Emergency (Priority 1) cases were more frequent than non-urgent (Priority 4) cases (178 [37.6%] vs. 74 [15.6%], respectively). In our series, there were three positive COVID-19 cases. There was a significant among-period difference in the length of hospital stay, which dropped from a median stay of 7 days (IQR: 4-18) to 6 (IQR: 3-13) to 5 days (IQR: 2-8). There was no significant among-period difference with respect to institution type, complications, or mortality. **Conclusion:** Our study demonstrated that the COVID-19 pandemic decreased the number of procedures performed in neurosurgery practice. The load of emergency neurosurgery procedures did not change throughout the three periods, which reflects the need to designate ample resources to cover emergencies. Notably, with strict screening for COVID -19 infections, neurosurgical procedures could be safely performed during the early pandemic phase. We recommend to restart performing neurosurgical procedures once the pandemic gets stabilized to avoid possible post pandemic health-care system intolerable overload.

#### Publication Type

Journal article.



<458>

Accession Number

20210005802

Author

Giesen, N.; Sprute, R.; Ruthrich, M.; Khodamoradi, Y.; Mellinghoff, S. C.; Beutel, G.; Lueck, C.; Koldehoff, M.; Hentrich, M.; Sandherr, M.; Bergwelt-Baildon, M. von; Wolf, H. H.; Hirsch, H. H.; Wormann, B.; Cornely, O. A.; Kohler, P.; Schalk, E.; Lilienfeld-Toal, M. von

Title

Evidence-based management of COVID-19 in cancer patients: guideline by the Infectious Diseases Working Party (AGIHO) of the German Society for Haematology and Medical Oncology (DGHO).

Source

European Journal of Cancer; 2020. 140:86-104. 160 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Since its first detection in China in late 2019 the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the associated infectious disease COVID-19 continue to have a major impact on global healthcare and clinical practice. Cancer patients, in particular those with haematological malignancies, seem to be at an increased risk for a severe course of infection. Deliberations to avoid or defer potentially immunosuppressive therapies in these patients need to be balanced against the overarching goal of providing optimal antineoplastic treatment. This poses a unique challenge to treating physicians. This guideline provides evidence-based recommendations regarding prevention, diagnostics and treatment of SARS-CoV-2 infection and COVID-19 as well as strategies towards safe antineoplastic care during the COVID-19 pandemic. It was prepared by the Infectious Diseases Working Party (AGIHO) of the German Society for Haematology and Medical Oncology (DGHO) by critically reviewing the currently available data on SARS-CoV-2 and COVID-19 in cancer patients applying evidence-based medicine criteria.

Publication Type

Journal article.

<459>

Accession Number

20210005722

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Author

Sinaci, S.; Tokalioglu, E. O.; Ocal, D.; Atalay, A.; Yilmaz, G.; Keskin, H. L.; Erdinc, S. O.; Sahin, D.; Tekin, O. M.

Title

Does having a high-risk pregnancy influence anxiety level during the COVID-19 pandemic?

Source

European Journal of Obstetrics & Gynecology and Reproductive Biology; 2020. 255:190-196.

Publisher

Elsevier Ireland

Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

Objective: We aimed to analyze the changing level of anxiety during COVID-19 pandemic in pregnant women, with and without high-risk indicators separately, in a tertiary care center serving also for COVID-19 patients, in the capital of Turkey. Study design: We designed a case-control and cross-sectional study using surveys. The Spielberger State-Trait Anxiety Scale questionnaire (STAI-T) and Beck Anxiety Inventory (BAI) which were validated in Turkish were given to outpatient women with high-risk pregnancies as study group and normal pregnancies as control group. A total of 446 women were recruited. Results: There was a statistically significant difference between those with and without high-risk pregnancy in terms of Trait-State Anxiety scores with COVID-19 pandemic ( $p < 0.05$ ). We found an increased prevalence of anxiety during COVID-19 pandemic in high-risk pregnant women comparing to pregnancies with no risk factors ( $p < 0.05$ ). There was a statistically significant difference between the education level in high-risk pregnant women in terms of anxiety scores ( $p < 0.05$ ), Beck Anxiety score was highest in high school graduates (42.75). While the level of Trait Anxiety was the highest with pandemic in those with high-risk pregnancy with threatened preterm labor and preterm ruptures of membranes (58.0), those with thrombophilia were the lowest (50.88). The State Anxiety level and Beck Anxiety Score of those with maternal systemic disease were the highest (53.32 and 45.53), while those with thrombophilia were the lowest (46.96 and 40.08). The scores of Trait Anxiety (56.38), State Anxiety (52.14), Beck Anxiety (43.94) were statistically higher during the pandemic in those hospitalized at least once ( $p < 0.05$ ). Conclusion: High-risk pregnant women require routine anxiety and depression screening and psychosocial support during the COVID-19 pandemic. High-risk pregnancy patients have comorbid conditions most of the time, hence they not only at more risk for getting infected, but also have higher anxiety scores because of the stress caused by COVID-19 pandemic.

Publication Type

Journal article.

<460>

Accession Number

20210005664

Author

Lai RuYing; Tan Li; Lai XiaoQuan; Zhang XinPing; Zhou Qian

Title

Help-seeking behavior of returning to work in healthcare workers and its influencing factors during COVID-19 subsiding.

Source

Journal of Occupational and Environmental Medicine; 2020. 62(11):898-903.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

**Objectives:** To explore the level and influencing factors of help-seeking behavior of returning to work in healthcare workers (HCWs). **Methods:** A total of 861 HCWs were surveyed. A structured self-administered questionnaire was used to collect data. Multivariable logistic regression was performed to examine the influencing factors of help-seeking behavior. **Results:** HCWs sought help with respect to COVID-19-diagnosed problem most. Help-seeking intention, problems encountered after return, test for return, work condition during COVID-19, relatives or friends diagnosed or suspected as COVID-19, and socio-demographic characteristics such as occupation, education, title, and marriage status are predictors of help-seeking behavior. **Conclusions:** Education and intervention should lay particular stress on HCWs featured rest at home before return, doctor, lower education and lower title to ensure the safety, accuracy, and quality of work after they return to work for a better occupational environment.

Publication Type

Journal article.

<461>

Accession Number

20210005661

Author

Azza Sarfraz; Zouina Sarfraz; Ammar Anwer; Muzna Sarfraz; Javaria Siddiq

Title

Availability, use, and satisfaction of personal protective equipment among healthcare workers: a cross-sectional assessment of low- and middle-income countries.

Source

Journal of Occupational and Environmental Medicine; 2020. 62(11):e657-e664.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

**Objective:** To assess the discrepancy among and within low- and middle-income countries (LMICs) regarding PPE availability, use, and satisfaction. **Methods:** The study population consisted of healthcare workers from LMICs who partook in the questionnaire survey from March 1, 2020, until April 15, 2020. **Results:** In the bivariate analysis, gender ( $P = 0.05$ ), HCWs ( $P < 0.01$ ), and level of care ( $P < 0.01$ ) were associated with the public or private sector ( $P < 0.05$ ). Using multivariate analysis, PPE factors were associated with the health sector ( $p < 0.05$ ). The multivariate logistic regression model determined a Pearson's  $\chi^2$  value of 706.736 ( $df = 726$ ,  $P = -0.689$ ) and a c-statistic of 0.592, indicating a good model. **Conclusion:** In LMICs, huge discrepancies are present in PPE provision to HCWs, especially among the public healthcare sectors. Efforts at national and international levels ought to be addressed to protect frontline HCWs at higher risk of contracting COVID-19.

Publication Type

Journal article.

<462>

Accession Number

20210005596

Author

Sloan, A. E.

Title

Food safety through the prism of COVID-19.

Source

Food Technology (Chicago); 2020. 74(8).

Publisher

Institute of Food Technologists

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Location of Publisher

Chicago

Country of Publication

USA

Publication Type

Journal article.

<463>

Accession Number

20210005471

Author

Hasan, S. N.; Ankit Srivastva; Anand Bihari; Singh, P. K.

Title

Management perspective of COVID-19 patients from L1 till L3 level hospital: an observational study.

Source

National Journal of Physiology, Pharmacy and Pharmacology; 2020. 10(11):1002-1005. 11 ref.

Publisher

Association of Physiologists, Pharmacists and Pharmacologists (APPP)

Location of Publisher

New Delhi

Country of Publication

India

Abstract

**Background:** The coronavirus (CoV) specifically known as CoVs disease (COVID)-19 spread from Wuhan city of China to the whole world and created havoc worldwide. It is an RNA virus of family beta-CoVs, and it is third CoV infection after Middle East respiratory syndrome and subacute respiratory syndrome. **Aim and Objective:** The objective of this study was to assess the status of COVID-19 patients in the study area. **Materials and Methods:** A hospital-based cross-sectional study was conducted in Government Medical College, Azamgarh, on the subjects either suspected or confirmed with COVID 19 tests for March 20, 2020, till the submission of this research. Oral consent was taken from all the patients. The total number of patients included in the study is 81 who were declared as COVID positive patients admitted in the isolation ward after taking throat and nasal swab followed by reverse transcription-polymerase chain reaction technique. Out of 81, 73 (90.12%) were male and 8 (9.88%) were female and the age varies from 8 years to 95 years with the mean age of 35.48 years. Out of total patients, 1 was referred due to critical illness, two were shifted to L1 hospital, and 27 were discharged in satisfactory conditions. **Results:** The majority of

patients (61.00%) were asymptomatic and the patients who were having symptoms presented sore throat and cough (32.00%), fever and cough 19%, sore throat, headache and body-ache (16.00%), cough, sore throat and chest pain (12.00%), and vomiting and pain abdomen (0.06%). Radiological investigations have suggested mild acute respiratory distress syndrome (ARDS) in almost (10.00%), and some subjects show changes in chronic obstructive pulmonary disease. There were 2 patients who showed severe changes of ARDS (<6.00%). Conclusion: The present study concludes that most of the patients were not much literate, and it was a challenge to make them understand the sensitivity of infection spread. The patients who showed symptoms were lesser; maximum was presented as sore throat, cough, and fever followed by other minor symptoms.

#### Publication Type

Journal article.

<464>

#### Accession Number

20210005439

#### Author

Tse, D. M. S.; Li Zhuo; Lu Ye; Li Yang; Liu Ying; Wong, W. C. W.

#### Title

Fighting against COVID-19: preparedness and implications on clinical practice in primary care in Shenzhen, China.

#### Source

BMC Family Practice; 2020. 21(271). 26 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** The new coronavirus pneumonia (NCP) caused by COVID-19 has affected more than 46 million people worldwide. In China, primary care has played a vital role during the COVID-19 outbreak, and it is important to examine the challenges faced by general practitioners (GPs). This study investigated the roles, preparedness and training needs of GPs in China in managing the NCP outbreak. Based on the outcomes of the study, we hope to take lessons and identify how GPs could be supported in delivering their gatekeeping roles and clinical duties in times of infectious disease outbreak. **Methods:** An online survey on the official website of Shenzhen Continuing Education Center. It included questions on GPs' demographics, their awareness of COVID-19 and their preparedness in managing suspected cases of NCP, as well as

referrals and their training needs. Conditional multi-variate logistic models were used to investigate the relationships between GPs' preparedness, situational confidence and anxiety. Results: GPs' clinical practice was significantly affected. GPs endeavoured to answer a flood of COVID-19-related enquiries, while undertaking community preventive tasks. In addition to in-person consultations, GP promoted COVID-19 awareness and education through telephone consultations, physical posters and social media. Overall GPs in Shenzhen felt well supported with adequate Personal Protective Equipment (PPE) and resources from secondary care services. Higher levels of self-perceived preparedness (OR = 2.19; 95%CI, 1.04-4.61), lower level of anxiety (OR = 0.56; 95%CI, 0.29-1.09) and fewer perceived family worries (OR = 0.37; 95%CI, 0.12-1.12) were associated with better confidence in coping at work. Conclusions: Training and supporting GPs while reducing their (and their families') anxiety increase their confidence in delivering the important roles of gatekeeping in face of major disease outbreaks.

#### Publication Type

Journal article.

<465>

#### Accession Number

20210005377

#### Author

Perez-Escamilla, R.; Vilar-Compte, M.; Gaitan-Rossi, P.

#### Title

Why identifying households by degree of food insecurity matters for policymaking.

#### Source

Global Food Security; 2020. 26.

#### Publisher

Elsevier B.V.

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

Experience-based food insecurity (FI) indicators can be used to rank households or individuals across the continuum of levels of severity of FI. The objective of this article was to conduct a literature review to examine the policy relevance of reporting different levels of severity of FI. Reporting on different FI levels is key for targeting and evaluating policies and programs. In addition, there are dose-response or curvilinear relationships between FI levels and diverse physical and mental health outcomes, and early childhood development indicators. The process of introduction of FI experience-based measures in Latin America improved the understanding of the meaning of different FI levels among policymakers, media and

population at large. Findings strongly suggest that FI can only be properly understood and addressed by assessing and reporting on all levels of severity of FI at the local, provincial, national, regional and global levels. Tracking and reporting trends of different FI levels is key during major economic shocks and public health emergencies such as the COVID-19 pandemic.

#### Publication Type

Journal article.

<466>

#### Accession Number

20210005291

#### Author

Yue JingLi; Yan Wei; Sun YanKun; Yuan Kai; Su SiZhen; Han Ying; Ravindran, A. V.; Kosten, T.; Everall, I.; Davey, C. G.; Bullmore, E.; Kawakami, N.; Barbui, C.; Thornicroft, G.; Lund, C.; Lin Xiao; Liu Lin; Shi Le; Shi Jie; Ran MaoSheng; Bao YanPing; Lu Lin

#### Title

Mental health services for infectious disease outbreaks including COVID-19: a rapid systematic review.

#### Source

Psychological Medicine; 2020. 50(15):2498-2513. many ref.

#### Publisher

Cambridge University Press

#### Location of Publisher

Cambridge

#### Country of Publication

UK

#### Abstract

The upsurge in the number of people affected by the COVID-19 is likely to lead to increased rates of emotional trauma and mental illnesses. This article systematically reviewed the available data on the benefits of interventions to reduce adverse mental health sequelae of infectious disease outbreaks, and to offer guidance for mental health service responses to infectious disease pandemic. PubMed, Web of Science, Embase, PsycINFO, WHO Global Research Database on infectious disease, and the preprint server medRxiv were searched. Of 4278 reports identified, 32 were included in this review. Most articles of psychological interventions were implemented to address the impact of COVID-19 pandemic, followed by Ebola, SARS, and MERS for multiple vulnerable populations. Increasing mental health literacy of the public is vital to prevent the mental health crisis under the COVID-19 pandemic. Group-based cognitive behavioral therapy, psychological first aid, community-based psychosocial arts program, and other culturally adapted interventions were reported as being effective against the mental health impacts of COVID-19, Ebola, and SARS. Culturally-adapted, cost-effective, and accessible strategies integrated into the public health



emergency response and established medical systems at the local and national levels are likely to be an effective option to enhance mental health response capacity for the current and for future infectious disease outbreaks. Tele-mental healthcare services were key central components of stepped care for both infectious disease outbreak management and routine support; however, the usefulness and limitations of remote health delivery should also be recognized.

Publication Type

Journal article.

<467>

Accession Number

20210005203

Author

Lucas, T. C. D.; Pollington, T. M.; Davis, E. L.; Hollingsworth, T. D.

Title

Responsible modelling: unit testing for infectious disease epidemiology.

Source

Epidemics; 2020. 33. 39 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Infectious disease epidemiology is increasingly reliant on large-scale computation and inference. Models have guided health policy for epidemics including COVID-19 and Ebola and endemic diseases including malaria and tuberculosis. Yet a coding bug may bias results, yielding incorrect conclusions and actions causing avoidable harm. We are ethically obliged to make our code as free of error as possible. Unit testing is a coding method to avoid such bugs, but it is rarely used in epidemiology. We demonstrate how unit testing can handle the particular quirks of infectious disease models and aim to increase the uptake of this methodology in our field.

Publication Type

Journal article.

<468>

Accession Number

20210005199

Author

Goes, F. G. B.; Silva, A. C. S. S. da; Santos, A. S. T. dos; Pereira-Avila, F. M. V.; Silva, L. J. da; Silva, L. F. da; Goulart, M. de C. e L.

Title

Challenges faced by pediatric nursing workers in the face of the COVID-19 pandemic.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3367). 32 ref.

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 identify the challenges pediatric nursing workers face as a result of the COVID-19 pandemic. **Method:** qualitative study, using a semi-structured electronic form applied to nursing workers from pediatric services in the state of Rio de Janeiro, Brazil. Data were submitted to lexicographic analysis using the Interface de R pour Analyses Multidimensionnelles de Textes et de Questionnaires, Word Cloud technique, and Similitude Analysis. **Results:** different challenges concerning the COVID-19 pandemic were reported, including the need to promote comprehensive and quality care while being concerned with protecting oneself and others, with an emphasis on fear. A lack of protective equipment, training, diagnostic tests, and knowledge/information concerning the disease was also reported, in addition to a reduced number of nursing workers and a lack of appreciation for the profession. **Conclusion:** managerial guidelines need to be adopted for properly allocating human and material resources in the health field, including the pediatric services, in addition to providing training on standard precautions. Actions to encourage, value, motivate, and support the nursing staff are needed during and after the pandemic to protect the physical and mental health of these professionals.

Publication Type

Journal article.

<469>

Accession Number

20210005156

Author

Ansah, E. W.; Sarfo, J. O.; Apaak, D.

Title

Physical activity and dietary behaviors: a phenomenological analysis of experiences of Ghanaians during the COVID-19 lockdown.

Source

Pan African Medical Journal; 2020. 37. 20 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication

Uganda

Abstract

Introduction: The COVID-19 pandemic has necessitated many public health preventive measures including lockdowns or curfews. However, because humans are used to working and moving up and down, they would need to find ways to avert the negatives associated with the COVID-19 induced lockdown. Therefore, the purpose of this study was to qualitatively explore experiences of Ghanaians during the lockdown period in terms of physical activity, dietary behaviors, boredom, and changes in weight. Methods: Using a phenomenological approach, we analyzed data from 27 persons from Accra, Tema, and Kumasi who filled our online open-ended survey. We created open-ended items and circulated online (between 21st April, 2020 and 10th May, 2020) to persons who experienced the lockdown. We analyzed the data using Colaizzi's 7-step phenomenological approach. Results: Many people felt very bored and frustrated during the lockdown period, and some of these people resorted to physical exercise routines either individually or collectively as family. However, many experienced tremendous physical inactivity because of lack of space. They experienced poor eating behaviors, all of which resulted in reported weight gains. Conclusion: The COVID-19 pandemic lockdown has caused boredom and frustrations to quite a number of people. Physical inactivity increased because of lack of space, coupled with poor eating habits producing high levels of weight gain among people who experienced the lockdown in Ghana. There is therefore an urgent need to teach these people how to exercise within limited space and how to eat healthily during times of restriction.

Publication Type

Journal article.

<470>

Accession Number

20210005150

Author

Zouari, S.; Saadi, A.; Chakroun, M.; Oueslati, A.; Fliss, M.; Bouzouita, A.; Derouiche, A.; Slama, R. B.; Ayed, H.; Chebil, M.

Title

Urological activity at the time of COVID-19 pandemic: is there any differences between public and private field?

Source

Pan African Medical Journal; 2020. 37. 13 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication

Uganda

Abstract

Introduction: As COVID-19 pandemic is rapidly evolving, there is a whole reorganization in hospitals to concentrate more resources to face the crisis. The purpose of this study is to evaluate the impact of COVID-19 disease on urological activity in Tunisia. To assess the differences in the management of urological conditions between the private and the public field. Methods: A survey was addressed to all certified urologists working in Tunisia in both the public and private sectors (n=194) using the national database of active urologists available and updated. We either called them or looked them up through email or social media. The form was open from March the 28th to April the 3rd. Results were obtained via spreadsheet and analysed using SPSS 23.0. Results: One hundred and twenty urologists have filled in the form. Consultations at the outpatient office were restricted to urgent cases in 66% (n=79). Telemedicine was more used by urologists in private than in public field p=0,03. Urologists in private sector followed more the sterilization protocol of the hospital/clinic and used more disposable materials whenever possible p=0,011. Elective surgical activity has completely stopped in 85% of the responders (n=102). Elective surgery requiring transfusion or intensive care unit was performed in 38% (n=46) and 26% (n=31) if there was a risk of disease progression. BPH surgery was more performed as usual in private sector than in public sector p=0,012. It was the only condition managed differently between both sectors. Conclusion: The drop of the urological activity is essential in order to give relevant stakeholders room to act efficiently against the spread of the virus. The context of the pandemic and the hospital's condition must be taken into consideration without compromising the patient's outcome.

Publication Type

Journal article.

<471>

Accession Number

20210005121

Author

Fisseha Shiferie; Eden Kassa

Title

The scourge of substandard and falsified medical products gets worse with COVID-19 pandemic.

Source

Pan African Medical Journal; 2020. 37. 9 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication

Uganda

Abstract

Although health professionals, communities, governments and global institutions work closely to halt the spread of COVID-19 and mitigate its societal impact, COVID-19 remains a challenge to many countries around the world. In addition to its direct health, economic and social consequences, the pandemic has also resulted in unforeseen consequences in Africa especially in East African countries. COVID-19 might increase the demand and consumption of Substandard and Falsified (SF) medical products in three major ways. The first way is due to the inability of vulnerable segment of the population to access healthcare services as they used to do before. The second way people get exposed to SF medical products is due to fear of being quarantined, isolated and traced. Yet another way is related to import permits for medical products. Concerned regulatory bodies shall intervene aggressively in ensuring the safety, quality and effectiveness of medical products before we face a parallel pandemic from SF medical products.

Publication Type

Journal article.

<472>

Accession Number

20210005092

Author

Ogunbameru, A.; Barrett, K.; Joda, A.; Khan, Y. A.; Pechlivanoglou, P.; Mac, S.; Naimark, D.; Ximenes, R.; Sander, B.

Title

Estimating healthcare resource needs for COVID-19 patients in Nigeria.

Source

Pan African Medical Journal; 2020. 37. 26 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication

Uganda

Abstract

Introduction: Continuous assessment of healthcare resources during the COVID-19 pandemic will help in proper planning and to prevent an overwhelming of the Nigerian healthcare system. In this study, we aim to predict the effect of COVID-19 on hospital resources in Nigeria. Methods: We adopted a previously published discrete-time, individual-level, health-state transition model of symptomatic COVID-19 patients to the Nigerian healthcare system and COVID-19 epidemiology in Nigeria by September 2020. We simulated different combined scenarios of epidemic trajectories and acute care capacity. Primary outcomes included the expected cumulative number of cases, days until depletion resources and the number of deaths associated with resource constraints. Outcomes were predicted over a 60-day time horizon. Results: In our best-case epidemic trajectory, which implies successful implementation of public health measures to control COVID-19 spread, assuming all three resource scenarios, hospital resources would not be expended within the 60-days time horizon. In our worst-case epidemic trajectory, assuming conservative resource scenario, only ventilated ICU beds would be depleted after 39 days and 16 patients were projected to die while waiting for ventilated ICU bed. Acute care resources were only sufficient in the three epidemic trajectory scenarios when combined with a substantial increase in healthcare resources. Conclusion: Substantial increase in hospital resources is required to manage the COVID-19 pandemic in Nigeria, even as the infection growth rate declines. Given Nigeria's limited health resources, it is imperative to focus on maintaining aggressive public health measures as well as increasing hospital resources to reduce COVID-19 transmission further.

Publication Type

Journal article.

<473>

Accession Number

20210005074

Author

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Karim, S. I.; Farhana Irfan; Batais, M. A.

Title

Becoming virtual: a preliminary experience of outpatient primary care during COVID-19 pandemic.

Source

Pan African Medical Journal; 2020. 37. 7 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication

Uganda

Abstract

The World Health Organization (WHO) has declared COVID-19 outbreak as a pandemic. This pandemic is transforming the world and has posed exceptional challenges to health care delivery. Saudi Arabia has exerted unprecedented efforts and measures to fight the pandemic. Appreciating the value of primary health care during this crisis the family and community medicine department reorganized the services. We discuss the problems faced, solutions and lessons learned in the hope others may find it helpful.

Publication Type

Journal article.

<474>

Accession Number

20210004998

Author

Iwu, C. J.; Jordan, P.; Jaca, A.; Iwu, C. D.; Schutte, L.; Wiysonge, C. S.

Title

Cochrane corner: personal protective equipment for preventing highly infectious diseases such as COVID-19 in healthcare staff.

Source

Pan African Medical Journal; 2020. 37. 6 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

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Kampala

Country of Publication

Uganda

Abstract

As coronavirus disease (COVID-19) cases continue to increase in Africa, healthcare workers (HCWs) have a high risk of being infected and the risks may be higher among those who work closely with patients. The risks of HCW infections can be mitigated with adequate precautions within healthcare facilities, especially with the use of personal protective equipment (PPE). We highlight and contextualise the findings of a Cochrane review on the type of PPE that protects best, the best way to put PPE on (donning) or to remove PPE (doffing) and how to train HCWs to use PPE. The review found low-certainty of evidence that full body PPE offer more protection, but HCWs may be faced with difficulty during donning and doffing. Following standard guidelines may be helpful in reducing infection and increasing compliance among HCWs. Video training and simulations may be better methods for training on the correct use of PPE than traditional methods of teaching. Countries must, therefore, ensure that HCWs undergo compulsory training on the correct use of PPE; regardless of their professional category. Of the 24 studies included in this review, none was conducted on the African continent. There is thus an urgent need for well conducted studies on the experiences of HCWs using full-body covering PPE within the African context. Such studies could lead to tailored interventions that will improve the proper use of PPE among HCWs.

Publication Type

Journal article.

<475>

Accession Number

20210004989

Author

Mandaah, F. V.; Nicholas, T.; Esemu, S. N.; Vanessa, A. B. T.; Destin, K. T. G.; Atiepoh, N. C.; Vanessa, L. F.

Title

Trends in the population knowledge, attitudes and practices toward COVID-19 in the Buea municipality two months after the onset of the pandemic in Cameroon.

Source

Pan African Medical Journal; 2020. 37. 11 ref.

Publisher

African Field Epidemiology Network

Location of Publisher

Kampala

Country of Publication



Uganda

## Abstract

**Introduction:** Two months into the COVID-19 pandemic in Cameroon, we assess the trend in the knowledge, attitude and practices of the population with the progression of the disease and the implementation of preventive methods put in place by the government of Cameroon and health partners organizations in response to the pandemic. **Methods:** This was a cross-sectional study conducted in selected health areas in the Buea municipality. A questionnaire was administered at the onset and two months later to collect data on the participants' knowledge, attitude and practices towards COVID-19. The data were analyzed in SPSS version 25. **Results:** A total of 480 and 680 participants were sampled at onset and two months later respectively. Of the 26 indicators of knowledge assessed, 22 (84.61%) showed significant increase ( $p < 0.05$ ) with the most significant changes observed with the symptoms, mode of transmission and prevention of the disease. The overall proportion of people with correct knowledge moved from 9.1% at onset to 41.4% two months after. Only 1.5% of participants had poor knowledge of the pandemic two months after against 14.2% at the onset. There was a significant ( $p < 0.05$ ) positive change in the population perception, attitude and practices toward COVID-19 two months after the onset of the pandemic. **Conclusion:** The population knowledge, attitude and practices on COVID-19 showed a positive trend two months after the onset of the pandemic. The implementation of government and health stakeholder preventive measures together with the incidence of the pandemic in Cameroon probably had a positive impact on the positive trend observed. There is a need for continuous sensitization to completely fill the knowledge gap of the population on COVID-19.

## Publication Type

Journal article.

<476>

## Accession Number

20210004861

## Author

Sow, A.; Gueye, M.; Boiro, D.; Ba, A.; Ba, I. D.; Faye, P. M.; Fall, A. L.; Ndiaye, O.

## Title

Effect of COVID-19 on routine immunization schedule in Senegalese hospitals. [French]

## Source

Pan African Medical Journal; 2020. 37. 10 ref.

## Publisher

African Field Epidemiology Network

## Location of Publisher

Kampala

## Country of Publication

Uganda

## Abstract

**Introduction:** The 19 COVID pandemic has pushed the world to implement drastic prevention methods based on limiting population movements that have an impact on public health policies, such as vaccination. The purpose of this work was to assess the effect of these preventive measures on routine immunization schedules in hospitals after the outbreak of this pandemic in Senegal. **Methods:** We conducted a retrospective cross-sectional study in the Vaccination Unit of the Abass NDAO hospital center in August 2020. We compared data from the Vaccination Unit over the period March-August of the last three years (2018, 2019 and 2020). The parameter studied was the number of vaccine doses administered in the different periods according to the expanded immunization program. **Results:** In April, the number of doses of vaccines given at 6 weeks was 36 in 2018, 29 in 2019 and 15 in 2020, reflecting a decrease of 50% compared to March. In July, the number of doses given was 40 in 2018, 35 in 2019 and 15 in 2020, reflecting a reduction of 42% compared to 2019. **Conclusion:** Measures to combat this pandemic should not affect routine immunization programmes, especially in our resource-constrained country. It is essential to continue vaccination schedule for children and to identify children who have missed vaccine doses in order to implement catch-up vaccination.

## Publication Type

Journal article.

<477>

## Accession Number

20210004729

## Author

Firth, A.; Prathapan, P.

## Title

Azithromycin: the first broad-spectrum therapeutic.

## Source

European Journal of Medicinal Chemistry; 2020. 207.

## Publisher

Elsevier Masson SAS

## Location of Publisher

Issy-les-Moulineaux

## Country of Publication

France

## Abstract

The Strategic Plan for Biodefense Research by the U.S. Department of Health and Human Services demarcates the need for drugs which target multiple types of pathogens to prepare for infectious threats. Azithromycin is one such broad-spectrum therapeutic that is both included in the University of Oxford's RECOVERY and excluded from the World Health Organization's SOLIDARITY trials. Here we review azithromycin's broad antibiotic, antimalarial, antiviral pharmacology and contextualise it against a broader history as the most repositioned therapeutic of the macrolide class; we further evaluate azithromycin's clinical and socio-economic propriety for respiratory pandemics and delineate a model for its combinatorial mechanism of action against COVID-19 pneumonia.

#### Publication Type

Journal article.

<478>

#### Accession Number

20210004706

#### Author

Singh, D. K.; Bindu Singh; Ganatra, S. R.; Gazi, M.; Cole, J.; Rajesh Thippeshappa; Alfson, K. J.; Clemmons, E.; Gonzalez, O.; Escobedo, R.; Lee TaeHyung; Ayan Chatterjee; Goez-Gazi, Y.; Riti Sharan; Gough, M.; Alvarez, C.; Blakley, A.; Ferdin, J.; Bartley, C.; Staples, H.; Parodi, L.; Callery, J.; Mannino, A.; Klaffke, B.; Escareno, P.; Platt, R. N., II; Hodara, V.; Scordo, J.; Shalini Gautam; Vilanova, A. G.; Olmo-Fontanez, A.; Schami, A.; Oyejide, A.; Ajithdoss, D. K.; Copin, R.; Baum, A.; Kyratsous, C.; Alvarez, X.; Ahmed, M.; Rosa, B.; Goodroe, A.; Dutton, J.; Hall-Ursone, S.; Frost, P. A.; Voges, A. K.; Ross, C. N.; Sayers, K.; Chen, C.; Hallam, C.; Khader, S. A.; Mitreva, M.; Anderson, T. J. C.; Martinez-Sobrido, L.; Patterson, J. L.; Turner, J.; Torrelles, J. B.; Dick, E. J., Jr.; Brasky, K.; Schlesinger, L. S.; Giavedoni, L. D.; Carrion, R., Jr.; Deepak Kaushal

#### Title

Responses to acute infection with SARS-CoV-2 in the lungs of rhesus macaques, baboons and marmosets.

#### Source

Nature Microbiology; 2020. 6(1):73-86. 34 ref.

#### Publisher

Nature Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Non-human primate models will expedite therapeutics and vaccines for coronavirus disease 2019 (COVID-19) to clinical trials. Here, we compare acute severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in young and old rhesus macaques, baboons and old marmosets. Macaques had clinical signs of

viral infection, mild to moderate pneumonitis and extra-pulmonary pathologies, and both age groups recovered in two weeks. Baboons had prolonged viral RNA shedding and substantially more lung inflammation compared with macaques. Inflammation in bronchoalveolar lavage was increased in old versus young baboons. Using techniques including computed tomography imaging, immunophenotyping, and alveolar/peripheral cytokine response and immunohistochemical analyses, we delineated cellular immune responses to SARS-CoV-2 infection in macaque and baboon lungs, including innate and adaptive immune cells and a prominent type-I interferon response. Macaques developed T-cell memory phenotypes/responses and bystander cytokine production. Old macaques had lower titres of SARS-CoV-2-specific IgG antibody levels compared with young macaques. Acute respiratory distress in macaques and baboons recapitulates the progression of COVID-19 in humans, making them suitable as models to test vaccines and therapies.

#### Publication Type

Journal article.

<479>

#### Accession Number

20210004703

#### Author

Cox, R. M.; Wolf, J. D.; Plemper, R. K.

#### Title

Therapeutically administered ribonucleoside analogue MK-4482/EIDD-2801 blocks SARS-CoV-2 transmission in ferrets.

#### Source

Nature Microbiology; 2020. 6(1):11-18. 29 ref.

#### Publisher

Nature Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

The coronavirus disease 2019 (COVID-19) pandemic is having a catastrophic impact on human health. Widespread community transmission has triggered stringent distancing measures with severe socio-economic consequences. Gaining control of the pandemic will depend on the interruption of transmission chains until vaccine-induced or naturally acquired protective herd immunity arises. However, approved antiviral treatments such as remdesivir and convalescent serum cannot be delivered orally, making them poorly suitable for transmission control. We previously reported the development of an orally efficacious

ribonucleoside analogue inhibitor of influenza viruses, MK-4482/EIDD-2801 (refs.), that was repurposed for use against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and is currently in phase II/III clinical trials (NCT04405570 and NCT04405739). Here, we explored the efficacy of therapeutically administered MK-4482/EIDD-2801 to mitigate SARS-CoV-2 infection and block transmission in the ferret model, given that ferrets and related members of the weasel genus transmit the virus efficiently with minimal clinical signs, which resembles the spread in the human young-adult population. We demonstrate high SARS-CoV-2 burden in nasal tissues and secretions, which coincided with efficient transmission through direct contact. Therapeutic treatment of infected animals with MK-4482/EIDD-2801 twice a day significantly reduced the SARS-CoV-2 load in the upper respiratory tract and completely suppressed spread to untreated contact animals. This study identified oral MK-4482/EIDD-2801 as a promising antiviral countermeasure to break SARS-CoV-2 community transmission chains.

#### Publication Type

Journal article.

<480>

#### Accession Number

20210004696

#### Author

Salazar, E.; Kuchipudi, S. V.; Christensen, P. A.; Eagar, T.; Yi Xin; Zhao PiCheng; Jin ZhiCheng; Long, S. W.; Olsen, R. J.; Chen Jian; Castillo, B.; Leveque, C.; Towers, D.; Lavinder, J.; Gollihar, J.; Cardona, J.; Ippolito, G.; Nissly, R.; Bird, I.; Greenawalt, D.; Rossi, R. M.; Gontu, A.; Srinivasan, S.; Poojary, I.; Cattadori, I. M.; Hudson, P. J.; Josleyn, N. M.; Prugar, L.; Huie, K.; Herbert, A.; Bernard, D. W.; Dye, J. M.; Kapur, V.; Musser, J. M.

#### Title

Convalescent plasma anti-SARS-CoV-2 spike protein ectodomain and receptor-binding domain IgG correlate with virus neutralization.

#### Source

Journal of Clinical Investigation; 2020. 130(12):6728-6738. 41 ref.

#### Publisher

American Society for Clinical Investigation

#### Location of Publisher

Ann Arbor

#### Country of Publication

USA

#### Abstract

The newly emerged severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) highlights the urgent need for assays that detect protective levels of neutralizing antibodies. We studied the relationship among anti-spike ectodomain (anti-ECD), anti-receptor-binding domain (anti-RBD) IgG titers, and SARS-CoV-2 virus

neutralization (VN) titers generated by 2 in vitro assays using convalescent plasma samples from 68 patients with COVID-19. We report a strong positive correlation between both plasma anti-RBD and anti-ECD IgG titers and in vitro VN titers. The probability of a VN titer of 160, the FDA-recommended level for convalescent plasma used for COVID-19 treatment, was 80% when anti-RBD or anti-ECD titers were 1:1350. Of all donors, 37% lacked VN titers of 160. Dyspnea, hospitalization, and disease severity were significantly associated with higher VN titer. Frequent donation of convalescent plasma did not significantly decrease VN or IgG titers. Analysis of 2814 asymptomatic adults found 73 individuals with anti-ECD IgG titers of 1:50 and strong positive correlation with anti-RBD and VN titers. Fourteen of these individuals had VN titers of 1:160, and all of them had anti-RBD titers of 1:1350. We conclude that anti-RBD or anti-ECD IgG titers can serve as a surrogate for VN titers to identify suitable plasma donors. Plasma anti-RBD or anti-ECD titers of 1:1350 may provide critical information about protection against COVID-19 disease.

#### Publication Type

Journal article.

<481>

#### Accession Number

20210004673

#### Author

Yuan ShuoFeng; Wang RunMing; Chan FukWoo [Chan, F. W. J.]; Zhang JinXia [Zhang, J. X. A.]; Cheng TianFan; Chik KaHeng [Chik, K. H. K.]; Ye ZiWei; Wang SuYu; Lee ChakYiu [Lee, C. Y. A.]; Jin LiJian; Li HongYan; Jin DongYan; Yuen KwokYung; Sun HongZhe

#### Title

Metallo drug ranitidine bismuth citrate suppresses SARS-CoV-2 replication and relieves virus-associated pneumonia in Syrian hamsters.

#### Source

Nature Microbiology; 2020. 5(11):1439-1448. 51 ref.

#### Publisher

Nature Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

SARS-CoV-2 is causing a pandemic of COVID-19, with high infectivity and significant mortality. Currently, therapeutic options for COVID-19 are limited. Historically, metal compounds have found use as antimicrobial agents, but their antiviral activities have rarely been explored. Here, we test a set of metallo drugs and related compounds, and identify ranitidine bismuth citrate, a commonly used drug for

the treatment of *Helicobacter pylori* infection, as a potent anti-SARS-CoV-2 agent, both in vitro and in vivo. Ranitidine bismuth citrate exhibited low cytotoxicity and protected SARS-CoV-2-infected cells with a high selectivity index of 975. Importantly, ranitidine bismuth citrate suppressed SARS-CoV-2 replication, leading to decreased viral loads in both upper and lower respiratory tracts, and relieved virus-associated pneumonia in a golden Syrian hamster model. In vitro studies showed that ranitidine bismuth citrate and its related compounds exhibited inhibition towards both the ATPase (IC<sub>50</sub> = 0.69 micro M) and DNA-unwinding (IC<sub>50</sub> = 0.70 micro M) activities of the SARS-CoV-2 helicase via an irreversible displacement of zinc(II) ions from the enzyme by bismuth(III) ions. Our findings highlight viral helicase as a druggable target and the clinical potential of bismuth(III) drugs or other metallodrugs for the treatment of SARS-CoV-2 infection.

#### Publication Type

Journal article.

<482>

#### Accession Number

20210004594

#### Author

Ahmed, S. A.; Hegazy, N. N.; Malak, H. W. A.; Kayser, W. C., III; Elrafie, N. M.; Mohammed Hassanien; Al-Hayani, A. A.; El-Saadany, S. A.; Al-Youbi, A. O.; Shehata, M. H.

#### Title

Model for utilizing distance learning post COVID-19 using (PACT)<sup>TM</sup> a cross sectional qualitative study.

#### Source

BMC Medical Education; 2020. 20(400). 29 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Background: COVID-19 pandemic pressured medical schools globally to shift to Distance learning (DL) as an alternative way to ensure that the content delivered is satisfactory for student progression. Aim of the work: This work aims at mapping priorities for post-COVID planning for better balance between distance learning and face to face learning. Methods: This qualitative study aimed to develop a model for utilizing DL using The Polarity Approach for Continuity and Transformation (PACT)<sup>TM</sup>. A virtual mapping session was held with 79 faculty from 19 countries. They worked in small groups to determine upsides and downsides of face-to-face and DL subsequently. An initial polarity map was generated identifying five tension areas;

Faculty, Students, Curriculum, Social aspects and Logistics. A 63-item assessment tool was generated based on this map, piloted and then distributed as a self-administered assessment. The outcomes of this assessment were utilized for another mapping session to discuss warning signs and action steps to maintain upsides and avoid downsides of each pole. Results: Participants agreed that face-to-face teaching allows them to inspire students and have meaningful connections with them. They also agreed that DL provides a good environment for most students. However, students with financial challenges and special needs may not have equal opportunities to access technology. As regards social issues, participants agreed that face-to-face learning provides a better chance for professionalism through enhanced team-work. Cognitive, communication and clinical skills are best achieved in face-to-face. Participants agreed that logistics for conducting DL are much more complicated when compared to face-to-face learning. Participants identified around 10 warning signs for each method that need to be continuously monitored in order to minimize the drawbacks of over focusing on one pole at the expense of the other. Action steps were determined to ensure optimized use of in either method. Conclusion: In order to plan for the future, we need to understand the dynamics of education within the context of polarities. Educators need to understand that the choice of DL, although was imposed as a no-alternative solution during the COVID era, yet it has always existed as a possible alternative and will continue to exist after this era. The value of polarity mapping and leveraging allows us to maximize the benefit of each method and guide educators' decisions to minimize the downsides for the good of the learning process.

#### Publication Type

Journal article.

<483>

#### Accession Number

20210004582

#### Author

Yousefi, H.; Mashouri, L.; Okpechi, S. C.; Alahari, N.; Alahari, S. K.

#### Title

Repurposing existing drugs for the treatment of COVID-19/SARS-CoV-2 infection: a review describing drug mechanisms of action.

#### Source

Biochemical Pharmacology; 2021. 183.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

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The outbreak of a novel coronavirus (SARS-CoV-2) has caused a major public health concern across the globe. SARS-CoV-2 is the seventh coronavirus that is known to cause human disease. As of September 2020, SARS-CoV-2 has been reported in 213 countries and more than 31 million cases have been confirmed, with an estimated mortality rate of ~3%. Unfortunately, a drug or vaccine is yet to be discovered to treat COVID-19. Thus, repurposing of existing cancer drugs will be a novel approach in treating COVID-19 patients. These drugs target viral replication cycle, viral entry and translocation to the nucleus. Some can enhance innate antiviral immune response as well. Hence this review focuses on comprehensive list of 22 drugs that work against COVID-19 infection. These drugs include fingolimod, colchicine, N4-hydroxycytidine, remdesivir, methylprednisone, oseltamivir, icanitabant, perphanizine, viracept, emetine, homoharringtonine, aloxistatin, ribavirin, valrubicin, famotidine, almitrine, amprenavir, hesperidin, biorobin, cromolyn sodium, and antibodies- tocilizumab and sarilumab. Also, we provide a list of 31 drugs that are predicted to function against SARS-CoV-2 infection. In summary, we provide succinct overview of various therapeutic modalities. Among these 53 drugs, based on various clinical trials and literature, remdesivir, nelfinavir, methylprednisolone, colchicine, famotidine and emetine may be used for COVID-19.

#### Publication Type

Journal article.

<484>

#### Accession Number

20210004385

#### Author

Pegorari, M. S.; Matos, A. P.; Iosimuta, N. C. R.; Ferreira, V. T. K.; Ohara, D. G.; Santos, E. P. R.; Silva, C. de F. R.; Santos, N. L. O. dos; Rocha, A. P.; Atallah, A. N.; Pinto, A. C. P. N.

#### Title

Clinical and socioeconomic characteristics of older adults with COVID-19: a protocol for a rapid systematic review.

#### Source

Revista da Associacao Medica Brasileira; 2020. 66(Suppl. 2):118-123. 18 ref.

#### Publisher

Associacao Medica Brasileira

#### Location of Publisher

Sao Paulo

#### Country of Publication

Brazil

#### Abstract

The aim of this rapid systematic review is to analyze the prevalence of clinical, socioeconomic, and demographic characteristics, laboratory and imaging findings, diagnostic tests, and treatment information

of older adults with COVID-19. To conduct this systematic review, the Cochrane Handbook recommendations will be followed. Patients aged 60 years or older with a confirmed diagnosis of SARS-CoV-2 infection will be included. A comprehensive literature search will be performed in the following databases: MEDLINE via PubMed, Embase, Cochrane Central Register of Controlled Trials (CENTRAL), Latin American and Caribbean Health Sciences Literature (LILACS), Spanish Bibliographic Index on Health Sciences (IBECS) and Epistemonikos COVID-19 L. OVE platform. No language restrictions will be applied. To assess the methodological quality of the included studies and the certainty of the evidence, the Newcastle-Ottawa Scale, and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach will be used. The meta-analysis will be performed using R software. We believe this rapid systematic review will be able to summarize the currently available evidence on clinical, socioeconomic characteristics, and management of COVID-19 in older adults. Therefore, it will help implement adequate strategies to fight the pandemic and assist in understanding the clinical profile of older patients with COVID-19, providing data with due scientific support upon which to base future choices of procedures and interventions.

#### Publication Type

Journal article.

<485>

#### Accession Number

20210004372

#### Author

Cai JiangHui; Chen WenWen; Yang Xiao; Yang XiuQing; Li Gen

#### Title

Allocation of pharmaceutical resources in maternal and child healthcare institutions during the COVID-19 pandemic.

#### Source

Revista da Associacao Medica Brasileira; 2020. 66(Suppl. 2):41-47. 24 ref.

#### Publisher

Associacao Medica Brasileira

#### Location of Publisher

Sao Paulo

#### Country of Publication

Brazil

#### Abstract

Since the outbreak of a cluster of patients with pneumonia of unknown cause in Wuhan, Hubei Province, China, in December 2019, the disease was later officially named coronavirus disease 2019 (COVID-19) caused by the novel severe acute respiratory syndrome coronavirus (SARS-CoV-2), quickly spreading globally. Pregnant women and children are particularly vulnerable during disasters and emergencies.

Comprehensive and applicable emergency preparedness and response are definitely important methods to prevent and contain the COVID-19 pandemic. The rational allocation of pharmaceutical resources plays an important role in the medical emergency plan. This paper aimed to share experiences for the allocation of pharmaceutical resources in hospitals focusing primarily on women and children during the COVID-19 pandemic.

Publication Type

Journal article.

<486>

Accession Number

20210004370

Author

Pinho, C. S.; Caria, A. C. I.; Aras Junior, R.; Pitanga, F. J. G.

Title

The effects of the COVID-19 pandemic on levels of physical fitness.

Source

Revista da Associacao Medica Brasileira; 2020. 66(Suppl. 2):34-37. 22 ref.

Publisher

Associacao Medica Brasileira

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

**INTRODUCTION:** The COVID-19 pandemic, caused by infections from a novel human coronavirus, has been reported since December 2019 in China but was only made official in March 2020. Since then, it has had an impact worldwide, both due to its aggressiveness and its fast propagation. Society has been facing this pandemic by following the recommendations and determinations of the WHO and the strategies deployed by governmental institutions. Among these, social isolation has been shown to be the most important, because when isolating, society tends to move less, with a consequent increase in physical inactivity and sedentary behavior, affecting its levels of physical fitness. The objectives of this review were: to review the most important effects of physical inactivity and sedentary behavior on the physical fitness levels of the population during the COVID-19 pandemic. **CONCLUSION:** The role of a regular practice of activities on the levels of physical fitness is fundamental to define the balance of quality of life during a COVID-19.

Publication Type

Journal article.

<487>

Accession Number

20210004368

Author

Souza, C. D. F. de

Title

In times of COVID-19, epidemiology is a unifying science.

Source

Revista da Associacao Medica Brasileira; 2020. 66(Suppl. 2):27-30. 15 ref.

Publisher

Associacao Medica Brasileira

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

In the end of December 2019, China reported an outbreak of pneumonia in Wuhan, a city with more than 11 million inhabitants, to the World Health Organization. Days later, a new agent (SARS-CoV-2) was identified; since then, it has spread throughout the planet, resulting in one of the most challenging pandemics in recent history. Faced with this scenario, Epidemiology plays an important role, given that its techniques and methods have contributed to generating knowledge, assisting in decision making in healthcare. This text presents a succinct reflection regarding the importance of epidemiology in light of the current pandemic.

Publication Type

Journal article.

<488>

Accession Number

20210004354

Author

Furnaris, M. M.; Sarpe, M. C.; Chiracu, A.; Baraitareanu, S.; Militaru, M.

Title

Perception of students and teachers in the faculty of veterinary medicine towards online communication.

Source

Revista Romana de Medicina Veterinara; 2020. 30(4):49-60. 14 ref.

Publisher

Asociatia Generala a Medicilor Veterinari din Romania

Location of Publisher

Bucharest

Country of Publication

Romania

Abstract

The development of the Internet and online communication may be some of the most significant influences on higher education over the past 30 years. "The Net Generation" and the emergence of "Web 2.0", or the interactive web, have created a whole new world of electronic communication. Most of the students growing in a world where digital technology has been a predetermined part of every day life. Taking into account the above, we aim to carry out an analysis of the means of online teaching-learning in the context of the COVID-19 pandemic, in which direct interactions, face to face between teachers and students have been abruptly interrupted. This study was conducted in June 2020 and involved 505 students and 56 teachers from Faculty of Veterinary Medicine of Bucharest, USAMVB. For this study, two anonymous questionnaires containing single, multiple or scaled response questions were applied, one to find out the perception of students, and one to find out the perception of teachers about online teaching, both offering full confidentiality. A number of frequency tables were used for the descriptive analysis, and for the inferential analysis, Pearson correlation analysis and ANOVA variance analysis were used. Students, in large numbers, want an interactive teaching environment and a hybrid approach to teaching. A common opinion of teachers and students is that online-only teaching is not suitable for Day One skills mastering. Regarding the quality of communication between students and teachers, the majority of students perceive online communication as improved or fluent. Half of the teachers participating in this study find communication with students online fluent and improved, while the other half find it difficult. The amount of work allocated to online academic activity is unanimously higher than the one allocated to face-to-face teaching. The perception of the involvement of students and teachers in the academic activity, the adaptation of these two categories to online teaching and the distress caused by academic activities in the online environment are closely linked.

Publication Type

Journal article.

<489>

Accession Number

20210004241

Author

Belizan, J. M.; Bardach, A.; Cormick, G.; Irazola, V.; Rey, R.

Title

Reflections on translational health research and the COVID-19 case in Argentina. [Spanish]

Source

Medicina (Buenos Aires); 2020. 80(Suppl. 3):42-44. 8 ref.

Publisher

Instituto de Investigaciones Medicas Alfredo Lanari

Location of Publisher

Buenos Aires

Country of Publication

Argentina

Abstract

CONICET's Translational Health Research Network is coordinating efforts to advance in translational medicine. Health researchers initiate and focus their research with the aim of improving the health and quality of life of the population. An efficient research system should address health problems relevant to the population resulting in interventions and outcomes important for patients and health professionals. Recommendations to achieve this involve large thematic areas like (a) to set research priorities; (b) to improve research methodology; (c) to make research management and regulation transparent; (d) to increase accessibility to all results; and (e) to improve research dissemination. The recent COVID-19 pandemic has been a clear demonstration of how the country's research system has united the most diverse disciplines to jointly provide solutions to address it. An active and transparent mechanism to identify priorities in the country and to unite funding and research efforts to provide solutions to those priorities is proposed. Translational health research means the joint work of the most diverse health research disciplines in order to jointly obtain efficient and effective interventions to improve the health and quality of life of the population.

Publication Type

Journal article.

<490>

Accession Number

20210004240

Author

Bozovich, G. E.; Lima, A. A. de; Fosco, M.; Burgos, L. M.; Martinez, R.; Lome, R. D. de; Torn, A.; Mercado, J. S.

Title

Collateral damage of COVID-19 pandemic in private healthcare centres of Argentina. [Spanish]

Source

Medicina (Buenos Aires); 2020. 80(Suppl. 3):37-41. 20 ref.

Publisher

Instituto de Investigaciones Medicas Alfredo Lanari

Location of Publisher

Buenos Aires

Country of Publication

Argentina

Abstract

To contain the coronavirus pandemic (COVID-19), a strict nationwide lockdown has been enforced and the health systems have been reorganized to deal with this entity. During this period, changes in the care of non-infectious diseases have been observed. Our aim was to describe the impact of the COVID-19 pandemic in the care of non-communicable diseases. A structured retrospective survey was carried out in 31 healthcare centers affiliated with the Asociacion de Clinicas, Sanatorios y Hospitales Privados de la Republica Argentina y Camara de Entidades de Diagnostico y Tratamiento. We compared data for April 2019 versus April 2020 regarding emergency room consultations, hospital admissions, invasive procedures and treatments, and bed occupancy. In April 2020, we observed a decrease in emergency room visits (75%) and hospitalizations (48%). A 62% decrease in admissions was noted for angina pectoris and acute coronary syndromes and a 46% decrease in admissions for stroke and transient ischemic attack. A meaningful decrease was found in coronary angioplasties (59%) and total percutaneous interventions (65%), and also a decrease in general surgeries (73%), and cardiac surgeries (58%). Although social distancing measures are a key public health strategy to flatten the infection curve, the observed decrease in medical visits and interventions may impact negatively on cardiovascular, cerebrovascular and cancer related morbidity and mortality. A collective effort is required to avoid the unintended consequences and collateral damage of the COVID-19 pandemic.

Publication Type

Journal article.

<491>

Accession Number

20210004239

Author

Basbus, L.; Lapidus, M. I.; Martingano, I.; Puga, M. C.; Pollan, J.

Title

Neutrophil to lymphocyte ratio as a prognostic marker in COVID-19. [Spanish]

Source

Medicina (Buenos Aires); 2020. 80(Suppl. 3):31-36. 11 ref.

Publisher

Instituto de Investigaciones Medicas Alfredo Lanari

Location of Publisher

Buenos Aires

Country of Publication

Argentina

Abstract

In December 2019, a new coronavirus was identified as the cause of an outbreak of pneumonia and respiratory distress in Wuhan, China. It was declared pandemic in March 2020. It is important to know predictors of poor outcomes in order to optimize the strategies of care in newly diagnosed patients. The neutrophil to lymphocyte ratio (NLR) constitutes a novel prognostic marker for oncologic, cardiovascular and infectious diseases. We aimed to assess its prognostic value in COVID-19. We evaluated a retrospective cohort of 131 patients with COVID-19 from March to May 2020. We analyzed the association of an NLR 3 with severe COVID-19, baseline characteristics of the population and the mortality rate. The median age was 52 years, and 54% were men. 21 patients presented criteria of severe disease, 9 of them required mechanical ventilation. NLR 3 was found in 81% (18/21) of severe patients and in 33% (36/110) of mild patients (OR = 8.74.95% CI 2.74-27.86;  $p < 0.001$ ). Age and hypertension were associated with severe disease. A mortality rate of 7% (9) was obtained. Seven of the 9 patients who died presented NLR 3, with a significant association between mortality and NLR 3 ( $p = 0.03$ ). NLR could be used in conjunction with other predictors, as an early prognostic marker in COVID-19 given its accessibility and low cost.

Publication Type

Journal article.

<492>

Accession Number

20210004237

Author

Ortiz, Z.; Antonietti, L.; Capriati, A.; Ramos, S.; Romero, M.; Mariani, J.; Ortiz, F.; Pecheny, M.

Title

Concerns and demands regarding COVID-19. Survey of health personnel. [Spanish]



Source

Medicina (Buenos Aires); 2020. 80(Suppl. 3):16-24. 19 ref.

Publisher

Instituto de Investigaciones Medicas Alfredo Lanari

Location of Publisher

Buenos Aires

Country of Publication

Argentina

Abstract

The COVID-19 pandemic affected the organization of health services and had consequences for health teams, according to the pre-existing safety and working conditions. During the first week of April 2020, a cross sectional study was carried out with a qualitative-quantitative approach. The aim was to explore the conditions determining the organizational climate: leadership, communication, institutional resources, cohesion/conflict management, and training; and how these were perceived by health personnel to deal with the pandemic. A total of 5670 healthcare workers participated in an online survey and 50 were interviewed, from all subsectors of the Argentinean health system (public, private and union-health insurance); 72.9% were women, 51.4% were physicians, and the predominant age group was under 40 years. In the qualitative sample (interviews), 52% were men, 62% were physicians, and the average age was 44.8 years. The dimensions of the organizational climate were stratified and five independent predictors of perception of conditions were identified: age, gender, tasks performed, health system subsector, and jurisdiction. The condition most frequently perceived as inadequate were the inaccessibility of institutional resources and the access to personal protective equipment was a major concern. Claims included the need of institutional strategies to support healthcare workers and of a clear and uniform communication. In conclusion, at the time of the study, the health personnel perceived serious deficits in their organizations regarding the conditions necessary to confront COVID-19, with differences among subsectors of the health system.

Publication Type

Journal article.

<493>

Accession Number

20210004232

Author

Sadeghi, R.; Khanjani, N.; Masoudi, M. R.

Title

Investigating the predictive factors of protective behaviors against COVID-19 among bank employees.  
(Special Issue: COVID-19.)

Source

Iran Occupational Health; 2020. 17(Special Issue).

Publisher

Iran University of Medical Sciences and Health Services

Location of Publisher

Tehran

Country of Publication

Iran

Abstract

Background and aims: COVID-19 is one of the most dangerous pandemics of the 21st century, which has caused disease in humans and has had various consequences for humans. One of the most at-risk groups are bank employees. Therefore, this study was conducted to investigate the predictors of protective behaviors against COVID-19 in bank employees of Sirjan. Methods: This descriptive-analytical cross-sectional study was conducted in 2020 in Sirjan. The participants in this study were 280 bank employees who were selected randomly. The data collection tool was a questionnaire in three sections, including demographic information, knowledge, and questions related to the Protection Motivation Theory, which was self administered. After collecting the data, descriptive tests (frequency and percentage), Pearson correlation and linear regression were used to analyze the data in SPSS 23. Results: The mean age of participants was 41.6±2.16 years. The results of correlation coefficients showed that there was a significant correlation between perceived susceptibility and perceived severity. However, it should be noted that there were positive correlations between protection motivation with perceived susceptibility ( $r = .414$ ,  $P < 0.001$ ), perceived severity ( $r = .354$ ,  $P < 0.001$ ), response efficiency ( $r = .411$ ,  $P < 0.001$ ), self-efficacy ( $r = .508$ ,  $P < 0.001$ ), and fear ( $r = .484$ ,  $P < 0.001$ ); and negative correlations between response cost with rewards ( $r = -.104$ ,  $P = < 0.05$ ) and response cost ( $r = -.237$ ,  $P = 0.002$ ). According to the linear regression test, 0.585 percent of protection motivation was predicted by perceived susceptibility and severity, response efficiency, self-efficacy, fear, among which the role of perceived fear ( $\beta = 0.28$ ) was stronger than other variables. Conclusion: The results of this study showed the effectiveness of the application of the protection motivation theory in predicting the behaviors for preventing COVID-19. Therefore, these structures, especially the perceived fear structure can be used in the development of educational programs and intervention techniques to change the attitude and behavior of bank employees.

Publication Type

Journal article.

<494>

Accession Number

20210004101

Author

Nazarenko, Y.

Title

Air filtration and SARS-CoV-2.

Source

Epidemiology and Health; 2020. 42. 21 ref.

Publisher

Korean Society of Epidemiology

Location of Publisher

Chuncheon

Country of Publication

Korea Republic

Abstract

Air filtration in various implementations has become a critical intervention in managing the spread of coronavirus disease 2019 (COVID-19). However, the proper deployment of air filtration has been hampered by an insufficient understanding of its principles. These misconceptions have led to uncertainty about the effectiveness of air filtration at arresting potentially infectious aerosol particles. A correct understanding of how air filtration works is critical for further decision-making regarding its use in managing the spread of COVID-19. The issue is significant because recent evidence has shown that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) can remain airborne longer and travel farther than anticipated earlier in the COVID-19 pandemic, albeit with diminishing concentrations and viability. While SARS-CoV-2 virions are around 60-140 nm in diameter, larger respiratory droplets and air pollution particles (>1 micro m) have been found to harbor the virions. Removing particles that could carry SARS-CoV-2 from the air is possible using air filtration, which relies on the natural or mechanical movement of air. Among various types of air filters, high-efficiency particle arrestance (HEPA) filters have been recommended. Other types of filters are less or more effective and, correspondingly, are easier or harder to move air through. The use of masks, respirators, air filtration modules, and other dedicated equipment is an essential intervention in the management of COVID-19 spread. It is critical to consider the mechanisms of air filtration and to understand how aerosol particles containing SARS-CoV-2 virions interact with filter materials to determine the best practices for the use of air filtration to reduce the spread of COVID-19.

Publication Type

Journal article.

<495>

Accession Number

20210004047

Author

Natale, G. de; Natale, L. de; Troise, C.; Marchitelli, V.; Coviello, A.; Holmberg, K. G.; Somma, R.

Title

The evolution of COVID-19 in Italy after the spring of 2020: an unpredicted summer respite followed by a second wave.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus (COVID-19) pandemic was particularly invasive in Italy during the period between March and late April 2020, then decreased in both the number of infections and in the seriousness of the illness throughout the summer of 2020. In this work, we measure the severity of the disease by the ratio of Intensive Care Units (ICU) spaces occupied by COVID-19 patients and the number of Active Cases (AC) each month from April to October 2020. We also use the ratio of the number of Deaths (D) to the number of Active Cases. What clearly emerges, from rigorous statistical analysis, is a progressive decrease in both ratios until August, indicating progressive mitigation of the disease. This is particularly evident when comparing March-April with July-August; during the summer period the two ratios became roughly 18 times lower. We test such sharp decreases against possible bias in counting active cases and we confirm their statistical significance. We then interpret such evidence in terms of the well-known seasonality of the human immune system and the virus-inactivating effect of stronger UV rays in the summer. Both ratios, however, increased again in October, as ICU/AC began to increase in September 2020. These ratios and the exponential growth of infections in October indicate that the virus - if not contained by strict measures - will lead to unsustainable challenges for the Italian health system in the winter of 2020-2021.

Publication Type

Journal article.

<496>

Accession Number

20210004040

Author

Cross, M.; Ng ShuKay; Scuffham, P.

Title

Trading health for wealth: the effect of COVID-19 response stringency.

Source

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

International governments' COVID-19 responses must balance human and economic health. Beyond slowing viral transmission, strict lockdowns have severe economic consequences. This work investigated response stringency, quantified by the Oxford COVID-19 Government Response Tracker's Stringency Index, and examined how restrictive interventions affected infection rates and gross domestic product (GDP) in China and OECD countries. Accounting for response timing, China imposed the most stringent restrictions, while Sweden and Japan were the least stringent. Expected GDP declines range from -8% (Japan) to -15.4% (UK). While greater restrictions generally slowed viral transmission, they failed to reach statistical significance and reduced GDP ( $p=0.006$ ). Timing was fundamental: governments who responded to the pandemic faster saw greater reductions in viral transmission ( $p=0.013$ ), but worse decreases in GDP ( $p=0.044$ ). Thus, response stringency has a greater effect on GDP than infection rates, which are instead affected by the timing of COVID-19 interventions. Attempts to mitigate economic impacts by delaying restrictions or decreasing stringency may buoy GDP in the short term but increase infection rates, the longer-term economic consequences of which are not yet fully understood. As highly restrictive interventions were successful in some but not all countries, decision-makers must consider whether their strategies are appropriate for the country on health and economic grounds.

Publication Type

Journal article.

<497>

Accession Number

20210004018

Author

Garbey, M.; Joerger, G.; Furr, S.

Title

Gastroenterology procedures generate aerosols: an air quality turnover solution to mitigate COVID-19's propagation risk.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 40 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The growing fear of virus transmission during the 2019 coronavirus disease (COVID-19) pandemic has called for many scientists to look into the various vehicles of infection, including the potential to travel through aerosols. Few have looked into the issue that gastrointestinal (GI) procedures may produce an abundance of aerosols. The current process of risk management for clinics is to follow a clinic-specific HVAC formula, which is typically calculated once a year and assumes perfect mixing of the air within the space, to determine how many minutes each procedural room refreshes 99% of its air between procedures when doors are closed. This formula is not designed to fit the complex dynamic of small airborne particle transport and deposition that can potentially carry the virus in clinical conditions. It results in reduced procedure throughput as well as an excess of idle time in clinics that process a large number of short procedures such as outpatient GI centers. We present and tested a new cyber-physical system that continuously monitors airborne particle counts in procedural rooms and also at the same time automatically monitors the procedural rooms' state and flexible endoscope status without interfering with the clinic's workflow. We use our data gathered from over 1500 GI cases in one clinical suite to understand the correlation between air quality and standard procedure types as well as identify the risks involved with any HVAC system in a clinical suite environment. Thanks to this system, we demonstrate that standard GI procedures generate large quantities of aerosols, which can potentially promote viral airborne transmission among patients and healthcare staff. We provide a solution for the clinic to improve procedure turnover times and throughput, as well as to mitigate the risk of airborne transmission of the virus.

Publication Type

Journal article.

<498>

Accession Number

20210004009

Author

Amodan, B. O.; Bulage, L.; Katana, E.; Ario, A. R.; Fodjo, J. N. S.; Colebunders, R.; Wanyenze, R. K.

Title

Level and determinants of adherence to COVID-19 preventive measures in the first stage of the outbreak in Uganda.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 18 ref.

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Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

We conducted an online survey in the first two months of the Coronavirus Disease 2019 (COVID-19) epidemic in Uganda to assess the level and determinants of adherence to and satisfaction with the COVID-19 preventive measures recommended by the government. We generated Likert scales for adherence and satisfaction outcome variables and measured them with four preventive measures, including handwashing, wearing face masks, physical distancing, and coughing/sneezing hygiene. Of 1726 respondents (mean age: 36 years; range: 12-72), 59% were males, 495 (29%) were adherent to, and 545 (32%) were extremely satisfied with all four preventive measures. Adherence to all four measures was associated with living in Kampala City Centre (AOR: 1.7, 95% CI: 1.1-2.6) and receiving COVID-19 information from health workers (AOR: 1.2, 95% CI: 1.01-1.5) or village leaders (AOR: 1.4, 95% CI: 1.02-1.9). Persons who lived with younger siblings had reduced odds of adherence to all four measures (AOR: 0.75, 95% CI: 0.61-0.93). Extreme satisfaction with all four measures was associated with being female (AOR: 1.3, 95% CI: 1.1-1.6) and health worker (AOR: 1.2, 95% CI: 1.0-1.5). Experiencing violence at home (AOR: 0.25, 95% CI: 0.09-0.67) was associated with lower satisfaction. Following reported poor adherence and satisfaction with preventive measures, behavior change programs using health workers should be expanded throughout, with emphasis on men.

Publication Type

Journal article.

<499>

Accession Number

20210004003

Author

Cagno, A. di; Buonsenso, A.; Baralla, F.; Grazioli, E.; Martino, G. di; Lecce, E.; Calcagno, G.; Fiorilli, G.

Title

Psychological impact of the quarantine-induced stress during the coronavirus (COVID-19) outbreak among Italian athletes.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 85 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The 2019 Coronavirus (COVID-19) outbreak caused home confinement, as well as training and sport competitions withdrawals. The prolonged inactivity impact, and lack of in-person interactions among teammates-coaches, could negatively affect athletes. Total of 1508 self-selected Italian athletes, 338 children (aged 10.52 +or- 1.31), 499 adolescents (aged 14.17 +or- 1.13), and 671 adults (aged 27.59 +or- 10.73), completed the Impact of Event Scale (IES-8, IES-15, and IES-R, respectively). Differences by gender, type of sport (individual vs. team), and competitive level (elite vs. amateur) were examined. One-way ANOVAs showed, in adults, significant differences between genders for perceived stress impact total score (TS;  $p=0.017$ ) and avoidance behavior, with higher scores in women ( $p=0.045$ ). Between individual and team sport, significant differences were found in TS ( $p=0.038$ ) and hyperarousal ( $p=0.030$ ), with higher results in individual. Adult elite athletes showed significantly higher scores in hyperarousal ( $p=0.020$ ) than amateurs. Significant differences were found between gender in adolescents for avoidance ( $p=0.011$ ), and between competitive levels in children, for intrusion ( $p=0.020$ ). These evidences may raise awareness on distress effects of COVID-19 lockdown among athletes and suggested applying specific well-being protocols during the activity resumption, considering gender, type of sport, and competitive level.

Publication Type

Journal article.

<500>

Accession Number

20210003994

Author

Wong YuenHa [Wong, Y. H. J.]; Wai KaChung [Wai, K. C. A.]; Zhao ShengZhi; Yip, F.; Lee JungJae; Wong KingHo [Wong, K. H. C.]; Wang ManPing; Lam TaiHing

Title

Association of individual health literacy with preventive behaviours and family well-being during COVID-19 pandemic: mediating role of family information sharing.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 21 ref.

Publisher

MDPI AG



Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

**Objective:** We tested a model of individual health literacy information sharing with family members, personal preventive behaviours and family well-being during the Coronavirus Disease 2019 (COVID-19) pandemic in Hong Kong. **Methods:** We analysed data of 1501 randomly selected Chinese adults from a cross-sectional survey in Hong Kong from 9 to 23 April, 2020. Individual health literacy about COVID-19 with the items extracted from the questionnaire in World Health Organization Risk Communication and Community Engagement (RCCE) Action Plan Guidance for COVID-19 preparedness and response, COVID-19 information sharing with family members, preventive behaviours against COVID-19 and family well-being were measured. Structural equation modelling analysis tested the proposed model. **Findings:** COVID-19 information sharing with family members partially mediated the association between individual health literacy and personal preventive behaviours. The direct effect of 0.24 was shown, and the indirect effect through COVID-19 information sharing with family members was small at 0.03 ( $Z=3.66$ ,  $p < 0.001$ ). Family well-being was associated with personal preventive behaviours against COVID-19. The model was adjusted for sex, age, and socioeconomic status factors and had good fit with RMSEA=0.04, CFI=0.98, TLI=0.96, and SRMR=0.02. **Conclusion:** COVID-19 information sharing with family members was a partial mediator between individual health literacy and personal preventive behaviours against COVID-19. Strategies for enhancing health literacy and preventive measures against COVID-19 are needed to promote family well-being in the pandemic.

Publication Type

Journal article.

<501>

Accession Number

20210003992

Author

Xiao Yang; Bian YanJie; Zhang Lei

Title

Mental health of Chinese online networkers under COVID-19: a sociological analysis of survey data.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 73 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This paper reports the results of a recent survey of Chinese WeChat networkers (n=2015, August 2020) about China's mental health conditions under COVID-19. The purpose of the survey was to measure symptoms of depression, anxiety, and somatization by using a standard 18-item battery and assess how the results were related to an individual's socioeconomic status, lifestyle, and social capital under an ongoing pandemic. The survey reveals that the pandemic has had a significant impact, as the respondents had more serious mental symptoms when their residential communities exhibited a greater exposure to the spread of the virus. The socioeconomic status of the respondents was negatively associated with the mental symptoms. It modified the impact of COVID-19, and its effect was substantially mediated by measures of lifestyle and social capital.

Publication Type

Journal article.

<502>

Accession Number

20210003984

Author

Li TszWai; Lee MeiChun [Lee, M. C. T.]; Lam PokFu; Ben-Ezra, M.; Liang Li; Liu HuiNan; Hou WaiKai

Title

Social capital, income loss, and psychobehavioral responses amid COVID-19: a population-based analysis.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 56 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study examined the associations of perceived social capital and income change since the outbreak with probable depression and preventive behaviors during the COVID-19 pandemic in Hong Kong. Random digit dialing recruited a population-representative sample of 3011 Hong Kong Chinese aged 15 years

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(mean=44, 55% females) between February 25 and April 29 2020. Respondents reported social capital (perceived interpersonal trust, social harmony, and sense of belonging), income change since the outbreak (loss vs. gain/no change), depressive symptoms, preventive behaviors, and demographics. Controlling for sociodemographics, lack of perceived interpersonal trust was associated with probable depression and avoiding contact with people with respiratory symptoms. Lack of perceived sense of belonging was associated with probable depression and decreased odds of adopting preventive behaviors. Lack of perceived social harmony was associated with probable depression and increased odds of used face masks among respondents with income loss only. Our results suggest that social capital is related to lower risk of depression and to higher chance of used face masks particularly among those experiencing income loss related to COVID-19. Prevention of mental health problems and promotion of effective preventive behaviors could be implemented by focusing on support for those who are socioeconomically disadvantaged.

#### Publication Type

Journal article.

<503>

#### Accession Number

20210003971

#### Author

Galvan, D.; Eftting, L.; Cremasco, H.; Conte-Junior, C. A.

#### Title

Can socioeconomic, health, and safety data explain the spread of COVID-19 outbreak on Brazilian federative units?

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 51 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Infinite factors can influence the spread of COVID-19. Evaluating factors related to the spread of the disease is essential to point out measures that take effect. In this study, the influence of 14 variables was assessed together by Artificial Neural Networks (ANN) of the type Self-Organizing Maps (SOM), to verify the relationship between numbers of cases and deaths from COVID-19 in Brazilian states for 110 days. The SOM analysis showed that the variables that presented a more significant relationship with the numbers of

cases and deaths by COVID-19 were influenza vaccine applied, Intensive Care Unit (ICU), ventilators, physicians, nurses, and the Human Development Index (HDI). In general, Brazilian states with the highest rates of influenza vaccine applied, ICU beds, ventilators, physicians, and nurses, per 100,000 inhabitants, had the lowest number of cases and deaths from COVID-19, while the states with the lowest rates were most affected by the disease. According to the SOM analysis, other variables such as Personal Protective Equipment (PPE), tests, drugs, and Federal funds, did not have as significant effect as expected.

#### Publication Type

Journal article.

<504>

#### Accession Number

20210003966

#### Author

Yang Yang; Liu KeQiao; Li SiQi; Shu Man

#### Title

Social media activities, emotion regulation strategies, and their interactions on people's mental health in COVID-19 pandemic.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 52 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The COVID-19 pandemic has dramatically changed the general population's life worldwide. People may spend more time on social media because of policies like "work at home". Using a cross-sectional dataset collected through an online survey in February 2020, in China, we examined (1) the relationships between social media activities and people's mental health status and (2) the moderation effect of emotional-regulation strategies. The sample included people aged 18 years from 32 provinces and regions in China (N=3159). The inferential analyses included a set of multiple linear regressions with interactions. Our results showed that sharing timely, accurate, and positive COVID-19 information, reducing excessive discussions on COVID-19, and promoting caring online interactions rather than being judgmental, might positively associate with the general public's psychological well-being. Additionally, the relationships between social media activities and psychological well-being varied at different emotion-regulation strategy levels. Adopting the cognitive reappraisal strategy might allay the adverse relationships between

certain social media activities and mental health indicators. Our findings expanded the theory of how social media activities can be associated with a human being's mental health and how it can interact with emotion-regulation strategies during the COVID-19 pandemic.

#### Publication Type

Journal article.

<505>

#### Accession Number

20210003948

#### Author

Aslan, I.; Ochnik, D.; Cinar, O.

#### Title

Exploring perceived stress among students in Turkey during the COVID-19 pandemic.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 84 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Students have been highly vulnerable to mental health issues during the COVID-19 pandemic, and researchers have shown that perceived stress and mental health problems have increased during the pandemic. The aim of this study was to reveal the prevalence of perceived stress and mental health among students during the pandemic and to explore predictors of stress levels. A cross-sectional study was conducted on a sample of 358 undergraduates from 14 universities in Turkey, including 200 female students (56%). The measurements used in the study were the Generalized Anxiety Disorder 7-item (GAD-7) scale, Patient Health Questionnaire (PHQ-8), Satisfaction with Life Scale (SWLS), Perception of COVID Impact on Student Well-Being (CI), Perceived Stress Scale (PSS-10), Physical Activity Scale (PA), and a sociodemographic survey. Students reported high perceived stress, mild generalized anxiety, and low satisfaction with life. More than half of the students met the diagnostic criteria of GAD (52%) and depression (63%). Female and physically inactive students had higher PSS-10 levels. A hierarchical linear regression model showed that after controlling for gender and negative CI, anxiety and physical inactivity significantly predicted high perceived stress. The study shows that students' mental health during the pandemic is at high risk.

Publication Type

Journal article.

<506>

Accession Number

20210003933

Author

Siddiqui, A. F.; Wiederkehr, M.; Rozanova, L.; Flahault, A.

Title

Situation of India in the COVID-19 pandemic: India's initial pandemic experience.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 89 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In this article, we investigate the impact of COVID-19 through screening and surveillance methods adopted in India, as well as the potential health system, social, political, and economic consequences. The research was done in a chronological manner, and data was collected between 30 January 2020 till 12 June 2020. Initial containment measures, including point of entry screenings and testing protocols, appeared insufficient. However, testing capacity was gradually expanded after the commencement of a nation-wide lockdown. Modeling predictions have shown varying results on the emergence of cases depending on the infectiousness of asymptomatic individuals, with a peak predicted in mid-July having over two million cases. The country also faces risks of the economic plunge by losing approximately 4% of its gross domestic product, due to containment measures and reduction in goods importation. The low public health expenditure combined with a lack of infrastructure and low fiscal response implies several challenges to scale up the COVID-19 response and management. Therefore, an emergency preparedness and response plan is essential to integrate into the health system of India.

Publication Type

Journal article.

<507>

Accession Number

20210003924

Author

Lee Nayoon; Lee HyunJu

Title

South Korean nurses' experiences with patient care at a COVID-19-designated hospital: growth after the frontline battle against an infectious disease pandemic.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

COVID-19 is a respiratory disease caused by a novel coronavirus that quickly spread worldwide, resulting in a global pandemic. Healthcare professionals coming into close contact with COVID-19 patients experience mental health issues, including stress, depression, anxiety, post-traumatic stress disorder, and burnout. This study aimed to explore the experiences of COVID-19-designated hospital nurses in South Korea who provided care for patients based on their lived experiences. Eighteen nurses working in a COVID-19-designated hospital completed in-depth individual telephone interviews between July and September 2020, and the data were analyzed using Giorgi's phenomenological methodology. The essential structure of the phenomenon was growth after the frontline battle against an infectious disease pandemic. Nine themes were identified: Pushed onto the Battlefield Without Any Preparation, Struggling on the Frontline, Altered Daily Life, Low Morale, Unexpectedly Long War, Ambivalence Toward Patients, Forces that Keep Me Going, Giving Meaning to My Work, and Taking Another Step in One's Growth. The nurses who cared for patients with COVID-19 had both negative and positive experiences, including post-traumatic growth. These findings could be used as basic data for establishing hospital systems and policies to support frontline nurses coping with infectious disease control to increase their adaption and positive experiences.

Publication Type

Journal article.

<508>

Accession Number

20210003923

Author

Mustafa, R. M.; Alshali, R. Z.; Bukhary, D. M.

Title

Dentists' knowledge, attitudes, and awareness of infection control measures during COVID-19 outbreak: a cross-sectional study in Saudi Arabia.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 37 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

As antiviral vaccines are still pending for the COVID-19 disease, improving dentists' knowledge and prevention measures is important. This study aimed to assess dentists' knowledge, attitude, and perception of COVID-19 in Saudi Arabia during the early outbreak period. In addition, infection control measures for dental setting were also assessed. Online questionnaire was distributed to dentists in different regions of Saudi Arabia when COVID-19 outbreak in Saudi Arabia was at its beginning. The questionnaire was assessing demographic variables, knowledge, attitude, risk perception, and preparedness towards COVID-19. Questions regarding infection control measures were also included. The correct incubation period of the virus was recognized by 43% of participants. Fever, cough, and shortness of breath were the mostly recognized symptoms for COVID-19 (98.9%, 95.5%, and 93.3% respectively). Participants in age groups 60, 50-59, and 20-29 years old were more likely to perceive COVID-19 as a very dangerous disease compared to 30-39 and 40-49 age groups. Dentists in Saudi Arabia showed satisfactory knowledge and positive attitude towards COVID-19. Improving dentists' level of knowledge could be achieved through increasing their accessibility to materials provided by dental health care authorities, which specifies the best and safest approaches for dealing with patients during and after the outbreak.

Publication Type

Journal article.

<509>



Accession Number

20210003913

Author

Nienhuis, C. P.; Lesser, I. A.

Title

The impact of COVID-19 on women's physical activity behavior and mental well-being.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 50 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: A global pandemic caused by COVID-19 resulted in restrictions to daily living for Canadians, including social distancing and closure of recreation facilities and provincial parks. Methods: The objective of this study was to assess whether sex differences exist in physical activity and well-being since COVID-19 and to explore how barriers or facilitators to physical activity may explain these differences. Chi-square tests, independent t-tests and one-way ANOVAs were conducted to evaluate data provided by 1098 Canadians - 215 men and 871 women. Results: Women were significantly less physically active than men and reported more barriers and fewer facilitators to physical activity and experienced significantly more generalized anxiety than men. Women who were engaged in less physical activity due to COVID-19 reported significantly lower mental health scores, lower social, emotional and psychological well-being, and significantly higher generalized anxiety, while women who engaged in more physical activity had improved mental health scores. Conclusions: Given the challenges that women uniquely face due to restrictions, it is imperative to advocate and provide environmental opportunity and support for physical activity to reduce the mental duress women may be experiencing. Specific physical activity programming that is inclusive of lifestyle physical activity and can engage children is encouraged.

Publication Type

Journal article.

<510>

Accession Number

20210003901

Author

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Raciborski, F.; Jankowski, M.; Gujski, M.; Pinkas, J.; Samel-Kowalik, P.; Zaczynski, A.; Pankowski, I.; Rakocy, K.; Wierzba, W.

Title

Prevention of SARS-CoV-2 infection among Police officers in Poland - implications for public health policies.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 59 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: This study aimed to characterize sources of knowledge on the means of prevention of SARS-CoV-2 infections as well as to assess the methods of preventing SARS-CoV-2 infection among police employees in Poland and their potential impact on the risk of SARS-CoV-2 infection. Methods: The study consisted of two phases: questionnaire and laboratory tests for SARS-CoV-2 infection. The questionnaire included 30 questions related to risk factors, knowledge about SARS-CoV-2, and methods of infection prevention. Results: Data were obtained from 5082 police employees. The most common source of knowledge for a daily update on SARS-CoV-2 infection prevention was the Internet (42.6%), television (40.3%), and radio (39.7%). The most commonly used methods of SARS-CoV-2 infection included washing one's hands for at least 20 s (95.8%), wearing facemasks (82.9%), and physical distancing (74.9%). Results of IgG tests were lower in police units where the overall compliance with the preventive measures was higher ( $p < 0.01$ ). Women were more likely to exercise SARS-CoV-2 infection prevention behaviors compared to men. Compliance with the recommended protective measures increased with age. Conclusions: Lower anti-SARS-CoV-2 IgG seropositivity rates were observed in police units with better overall compliance with the preventive measures, suggesting the key importance of group rather than individual behaviors.

Publication Type

Journal article.

<511>

Accession Number

20210003897

Author

Coppeta, L.; Somma, G.; Ippoliti, L.; Ferrari, C.; D'Alessandro, I.; Pietroiusti, A.; Aurilio, M. T.

Title

Contact screening for healthcare workers exposed to patients with COVID-19.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 15 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In China and Italy, many cases of coronavirus disease 2019 (COVID-19) have occurred among healthcare workers (HCWs). Prompt identification, isolation and contact tracing of COVID-19 cases are key elements in controlling the COVID-19 pandemic. The aim of this study was to evaluate the rate of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infection among HCWs exposed to patients with COVID-19 in relation to the main determinants of exposure. To assess the risk of exposure, we performed active symptom monitoring in 1006 HCWs identified as contacts of COVID19 cases. The presence of symptoms was statistically associated with a positive nasopharyngeal swab result. Only one subject was asymptomatic at the time of positive test. These data suggest that clinical history may help in the selection of subjects to be investigated by means of reverse transcriptase-polymerase chain reaction (RT-PCR) in the case of a shortage of diagnostic resources. We found that close contact (within 2 m for 15 min or more) was not statistically related to contagion. Regarding the use of personal protective equipment (PPE), only the use of facial masks was inversely related to the chance of becoming infected ( $p < 0.01$ ). In conclusion, our data show that unprotected contacts between HCWs should be considered a major route of HCW contagion, suggesting that the use of facial masks should be implemented even in settings where known patients with COVID-19 are not present.

Publication Type

Journal article.

<512>

Accession Number

20210003891

Author

Ao YiBin; Zhu Hao; Meng FanRong; Wang Yan; Ye Gui; Yang LinChuan; Dong Na; Martek, I.

Title

The impact of social support on public anxiety amidst the COVID-19 pandemic in China.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 65 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The recent coronavirus outbreak has captured worldwide attention. This study investigated the anxiety of the Chinese public and its relationship with social support during the early stage of the COVID-19 pandemic, thereby providing empirical support for interventions on improving the public's mental health. On the basis of an online questionnaire survey conducted on 10-18 February 2020, this study shows that 19.8%, 68.5%, and 11.1% of the respondents suffered mild anxiety, moderate anxiety, and severe anxiety, respectively. Significant differences are reported in state anxiety between people with different household incomes. There are significant differences in trait anxiety and state anxiety between different social support groups. Social support and trait anxiety are negatively correlated. Social support and state anxiety are negatively correlated. Social support affects state anxiety both directly and indirectly (through the mediation of trait anxiety). Therefore, during the COVID-19 pandemic, increasing public support for society can effectively reduce public anxiety.

Publication Type

Journal article.

<513>

Accession Number

20210003885

Author

Hwang Jinsoo; Kim Dohyung; Kim Jinkyung [Kim, J. J.]

Title

How to form behavioral intentions in the field of drone food delivery services: the moderating role of the COVID-19 outbreak.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 67 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study was designed to identify the significance of drone food delivery services using the moderating role of the outbreak of COVID-19. More specifically, this study proposed that there is a positive relationship between the overall image and the desire. Additionally, it was hypothesized that the desire helps to enhance two types of behavioral intentions, which included word-of-mouth intentions and the willingness to pay more. Lastly, the moderating role of the outbreak of COVID-19 was proposed during this process. Six hypotheses were tested that used 335 samples before the outbreak of COVID-19, and 343 samples were used after the outbreak of COVID-19 in South Korea. The data analysis results indicated that the overall image has a positive influence on the desire, which in turn positively affects the word-of-mouth intentions and the willingness to pay more. Furthermore, this study identified the important moderating role of the outbreak of COVID-19 in the relationship between the desire and the word-of-mouth intentions.

Publication Type

Journal article.

<514>

Accession Number

20210003877

Author

Hanke, A. A.; Sundermeier, T.; Boeck, H. T.; Schieffer, E.; Boyen, J.; Braun, A. C.; Rolf, S.; Stein, L.; Kuck, M.; Schiffer, M.; Pape, L.; Zwaan, M. de; Haufe, S.; Kerling, A.; Tegtbur, U.; Nohre, M.

Title

Influence of officially ordered restrictions during the first wave of COVID-19 pandemic on physical activity and quality of life in patients after kidney transplantation in a telemedicine based aftercare program - a KTx360 degrees sub study.

Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

## Abstract

Guidelines recommend a healthy lifestyle and regularly physical activity (PA) after kidney transplantation (KTx). The KTx360 degrees program is a multicenter, multisectoral, multimodal, telemedicine-based follow-up care program. Effects of the first COVID-19 wave restrictions on health-related quality of life and PA of supervised KTx360 degrees patients were evaluated using an online questionnaire. Six hundred and fifty-two KTx360 degrees patients were contacted via email and were asked to complete the Freiburg questionnaire of physical activity and the Short form 12 Health Survey (SF-12) online. Pre-pandemic and lockdown data were compared in 248 data sets. While sporting activity decreased during the COVID-19 pandemic, basic and leisure activity increased, resulting in increased overall activity. The physical component scale of the SF-12 was in the low normal range before as well as during the pandemic, with a small but significant increase during the pandemic. The mental component scale showed normal values before and during pandemic with a small but statistically significant decrease. Our study supports the effectiveness of a telemedicine based program for KTx patient care in maintaining PA and quality of life during the first peak of the COVID-19 pandemic. However, further research and observation during the ongoing pandemic are required.

## Publication Type

Journal article.

<515>

## Accession Number

20210003876

## Author

Tejedor, S.; Perez-Escoda, A.; Ventin, A.; Tusa, F.; Martinez, F.

## Title

Tracking websites' digital communication strategies in Latin American hospitals during the COVID-19 pandemic.

## Source

International Journal of Environmental Research and Public Health; 2020. 17(23). 45 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract

Since the advent of the Internet, websites have become the nerve center of the digital ecosystems of media, companies and all kinds of institutions. Currently, the impact of the global coronavirus pandemic has placed healthcare issues at the center of social debate, including hospitals and their websites as digital sources of trustworthy information. COVID-19 has intensified the need for quality information and the legitimacy of sources fighting the infodemic situation. In this regard hospitals become essential social actors in the spread of healthcare information. Within this framework, a qualitative study is presented with descriptive components and based on content analysis. This study examines 58 websites from the best hospitals included in the "America Economia" ranking health sector from Latin America. The study applies an analysis methodology based on previous research focusing on specialized web studies, defining an analysis model on six variables and 65 thematic indicators. The research concludes that hospitals occupying first positions in the medical services directory are not necessarily those that have the best websites. Similarly, it is worth noting that a quarter of the studied sample do not devote a specific space to reporting coronavirus information. Brazil, Colombia and Chile are the countries with the highest number of hospitals among those with the best websites. In conclusion, digital media, specifically websites, could constitute legitimate resources of healthcare information consumption, so their accuracy and proper development seem to be significant to become genuine sources that not only could provide better healthcare services but help avoid the spread of misinformation about the COVID-19 pandemic.

#### Publication Type

Journal article.

<516>

#### Accession Number

20210003704

#### Author

Cugno, M.; Meroni, P. L.; Gualtierotti, R.; Griffini, S.; Grovetti, E.; Torri, A.; Lonati, P.; Grossi, C.; Borghi, M. O.; Novembrino, C.; Boscolo, M.; Uceda Renteria, S. C.; Valenti, L.; Lamorte, G.; Manunta, M.; Prati, D.; Pesenti, A.; Blasi, F.; Costantino, G.; Gori, A.; Bandera, A.; Tedesco, F.; Peyvandi, F.

#### Title

Complement activation and endothelial perturbation parallel COVID-19 severity and activity.

#### Source

Journal of Autoimmunity; 2021. 116. 37 ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

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Background; Animal models and few clinical reports suggest the involvement of the complement system in the onset of severe manifestations of coronavirus disease-2019 (COVID-19). However, complement contribution to endotheliopathy and hypercoagulability has not been elucidated yet. Background: To evaluate the association among complement activation, endothelial damage and disease severity or activity in COVID-19 patients. Methods: In this single-centre cohort study, 148 patients with COVID-19 of different severity were evaluated upon hospital admission and 30 days later. Markers of complement activation (SC5b-9 and C5a) and endothelial perturbation (von Willebrand factor [vWF], tissue-type plasminogen activator [t-PA], plasminogen activator inhibitor-1 [PAI-1], soluble thrombomodulin [sTM], and soluble endothelial selectin [sE-selectin]) were measured in plasma. Results: The patients had high plasma levels of SC5b-9 and C5a ( $p = 0.0001$  for both) and vWF, t-PA and PAI-1 ( $p = 0.0001$  for all). Their SC5b-9 levels correlated with those of vWF ( $r = 0.517$ ,  $p = 0.0001$ ) and paralleled disease severity (severe vs mild  $p = 0.0001$ , severe vs moderate  $p = 0.026$  and moderate vs mild  $p = 0.001$ ). The levels of sE-selectin were significantly increased only in the patients with severe disease. After 30 days, plasma SC5b-9, C5a and vWF levels had significantly decreased ( $p = 0.0001$  for all), and 43% of the evaluated patients had normal levels. Conclusions; Complement activation is boosted during the progression of COVID-19 and dampened during remission, thus indicating its role in the pathophysiology of the disease. The association between complement activation and the biomarkers of endothelial damage suggests that complement may contribute to tissue injury and could be the target of specific therapy.

#### Publication Type

Journal article.

<517>

#### Accession Number

20210003570

#### Author

Intawong, K.; Olson, D.; Chariyalertsak, S.

#### Title

Application technology to fight the COVID-19 pandemic: lessons learned in Thailand.

#### Source

Biochemical and Biophysical Research Communications; 2021. 534:830-836.

#### 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.

<518>

#### Accession Number

20210003212

#### Author

Bassareo, P. P.; Melis, M. R.; Marras, S.; Calcaterra, G.

#### Title

Learning from the past in the COVID-19 era: rediscovery of quarantine, previous pandemics, origin of hospitals and national healthcare systems, and ethics in medicine.

#### Source

Postgraduate Medical Journal; 2020. 96(1140):633-638. 52 ref.

#### Publisher

BMJ Publishing Group

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

After the dramatic coronavirus outbreak at the end of 2019 in Wuhan, Hubei province, China, on 11 March 2020, a pandemic was declared by the WHO. Most countries worldwide imposed a quarantine or lockdown to their citizens, in an attempt to prevent uncontrolled infection from spreading. Historically, quarantine is the 40-day period of forced isolation to prevent the spread of an infectious disease. In this educational paper, a historical overview from the sacred temples of ancient Greece-the cradle of medicine-to modern hospitals, along with the conceive of healthcare systems, is provided. A few foods for thought as to the conflict between ethics in medicine and shortage of personnel and financial resources in the coronavirus disease 2019 era are offered as well.

#### Publication Type

Journal article.

<519>

#### Accession Number

20210003096

#### Author

Garduno-Soto, M.; Choreno-Parra, J. A.

#### Title

Cutaneous susceptibility to SARS-CoV-2 infection according to the expression of viral entry factors in the skin.

#### Source

Gaceta Medica de Mexico; 2020. 156(4):348-351. 12 ref.

#### Publisher

Instituto Mexicano del Seguro Social

#### Location of Publisher

Mexico City

#### Country of Publication

Mexico

#### Abstract

**Introduction:** Reports of dermatological manifestations in patients with COVID-19 suggest a possible cutaneous tropism of SARS-CoV-2; however, the capacity of this virus to infect the skin is unknown. **Background:** To determine the susceptibility of the skin to SARS-CoV-2 infection based on the expression of viral entry factors ACE2 and TMPRSS2 in this organ. **Method:** A comprehensive analysis of human tissue gene expression databases was carried out looking for the presence of the ACE2 and TMPRSS2 genes in the skin. mRNA expression of these genes in skin-derived human cell lines was also assessed. **Results:** The analyses showed high co-expression of ACE2 and TMPRSS2 in the gastrointestinal tract and kidney, but not in the skin. Only the human immortalized keratinocyte HaCaT cell line expressed detectable levels of ACE2, and no cell line originating in the skin expressed TMPRSS2. **Conclusions:** Our results suggest that cutaneous

manifestations in patients with COVID-19 cannot be directly attributed to the virus. It is possible that cutaneous blood vessels endothelial damage, as well as the effect of circulating inflammatory mediators produced in response to the virus, are the cause of skin involvement.

Publication Type

Journal article.

<520>

Accession Number

20210003093

Author

Almeida-Espinosa, A.; Sarmiento-Ardila, J. A.

Title

COVID-19: implications of SARS-CoV-2 in Colombia.

Source

Gaceta Medica de Mexico; 2020. 156(4):330-334. 49 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

COVID-19 arrived to Latin America early in March 2020. Currently, strategies are being developed in Colombia focusing on the quarantine and social and economic capital reactivation, whereby the expected results are not being obtained. In this article, we propose to review scientific evidence-based literature where information on the operation and adaptation of health systems, and social, economic and solidarity sectors of Colombia is presented. The purpose is to identify COVID-19 implications in the network that provides health services, quality of life and health-disease prognosis in the country, which is not prepared to face crises of social nature and of health systems, as well as the economic and solidarity impacts that are brought about by pandemics and crude episodes of disease.

Publication Type

Journal article.

<521>

Accession Number

20210003003

Author

Rhein, C. von; Scholz, T.; Henss, L.; Kronstein-Wiedemann, R.; Schwarz, T.; Rodionov, R. N.; Corman, V. M.; Tonn, T.; Schnierle, B. S.

Title

Comparison of potency assays to assess SARS-CoV-2 neutralizing antibody capacity in COVID-19 convalescent plasma.

Source

Journal of Virological Methods; 2021. 288.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Convalescent plasma is plasma collected from individuals after resolution of an infection and the development of antibodies. Passive antibody administration by transfusion of convalescent plasma is currently in clinical evaluations to treat COVID-19 patients. The level of neutralizing antibodies vary among convalescent patients and fast and simple methods to identify suitable plasma donations are needed. We compared three methods to determine the SARS-CoV-2 neutralizing activity of human convalescent plasma: live virus neutralization by plaque reduction assay, a lentiviral vector based pseudotype neutralization assay and a competition ELISA-based surrogate virus neutralization assay (sVNT). Neutralization activity correlated among the different assays; however the sVNT assay was overvaluing the low neutralizing plasma. On the other hand, the sVNT assay required the lowest biosafety level, is fast and is sufficient to identify highly neutralizing plasma samples. Though weakly neutralizing samples were more reliably detected by the more challenging lentiviral vector based assays or virus neutralization assays. Spike receptor binding competition assays are suitable to identify highly neutralizing plasma samples under low biosafety requirements. Detailed analysis of in vitro neutralization activity requires more sophisticated methods that have to be performed under higher biosafety levels.

Publication Type

Journal article.

<522>

Accession Number

20210002835

Author

Sun ChunYang; Sun YaLei; Li XinMin

Title

The role of Chinese medicine in COVID-19 pneumonia: a systematic review and meta-analysis.

Source

American Journal of Emergency Medicine; 2020. 38(10):2153-2159. 30 ref.

Publisher

Elsevier Inc.

Location of Publisher

St. Louis

Country of Publication

USA

Abstract

Introduction: Chinese medicine (CM) has been used to treat Novel Coronavirus 2019 (COVID-19) pneumonia in China. This meta-analysis was conducted to evaluate the clinical efficacy and safety of CM in the treatment of COVID-19 pneumonia. Methods: Randomized controlled trials (RCTs) involving CM in the treatment of COVID-19 pneumonia were identified from Cochrane Central Register of Controlled Trials, PubMed, EMBASE, Chinese National Knowledge Infrastructure, Chinese Biomedical Database, Wanfang Database and VIP Information Database. The methodological quality of trials was evaluated with Cochrane Handbook criteria, and the Cochrane Collaboration's Review Manager 5.3 software was used for meta-analysis. Results: A total of 7 valid studies involving 681 patients were included. The meta-analysis exhibited in comparison to conventional treatment, CM combined with conventional treatment significantly improved clinical efficacy (RR = 1.21, 95% CI [1.08,1.36]), and significantly increased viral nucleic acid negative conversion rate (RR = 1.49, 95% CI [1.13,1.97]). CM also prominently reduced pulmonary inflammation (RR = 1.27, 95% CI [1.12,1.44]), and improved host immune function (WBC, MD = 0.92, 95% CI [0.07,1.76]; LYM, MD = 0.33, 95% CI [0.08,0.57]; LYM%, MD = 2.90, 95% CI [2.09,3.71]; CRP, MD = -12.66, 95% CI [-24.40, -0.92]). Meanwhile, CM did not increase the incidence of adverse reactions (RR = 1.17, 95% CI [0.39,3.52]). Conclusion: According to the allocated data, CM has demonstrated clinical efficacy and safety on COVID-19 pneumonia, which need to be confirmed by high quality, multiple-center, large sample randomized controlled trials.

Publication Type

Journal article.

<523>

Accession Number

20210002814

Author

Li GuoMing; Yuan, M.; Li HaiHong; Deng ChangSheng; Wang Qi; Tang YeXiao; Zhang HongYing; Yu WeiSheng; Xu, Q.; Zou, Y.; Yuan YueMing; Guo, J.; Jin ChunMing; Guan XiangDong; Xie, F.; Song JianPing

Title

Safety and efficacy of artemisinin-piperaquine for treatment of COVID-19: an open-label, non-randomised and controlled trial.

Source

International Journal of Antimicrobial Agents; 2021. 57(1). 35 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

**Background:** There are no effective therapies for patients with coronavirus disease-2019 (COVID-19). **Methods:** Forty-one patients with confirmed COVID-19 were enrolled in the study and divided into two groups: artemisinin-piperaquine (AP) (n = 23) and control (n = 18). The primary outcome were the time taken to reach undetectable levels of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) and the percentage of participants with undetectable SARS-CoV-2 on days 7, 10, 14, and 28. The computed tomography (CT) imaging changes within 10 days, corrected QT interval changes, adverse events, and abnormal laboratory parameters were the secondary outcomes. **Results:** The mean time to reach undetectable viral RNA (mean +or- standard deviation) was 10.6 +or- 1.1 days (95% confidence interval [CI] 8.4-12.8) for the AP group and 19.3 +or- 2.1 days (95% CI 15.1-23.5) for the control group. The percentages of patients with undetectable viral RNA on days 7, 10, 14, 21, and 28 were 26.1%, 43.5%, 78.3%, 100%, and 100%, respectively, in the AP group and 5.6%, 16.7%, 44.4%, 55.6%, and 72.2%, respectively, in the control group. The CT imaging within 10 days post-treatment showed no significant between-group differences (P > 0.05). Both groups had mild adverse events. **Conclusions:** In patients with mild-to-moderate COVID-19, the time to reach undetectable SARS-CoV-2 was significantly shorter in the AP group than that in the control group. However, physicians should consider QT interval changes before using AP.

Publication Type

Journal article.

<524>

Accession Number

20210002701

Author

Govender, I.; Masilo, K. A. O.; Maphasha, O. M.; Matjila, S.

Title

A description of events surrounding the index COVID-19 diagnosis in a staff member at Kalafong Provincial Tertiary Hospital in Gauteng, South Africa.

Source

South African Family Practice; 2020. 62(1 Part 4). 23 ref.

Publisher

AOSIS OpenJournals

Location of Publisher

Tygervalley

Country of Publication

South Africa

Abstract

The ongoing coronavirus disease 2019 (COVID-19) pandemic presented a huge challenge to the health systems across the world. When the virus hit South Africa, and the state of national disaster was announced by the president, the healthcare system had to work on its COVID-19 response preparedness. Initially, a few hospitals were then designated facilities for managing COVID-19 patients. Kalafong Hospital, which was not amongst a list of designated facilities for COVID-19 was forced to evaluate its level of preparedness after an intern doctor tested positive. The objectives of this report are to illustrate the hospital's response around the management of the index case to share our facility's general response to the pandemic.

Publication Type

Journal article.

<525>

Accession Number

20210002683

Author

Abdellatif, M. M.

Title

Phylogeny of 2019-nCoV and SARS-like CoVs of human, bat and pangolin origin.

Source

International Journal of Veterinary Science; 2020. 9(4):546-552. many ref.

Publisher

Faculty of Agriculture, Nnamdi Azikiwe University

Location of Publisher

Anambra

Country of Publication

Nigeria

Abstract

A novel coronavirus first broke out in Wuhan, China in December, 2019 has been declared a pandemic by WHO on March, 2020. This work aimed to search for probable ancestor of the virus, phylogeny of 2019-nCoV and similar SL-CoVs based on the whole genome, M, N, ORF1ab, orf3a, and S gene sequences (n=84) obtained from GenBank using BLASTn software in the NCBI was done. Nucleotides of ORF3a and S-genes among 2019-nCoV are identical, whereas its similar on the whole genome (99.9-100%), M-gene (99.7-100%), N-gene (99.9-100%) and ORF1ab-gene (99.7-100%). nCoV are similar to bat CoV/RaTG13 on the whole genome (96.2%), M-gene (95.0%), N-gene (97%), ORF1ab-gene (95.3%), ORF3a-gene (99.1%) and S-gene (90.7%). Likewise, nCoV exhibited homology to bat-CoVZXC21 on M-gene (93.2%), N-gene (91.5%), ORF1ab-gene (93.1%) and ORF3a-gene (94.4%). The emergent viruses shared identity to bat-CoVZC45 on N-gene (91.3%), ORF1ab-gene (92.8%) and ORF3a-gene (94.0%). In addition, pangolinCoV/MP789 exhibited common sequences on M-gene (91.0%), N-gene (96.3%) and ORF3a-gene (93.3%) to nCoV. Furthermore, pangolin-CoV/MP789 is analogous to bat CoV/RaTG13 (91.3%) and bat-SL-CoVZXC21 (92.2%) on M-gene and to bat CoV/RaTG13 (94.8%) on N-gene. Nevertheless, nCoV are distinct from the previously identified SL-CoVs of human origin. The present analysis indicates that nCoV may have transmitted from bats, pangolin and/or unidentified hosts.

Publication Type

Journal article.

<526>

Accession Number

20210002003

Author

Namisha Sharma; Mehanathan Muthamilarasan; Ashish Prasad; Manoj Prasad

Title

Genomics approaches to synthesize plant-based biomolecules for therapeutic applications to combat SARS-CoV-2.



Source

Genomics (San Diego); 2020. 112(6):4322-4331. many ref.

Publisher

Elsevier Science

Location of Publisher

San Diego

Country of Publication

USA

Abstract

COVID-19 caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is devastating to the humankind for which neither vaccines nor precise therapeutic molecules for treatment are identified. The search for new drugs and repurposing of existing drugs are being performed; however, at the same time, research on plants to identify novel therapeutic compounds or testing the existing ones is progressing at a slower phase. In this context, genomics and biotechnology offer various tools and strategies to manipulate plants for producing those complex biopharmaceutical products. This review enumerates the scope for research on plant-based molecules for their potential application in treating SARS-CoV-2 infection. Strategies to edit gene and genome, overexpression and silencing approaches, and molecular breeding for producing target biomolecules in the plant system are discussed in detail. Altogether, the present review provides a roadmap for expediting research on using plants as a novel source of active biomolecules having therapeutic applications.

Publication Type

Journal article.

<527>

Accession Number

20210001929

Author

Chen XinLin; Lu Lu; Shi Jie; Zhang Xin; Fan HaoJun; Fan Bin; Qu Bo; Lv Qi; Hou ShiKe

Title

Application and prospect of a mobile hospital in disaster response. (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(3):377-383. 53 ref.

Publisher

Cambridge University Press

Location of Publisher

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Cambridge

Country of Publication

UK

Abstract

Disasters such as an earthquake, a flood, and an epidemic usually lead to large numbers of casualties accompanied by disruption of the functioning of local medical institutions. A rapid response of medical assistance and support is required. Mobile hospitals have been deployed by national and international organizations at disaster situations in the past decades, which play an important role in saving casualties and alleviating the shortage of medical resources. In this paper, we briefly introduce the types and characteristics of mobile hospitals used by medical teams in disaster rescue, including the aspects of structural form, organizational form, and mobile transportation. We also review the practices of mobile hospitals in disaster response and summarize the problems and needs of mobile hospitals in disaster rescue. Finally, we propose the development direction of mobile hospitals, especially on the development of intelligence, rapid deployment capabilities, and modularization, which provide suggestions for further research and development of mobile hospitals in the future.

Publication Type

Journal article.

<528>

Accession Number

20210000268

Author

Solomon, S.; Rao, G. P.; Swapna, M.

Title

Impact of COVID-19 on Indian sugar industry.

Source

Sugar Tech; 2020. 22(4):547-551. 1 ref.

Publisher

Springer (India) Private Limited

Location of Publisher

New Delhi

Country of Publication

India

Abstract

The Indian sugar industry, a significant player in the national economy, has faced many challenges in the course of its journey. The threat posed by the growing pandemic novel corona virus (COVID-19), has been the most recent one and it is impacting sugar industry stakeholders and its integrated industries, not only in India, but all over the world. The entire value chain of the Indian sugar industry, viz., sugarcane, sugar, molasses, ethanol and their subsequent marketing and export, has been adversely affected from the spillover impacts. The major impacts of COVID-19 on Indian sugar industry are discussed.

#### Publication Type

Journal article.

<529>

#### Accession Number

20203601709

#### Author

Merkies, K.; Copelin, C.; Crouchman, E.; St-Onge, A.

#### Title

The effect of the COVID-19 pandemic on riding lesson barns and summer camps in Ontario.

#### Source

Animals; 2020. 10(12). 23 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The COVID-19 pandemic has direct effects on the operations of riding lesson facilities and summer camps, with little government guidance on how to implement these. An online survey link was distributed to riding lesson facilities in Ontario. Descriptive statistics of respondents (n = 72) reported a decrease in both the number of riding lessons offered and the number of riding students per lesson. Scheduling riding times and limiting access to specific places on the farm ensured controlled access to the farms. Strict hygiene procedures were implemented including disinfecting high contact areas and shared tack. Summer camps followed the same procedures, although some farms chose not to offer camps at all. The use of facemasks was not prevalent in either riding lessons (43.3%) or camps (25%), likely because the activities took place outside. However, recent evidence shows that facemasks are perhaps even more important when outdoors, and it is recommended that riding lesson facilities re-evaluate their requirements for students and staff to wear facemasks while in the barn. In spite of the hardships, many positive aspects were noted

including time to attend to repair and maintenance needs, scrutinizing business practices, more respect for barn rules, and more time to bond with the horses.

#### Publication Type

Journal article.

<530>

#### Accession Number

20203601676

#### Author

Zappulli, V.; Ferro, S.; Bonsembiante, F.; Brocca, G.; Calore, A.; Cavicchioli, L.; Centelleghes, C.; Corazzola, G.; Vreese, S. de; Gelain, M. E.; Mazzariol, S.; Moccia, V.; Rensi, N.; Sammarco, A.; Torrigiani, F.; Verin, R.; Castagnaro, M.

#### Title

Pathology of coronavirus infections: a review of lesions in animals in the One-Health perspective.

#### Source

Animals; 2020. 10(12). 300 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Coronaviruses (CoVs) are worldwide distributed RNA-viruses affecting several species, including humans, and causing a broad spectrum of diseases. Historically, they have not been considered a severe threat to public health until two outbreaks of COVs-related atypical human pneumonia derived from animal hosts appeared in 2002 and in 2012. The concern related to CoVs infection dramatically rose after the COVID-19 global outbreak, for which a spill-over from wild animals is also most likely. In light of this CoV zoonotic risk, and their ability to adapt to new species and dramatically spread, it appears pivotal to understand the pathophysiology and mechanisms of tissue injury of known CoVs within the "One-Health" concept. This review specifically describes all CoVs diseases in animals, schematically representing the tissue damage and summarizing the major lesions in an attempt to compare and put them in relation, also with human infections. Some information on pathogenesis and genetic diversity is also included. Investigating the lesions and distribution of CoVs can be crucial to understand and monitor the evolution of these viruses as well as of other pathogens and to further deepen the pathogenesis and transmission of this disease to help public health preventive measures and therapies.

Publication Type

Journal article.

<531>

Accession Number

20203601523

Author

Vidaurreta, I.; Orengo, J.; Fe, C. de la; Gonzalez, J. M.; Gomez-Martin, A.; Benito, B.

Title

Price fluctuation, protected geographical indications and employment in the Spanish small ruminant sector during the COVID-19 crisis.

Source

Animals; 2020. 10(12). 46 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Official milk prices in the Spanish small ruminant sector were used for 5 years (2015-2019) to analyze the effect caused by the coronavirus disease (COVID-19) crisis in 2020. Meat price fluctuations were also studied using the weekly prices officially provided by some of the main agrarian markets of the country (n = 6) in 2019 and 2020. Moreover, the sales and prices of three protected geographical indications (PGI) of lamb meat served to study the marketability when the products are sold or not under these quality labels in a crisis context. According to Spanish Government's official communications, 2020 was divided in three periods of study (pre-COVID-19, total confinement and post-confinement). The evolution of employment in this subsector in 2020, as a direct consequence of this crisis, was also analyzed considering data provided by producers. Results showed an intra-annual seasonal effect for milk prices in 2020 for both livestock species, as observed in previous years. However, a negative economic impact on goat milk prices due to the pandemic was checked during the confinement and post-confinement months. Sheep milk prices remained stable. Lamb and goat kid meat prices showed a similar trend in comparison with 2019 during the pre-COVID-19 period. The total confinement period recorded a short interval of 1-2 weeks in which the prices declined, before the suspension of quotations in many markets. In contrast, once confinement was completed, meat prices for both ruminant species rapidly reached levels that existed before the coronavirus crisis. Overall data suggested the protective effect of the PGI marks on lamb meat. Lambs with a PGI had better 2020 prices than non-PGI lambs (+8%), regardless of the period analyzed. Moreover, with

fewer lambs sold in 2020, there was a relevant drop in sales of non-PGI lambs vs. PGI (-19% vs. -2%) during the first 7 months. Finally, there was little or no readjustment of the workforce in the small ruminant flocks.

Publication Type

Journal article.

<532>

Accession Number

20203601453

Author

Ding, J.; van der A., R. J.; Eskes, H. J.; Mijling, B.; Stavrakou, T.; Geffen, J. H. G. M. van; Veeffkind, J. P.

Title

NOx emissions reduction and rebound in China due to the COVID-19 crisis. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(19). 33 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

During the COVID-19 lockdown (24 January-20 March) in China low air pollution levels were reported in the media as a consequence of reduced economic and social activities. Quantification of the pollution reduction is not straightforward due to effects of transport, meteorology, and chemistry. We have analyzed the NOx emission reductions calculated with an inverse algorithm applied to daily NO2 observations from TROPOMI onboard the Copernicus Sentinel-5P satellite. This method allows the quantification of emission reductions per city and the analysis of emissions of maritime transport and of the energy sector separately. The reductions we found are 20-50% for cities, about 40% for power plants, and 15-40% for maritime transport depending on the region. The reduction in both emissions and concentrations shows a similar timeline consisting of a sharp reduction (34-50%) around the Spring festival and a slow recovery from mid-February to mid-March.

Publication Type

Journal article.

<533>

Accession Number

20203601222

Author

Lin DanHua; Friedman, D. B.; Qiao Shan; Tam CheukChi; Li XiaoYan; Li XiaoMing

Title

Information uncertainty: a correlate for acute stress disorder during the COVID-19 outbreak in China.

Source

BMC Public Health; 2020. 20(1867). 27 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Individuals' stress in responding to the current COVID-19 pandemic may be exacerbated by information uncertainty driven by inconsistent, unverified, and conflicting news from various sources. The current study aims to test if information uncertainty during the COVID-19 outbreak was related to acute stress disorder (ASD) over and above other psychosocial stressors. Methods: An anonymous online survey was conducted with 7800 college students throughout China from January 31 through February 11, 2020. Existing scales were modified to measure ASD and six potential stressors including information uncertainty during the COVID-19 outbreak. Hierarchical regression analysis was conducted to assess the unique association of information uncertainty with ASD. To minimize the effect of large sample size and also to get a sense of whether the effects of information uncertainty were similar to people at the center of the epidemic, we repeated the hierarchical regression among 10% of the students who were randomly selected from the entire sample ("10% random sample"; n = 780) and 226 students from Hubei Province where the outbreak started. Results: Information uncertainty was highly prevalent among the respondents (64%). It was significantly associated with ASD beyond other key variables and potential stressors across three samples. In the hierarchical regression among the entire sample, demographic variables accounted for 9.4% of the variance in ASD. The other five stressors added 5.1% of the variance. The information uncertainty (beta = .159; p <.001) explained an additional 2.1% of the variance. Likewise, the information uncertainty explained an additional 2.1 and 3.4% of the variance in ASD beyond all other variables among the 10% random sample (beta = .165; p <.001) and the Hubei sample (beta = .196; p <.01), respectively. Conclusion: Information uncertainty is a unique correlate of psychological stress during the COVID-19 outbreak. Reducing information uncertainty is essential not only for halting virus transmission but also for mitigating negative impacts of the pandemic on people's psychosocial wellbeing. Transparent, timely, and accurate communication can reduce public confusion, fear, and stress. Capacity building in governments,

communities, and media outlets to prevent, reduce and manage information uncertainty should be a critical part of the response to an emerging global health crisis such as the COVID-19 pandemic.

Publication Type

Journal article.

<534>

Accession Number

20203601025

Author

Favara, D. M.; Ceron-Gutierrez, M. L.; Carnell, G. W.; Heeney, J. L.; Corrie, P.; Doffinger, R.

Title

Detection of breastmilk antibodies targeting SARS-CoV-2 nucleocapsid, spike and receptor-binding-domain antigens.

Source

Emerging Microbes and Infections; 2020. 9(2728-2731):2728-2731. 15 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

A 40-year-old female was found to have strongly neutralizing SARS-CoV-2 breastmilk IgA and IgG antibodies reactive against multiple SARS-CoV-2 antigens at 2.5 months after documented infection with SARS-CoV-2. At 6.5 months following the infection, she remained positive for breastmilk and serum SARS-CoV-2 neutralizing antibodies. Holder breast milk pasteurization did not diminish SARS-CoV-2 antibody titres but it reduced its neutralizing capacity, while serum heat inactivation had no negative effect on SARS-CoV-2 serum antibody levels and neutralizing capacity. Current data on SARS-CoV-2 and breastmilk are reviewed.

Publication Type

Journal article.



<535>

Accession Number

20203600176

Author

Taridala, S. A. A.; Nursavista, R.; Kurnia, A.; Purbaningsih, Y.; Alzarliani, W. O.; Rayuddin; Hartati

Title

Abalone marketing and its performance during COVID-19 pandemic.

Source

AAFL Bioflux; 2020. 13(5):2946-2955. 41 ref.

Publisher

Bioflux

Location of Publisher

Cluj-Napoca

Country of Publication

Romania

Abstract

This study aims to analyze the abalone marketing in Buton Island and its performance during the Covid-19 pandemic. Abalone is one of Indonesian marine resources with great potential to be developed. The high demand for abalone is usually not met with enough supplies, resulting in its expensive price. Sources are scattered and in remote locations, creating the need for marketing institutions. The study took place in Bajo Bahari village (Buton regency) and Baubau (a city in Southeast Sulawesi), Indonesia. The data was initially collected in February to May 2015, and later in March 2020 when the Covid-19 pandemic hit. The study consists of all 30 Bajo Bahari abalone fishermen. Additionally, 5 abalone merchants were chosen using snowball sampling method; which consists of 3 village abalone collector (VAC) and 2 wholesalers who act as the inter-island abalone trader (IAT). The abalone marketing performance was analyzed through the marketing margin and the fishermen's share, by first identifying the marketing channels. Results show two marketing channels were created, channel I (fishermen as producersVACIAT) and channel II (fishermen as producersIAT). Channel II showed better performance compared to channel I. Channel II had lower marketing margin (IDR 58,333) and high fishermen's share, 72%. In contrast, channel I showed higher marketing margin (IDR 127,778) and low fishermen's share, 16%. The Covid-19 pandemic poses challenges to the local abalone marketing, where fishing activities are stopped and disrupted the overall abalone marketing in Buton Island.

Publication Type

Journal article.

<536>

Accession Number

20203599364

Author

Feng LingYan; Shi YingYing; Huang LiXia; Qiu WenHong

Title

Practice of online teaching in medical immunology during COVID-19 epidemic. [Chinese]

Source

Chinese Journal of Immunology; 2020. 36(19):2320-2323. 10 ref.

Publisher

Editorial Board of Chinese Journal of Immunology

Location of Publisher

Changchun

Country of Publication

China

Abstract

In response to the ministry of education proposed measure "suspended class, ongoing learning" under the COVID-19 epidemic. Taking the course of Medical Immunology as an example, this article discusses the implementation of "full online" teaching mode facing the particularity during coronavirus pneumonia epidemic, cultivation of scientific and humanistic spirit and the inspiration of students' curiosity by introducing hot issues in epidemic life. This paper provides case and reference for the distance teaching of medical immunology in local colleges and universities.

Publication Type

Journal article.

<537>

Accession Number

20203597821

Author

Gentles, A. D.; Guth, S.; Rozins, C.; Brook, C. E.

Title

A review of mechanistic models of viral dynamics in bat reservoirs for zoonotic disease.

Source

Pathogens and Global Health; 2020. 114(8):407-425. 96 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The emergence of SARS-CoV-2, a coronavirus with suspected bat origins, highlights a critical need for heightened understanding of the mechanisms by which bats maintain potentially zoonotic viruses at the population level and transmit these pathogens across species. We review mechanistic models, which test hypotheses of the transmission dynamics that underpin viral maintenance in bat systems. A search of the literature identified only twenty-five mechanistic models of bat-virus systems published to date, derived from twenty-three original studies. Most models focused on rabies and related lyssaviruses (eleven), followed by Ebola-like filoviruses (seven), Hendra and Nipah-like henipaviruses (five), and coronaviruses (two). The vast majority of studies has modelled bat virus transmission dynamics at the population level, though a few nested within-host models of viral pathogenesis in population-level frameworks, and one study focused on purely within-host dynamics. Population-level studies described bat virus systems from every continent but Antarctica, though most were concentrated in North America and Africa; indeed, only one simulation model with no associated data was derived from an Asian bat-virus system. In fact, of the twenty-five models identified, only ten population-level models were fitted to data - emphasizing an overall dearth of empirically derived epidemiological inference in bat virus systems. Within the data fitted subset, the vast majority of models were fitted to serological data only, highlighting extensive uncertainty in our understanding of the transmission status of a wild bat. Here, we discuss similarities and differences in the approach and findings of previously published bat virus models and make recommendations for improvement in future work.

Publication Type

Journal article.

<538>

Accession Number

20203597765

Author

Horecka, K.; Nipuni Ratnayaka; Davis, E. A.

Title

Changes in mass treatment of the canine parvovirus ICU population in relation to public policy changes during the COVID-19 pandemic.

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Source

Viruses; 2020. 12(12). 49 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Previous work has indicated that canine parvovirus (CPV) prevalence in the Central Texas region may follow yearly, periodic patterns. The peak in CPV infection rates occurs during the summer months of May and June, marking a distinct "CPV season". We hypothesized that human activity contributes to these seasonal changes in CPV infections. The COVID-19 pandemic resulted in drastic changes in human behavior which happened to synchronize with the CPV season in Central Texas, providing a unique opportunity with which to assess whether these society-level behavioral changes result in appreciable changes in CPV patient populations in the largest CPV treatment facility in Texas. In this work, we examine the population of CPV-infected patients at a large, dedicated CPV treatment clinic in Texas (having treated more than 5000 CPV-positive dogs in the last decade) and demonstrate that societal-behavioral changes due to COVID-19 were associated with a drastic reduction in CPV infections. This reduction occurred precisely when CPV season would typically begin, during the period immediately following state-wide "reopening" of business and facilities, resulting in a change in the typical CPV season when compared with previous years. These results provide evidence that changes in human activity may, in some way, contribute to changes in rates of CPV infection in the Central Texas region.

Publication Type

Journal article.

<539>

Accession Number

20203597731

Author

Yoshizawa, N.; Ishihara, R.; Omiya, D.; Ishitsuka, M.; Hirano, S.; Suzuki, T.

Title

Application of a photocatalyst as an inactivator of bovine coronavirus.

Source

Viruses; 2020. 12(12). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Bovine coronavirus (BCoV), a major causative pathogen of bovine enteric and respiratory diseases and a zoonotic pathogen transmissible between animals and humans, has led to severe economic losses in numerous countries. BCoV belongs to the genus Betacoronavirus, which is a model of a pathogen that is threatening human health and includes severe acute respiratory syndrome coronavirus (SARS-CoV), SARS-CoV-2, and Middle East respiratory syndrome coronavirus. This study aimed to determine whether photocatalytic material effectively reduces CoVs in the environment. Using the film adhesion method of photocatalytic materials, we assessed its antiviral activity and the effect of visible light irradiation according to methods defined by the International Organization for Standardization. Consequently, photocatalytic material was found to have antiviral activity, reducing the viral loads by 2.7 log TCID50 (tissue culture infective dose 50)/0.1 mL (500 lux), 2.8 log TCID50/0.1 mL (1000 lux), and 2.4 log TCID50/0.1 mL (3000 lux). Hence, this photocatalytic material might be applicable not only to reducing CoVs in the cattle breeding environment but also perhaps in other indoor spaces, such as offices and hospital rooms. To our knowledge, this study is the first to evaluate the antiviral activity of a photocatalytic material against CoV.

Publication Type

Journal article.

<540>

Accession Number

20203597292

Author

Ilich, J. Z.

Title

Nutritional and behavioral approaches to body composition and low-grade chronic inflammation management for older adults in the ordinary and COVID-19 times.

Source

Nutrients; 2020. 12(12). 112 ref.

Publisher

MDPI AG

Location of Publisher

Basel

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Country of Publication

Switzerland

Abstract

As more insight is gained into personalized health care, the importance of personalized nutritional and behavioral approaches is even more relevant in the COVID-19 era, in addition to the need for further elucidation regarding several diseases/conditions. One of these concerning body composition (in this context; bone, lean and adipose tissue) is osteosarcopenic adiposity (OSA) syndrome. OSA occurs most often with aging, but also in cases of some chronic diseases and is exacerbated with the presence of low-grade chronic inflammation (LGCI). OSA has been associated with poor nutrition, metabolic disorders and diminished functional abilities. This paper addresses various influences on OSA and LGCI, as well as their mutual action on each other, and provides nutritional and behavioral approaches which could be personalized to help with either preventing or managing OSA and LGCI in general, and specifically in the time of the COVID-19 pandemic. Addressed in more detail are nutritional recommendations for and roles of macro- and micronutrients and bioactive food components; the microbiome; and optimal physical activity regimens. Other issues, such as food insecurity and nutritional inadequacy, circadian misalignment and shift workers are addressed as well. Since there is still a lack of longer-term primary studies in COVID-19 patients (either acute or recovered) and interventions for OSA improvement, this discussion is based on the existing knowledge, scientific hypotheses and observations derived from similar conditions or studies just being published at the time of this writing.

Publication Type

Journal article.

<541>

Accession Number

20203597153

Author

Grant, W. B.; Lahore, H.; Rockwell, M. S.

Title

The benefits of vitamin D supplementation for athletes: better performance and reduced risk of COVID-19.

Source

Nutrients; 2020. 12(12). 133 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

## Abstract

The COVID-19 pandemic is having major economic and personal consequences for collegiate and professional sports. Sporting events have been canceled or postponed, and even when baseball and basketball seasons resumed in the United States recently, no fans were in attendance. As play resumed, several players developed COVID-19, disrupting some of the schedules. A hypothesis now under scientific consideration is that taking vitamin supplements to raise serum 25-hydroxyvitamin D [25(OH)D] concentrations could quickly reduce the risk and/or severity of COVID-19. Several mechanisms have been identified through which vitamin D could reduce the risks of infection and severity, death, and long-haul effects of COVID-19: (1) inducing production of cathelicidin and defensins to reduce the survival and replication of the SARS-CoV-2 virus; (2) reducing inflammation and the production of proinflammatory cytokines and risk of the cytokine storm that damages the epithelial layer of the lungs, heart, vascular system, and other organs; and (3) increasing production of angiotensin-converting enzyme 2, thus limiting the amount of angiotensin II available to the virus to cause damage. Clinical trials have confirmed that vitamin D supplementation reduces risk of acute respiratory tract infections, and approximately 30 observational studies have shown that incidence, severity, and death from COVID-19 are inversely correlated with serum 25(OH)D concentrations. Vitamin D supplementation is already familiar to many athletes and sports teams because it improves athletic performance and increases playing longevity. Thus, athletes should consider vitamin D supplementation to serve as an additional means by which to reduce risk of COVID-19 and its consequences.

## Publication Type

Journal article.

<542>

## Accession Number

20203596846

## Author

Vrba, S. M.; Kirk, N. M.; Brisse, M. E.; Liang YuYing; Hinh Ly

## Title

Development and applications of viral vectored vaccines to combat zoonotic and emerging public health threats.

## Source

Vaccines; 2020. 8(4). 222 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Switzerland

## Abstract

Vaccination is arguably the most cost-effective preventative measure against infectious diseases. While vaccines have been successfully developed against certain viruses (e.g., yellow fever virus, polio virus, and human papilloma virus HPV), those against a number of other important public health threats, such as HIV-1, hepatitis C, and respiratory syncytial virus (RSV), have so far had very limited success. The global pandemic of COVID-19, caused by the SARS-CoV-2 virus, highlights the urgency of vaccine development against this and other constant threats of zoonotic infection. While some traditional methods of producing vaccines have proven to be successful, new concepts have emerged in recent years to produce more cost-effective and less time-consuming vaccines that rely on viral vectors to deliver the desired immunogens. This review discusses the advantages and disadvantages of different viral vaccine vectors and their general strategies and applications in both human and veterinary medicines. A careful review of these issues is necessary as they can provide important insights into how some of these viral vaccine vectors can induce robust and long-lasting immune responses in order to provide protective efficacy against a variety of infectious disease threats to humans and animals, including those with zoonotic potential to cause global pandemics.

## Publication Type

Journal article.

<543>

## Accession Number

20203595120

## Author

Freuling, C. M.; Breithaupt, A.; Muller, T.; Sehl, J.; Balkema-Buschmann, A.; Rissmann, M.; Klein, A.; Wylezich, C.; Hoper, D.; Wernike, K.; Aebischer, A.; Hoffmann, D.; Friedrichs, V.; Dorhoi, A.; Groschup, M. H.; Beer, M.; Mettenleiter, T. C.

## Title

Susceptibility of raccoon dogs for experimental SARS-CoV-2 infection.

## Source

Emerging Infectious Diseases; 2020. 26(12):2982-2985. 12 ref.

## Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

## Location of Publisher

Atlanta

## Country of Publication

USA



## Abstract

Raccoon dogs might have been intermediate hosts for severe acute respiratory syndrome-associated coronavirus in 2002-2004. We demonstrated susceptibility of raccoon dogs to severe acute respiratory syndrome coronavirus 2 infection and transmission to in-contact animals. Infected animals had no signs of illness. Virus replication and tissue lesions occurred in the nasal conchae.

## Publication Type

Journal article.

<544>

## Accession Number

20203595115

## Author

Lau, S. K. P.; Wong, A. C. P.; Luk, H. K. H.; Li, K. S. M.; Fung, J.; He ZiRong; Cheng, F. K. K.; Chan, T. T. Y.; Chu, S.; Aw-Yong, K. L.; Lau, T. C. K.; Fung, K. S. C.; Woo, P. C. Y.

## Title

Differential tropism of SARS-CoV and SARS-CoV-2 in bat cells.

## Source

Emerging Infectious Diseases; 2020. 26(12):2961-2965. 15 ref.

## Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

## Location of Publisher

Atlanta

## Country of Publication

USA

## Abstract

Severe acute respiratory syndrome coronavirus 2 did not replicate efficiently in 13 bat cell lines, whereas severe acute respiratory syndrome coronavirus replicated efficiently in kidney cells of its ancestral host, the *Rhinolophus sinicus* bat, suggesting different evolutionary origins. Structural modeling showed that RBD/RsACE2 binding may contribute to the differential cellular tropism.

## Publication Type

Journal article.

<545>

Accession Number

20203594448

Author

Fernandez-Raga, M.; Diaz-Marugan, L.; Garcia Escolano, M.; Bort, C.; Fanjul, V.

Title

SARS-CoV-2 viability under different meteorological conditions, surfaces, fluids and transmission between animals.

Source

Environmental Research; 2021. 192.

Publisher

Elsevier Inc

Location of Publisher

Orlando

Country of Publication

USA

Abstract

Since the COVID-19 outbreak, researchers have tried to characterise the novel coronavirus SARS-CoV-2 to better understand the pathogenic mechanisms of the virus and prevent further dissemination. As a consequence, there has been a bloom in scientific research papers focused on the behaviour of the virus in different environmental contexts. Nevertheless, despite these efforts and due to its novelty, available information about this coronavirus is limited, as several research studies are still ongoing. This review aims to shed light on this issue. To that end, we have examined the scientific literature to date regarding the viability of SARS-CoV-2 on surfaces and fluids or under different environmental conditions (temperature, precipitation and UV radiation). We have also addressed the role of animals in the transmission of this coronavirus.

Publication Type

Journal article.

<546>

Accession Number

20203594319

Author

Zuo Tao; Zhan Hui; Zhang Fen; Liu Qin; Tso, E. Y. K.; Lui, G. C. Y.; Chen Nan; Li, A.; Lu WenQi; Chan, F. K. L.; Chan, P. K. S.; Ng, S. C.

Title

Alterations in fecal fungal microbiome of patients with COVID-19 during time of hospitalization until discharge.

Source

Gastroenterology; 2020. 159(4):1302-1310.e5. 36 ref.

Publisher

Elsevier Inc

Location of Publisher

New York

Country of Publication

USA

Abstract

**Background & Aims:** Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infects intestinal cells, and might affect the intestinal microbiota. We investigated changes in the fecal fungal microbiomes (mycobiome) of patients with SARS-CoV-2 infection during hospitalization and on recovery. **Methods:** We performed deep shotgun metagenomic sequencing analysis of fecal samples from 30 patients with coronavirus disease 2019 (COVID-19) in Hong Kong, from February 5 through May 12, 2020. Fecal samples were collected 2 to 3 times per week from time of hospitalization until discharge. We compared fecal mycobiome compositions of patients with COVID-19 with those from 9 subjects with community-acquired pneumonia and 30 healthy individuals (controls). We assessed fecal mycobiome profiles throughout time of hospitalization until clearance of SARS-CoV-2 from nasopharyngeal samples. **Results:** Patients with COVID-19 had significant alterations in their fecal mycobiomes compared with controls, characterized by enrichment of *Candida albicans* and a highly heterogeneous mycobiome configuration, at time of hospitalization. Although fecal mycobiomes of 22 patients with COVID-19 did not differ significantly from those of controls during times of hospitalization, 8 of 30 patients with COVID-19 had continued significant differences in fecal mycobiome composition, through the last sample collected. The diversity of the fecal mycobiome of the last sample collected from patients with COVID-19 was 2.5-fold higher than that of controls ( $P < .05$ ). Samples collected at all timepoints from patients with COVID-19 had increased proportions of opportunistic fungal pathogens, *Candida albicans*, *Candida auris*, and *Aspergillus flavus* compared with controls. Two respiratory-associated fungal pathogens, *A. flavus* and *Aspergillus niger*, were detected in fecal samples from a subset of patients with COVID-19, even after clearance of SARS-CoV-2 from nasopharyngeal samples and resolution of respiratory symptoms. **Conclusions:** In a pilot study, we found heterogeneous configurations of the fecal mycobiome, with enrichment of fungal pathogens from the genera *Candida* and *Aspergillus*, during hospitalization of 30 patients with COVID-19 compared with controls. Unstable gut mycobiomes and prolonged dysbiosis persisted in a subset of patients with COVID-19 up to 12 days after nasopharyngeal clearance of SARS-CoV-2. Studies are needed to determine whether alterations in intestinal fungi contribute to or result from SARS-CoV-2 infection, and the effects of these changes in disease progression.

Publication Type

Journal article.

<547>

Accession Number

20203586249

Author

Belayneh Ayanaw Kassie; Aynishet Adane; Yared Tadesse Tilahun; Eskeziaw Abebe Kassahun; Amare Simegn Ayele; Aysheshim Kassahun Belew

Title

Knowledge and attitude towards COVID-19 and associated factors among health care providers in Northwest Ethiopia.

Source

PLoS ONE; 2020. 15(8). 33 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: COVID-19 has a devastating effect on social, economic, and political crises that will leave deep pockmarks on victims of the virus. Having poor knowledge and attitude of the disease among health care providers could bring in impeded effect in the supportive treatment and, it increases the spread of the pandemic. Background: The study aims to assess the knowledge and attitude towards COVID-19, and associated factors among health care providers in Northwest Ethiopia in 2020. Methods: Institution based cross-sectional study was conducted from the mid of March to the end of April 2020 among 408 participants who were selected by a simple random sampling technique. Pretested and structured self-administered questionnaire was used to collect data. The data were entered using EPI-info v. 7, and were exported to SPSS version 20 for further analysis. Bivariate and multivariable logistic regression analyses were used to identify factors associated with Knowledge and Attitude towards COVID-19. Variables having p-value < 0.05 were taken as variables which were significantly associated with the dependent variable. Result: A total of 408(97.1%) participants have participated in the study. Most of the participants (67.3%) were males. One-third (35.5%) of the participants were nurses. About 62% of the health care providers were Bachelor degree holders. The prevalence of Knowledge and attitude towards COVID-19 found to be 73.8% (95%CI: 69.9, 77.9) and 65.7% (95%CI: 61.5, 70.1) respectively. Master degree level of education (AOR = 2.85; 95% CI: 1.25, 6.00) was associated with knowledge of the participants. Similarly, having good knowledge (AOR = 3.17; 95%CI: 1.97, 5.06) was positively associated with the attitude of health care providers towards COVID-19. Conclusion and recommendation: Health care providers found to have good knowledge and attitude towards COVID-19. Being Master's Degree holder and having good knowledge are associated with the knowledge and attitude of the respondents towards COVID-19 respectively. Thus,

improving awareness through health education is a significant approach to address the global agenda of COVID-19 Pandemic.

Publication Type

Journal article.

<548>

Accession Number

20203586247

Author

Lim KhaiLone; Nur Alia Johari; Wong SiewTung; Khaw LokeTim; Tan BoonKeat; Chan KokKeong; Wong ShewFung; Chan WanLing [Chan, W. L. E.]; Nurul Hanis Ramzi; Lim KimChooi [Lim, K. C. P.]; Sulaiman Lokman Hakim; Voon, K.

Title

A novel strategy for community screening of SARS-CoV-2 (COVID-19): sample pooling method.

Source

PLoS ONE; 2020. 15(8). 17 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

The rapid global spread of the coronavirus disease (COVID-19) has inflicted significant health and socioeconomic burden on affected countries. As positive cases continued to rise in Malaysia, public health laboratories experienced an overwhelming demand for COVID-19 screening. The confirmation of positive cases of COVID-19 has solely been based on the detection of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) using real-time reverse transcription polymerase chain reaction (qRT-PCR). In efforts to increase the cost-effectiveness and efficiency of COVID-19 screening, we evaluated the feasibility of pooling clinical Nasopharyngeal/Oropharyngeal (NP/OP) swab specimens during nucleic acid extraction without a reduction in sensitivity of qRT-PCR. Pools of 10 specimens were extracted and subsequently tested by qRT-PCR according to the WHO-Charite protocol. We demonstrated that the sample pooling method showed no loss of sensitivity. The effectiveness of the pooled testing strategy was evaluated on both retrospective and prospective samples, and the results showed a similar detection sensitivity compared to testing individual sample alone. This study demonstrates the feasibility of using a pooled testing strategy to increase testing capacity and conserve resources, especially when there is a high demand for disease testing.

Publication Type

Journal article.

<549>

Accession Number

20203586170

Author

Gao XuWen; Shi XinJie; Guo HongDong; Liu YeHong

Title

To buy or not buy food online: the impact of the COVID-19 epidemic on the adoption of e-commerce in China.

Source

PLoS ONE; 2020. 15(8). 34 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Drawing on a recent online survey combined with city-level data, this paper examines the impact of the COVID-19 on consumers' online food purchase behavior in the short term. To address the potential endogeneity issues, we adopt an instrumental variable (IV) strategy, using the distance from the surveyed city to Wuhan as the instrumental variable. We show that our IV method is effective in minimizing potential bias. It is found that the share of confirmed COVID-19 cases increases the possibility of consumers purchasing food online. This is more likely to be the case for young people having a lower perceived risk of online purchases and living in large cities. Despite some limitations, this paper has policy implications for China and other countries that have been influenced by the COVID-19 epidemic. Specifically, government support and regulation should focus on (i) ensuring the safety of food sold on the internet, (ii) protecting the carrier from becoming infected, and (iii) providing financial support to the poor since they may have difficulties in obtaining access to food living in small cities. Moreover, how to help those who are unable to purchase food online because of their technical skills (e.g., the elderly who are not familiar with smart phones or the internet) also deserves more attention for the government and the public.

Publication Type

Journal article.

<550>

Accession Number

20203586028

Author

Shirahmadi, S.; Seyedzadeh-Sabounchi, S.; Khazaei, S.; Bashirian, S.; Miresmaeili, A. F.; Bayat, Z.; Houshmand, B.; Semyari, H.; Barati, M.; Jenabi, E.; Heidarian, F.; Zareian, S.; Kheirandish, M.; Dadae, N.

Title

Fear control and danger control amid COVID-19 dental crisis: application of the Extended Parallel Process Model.

Source

PLoS ONE; 2020. 15(8). 24 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

**Objectives:** There is high risk of contamination with COVID-19 virus during routine dental procedures and infection control is crucial. The aim of this study was to determine the factors associated with Covid-19 preventive behaviors among oral health care providers using an extended parallel process model (EPPM). **Methods:** In a cross-sectional study, short text message invite surveys were sent to 870 oral health care providers in west part of Iran. Data were collected through validated self-report EPPM questionnaires. Descriptive statistics, Chi-square and Fishers exact tests were used for data analysis. **Results:** In total, 300 completed questionnaires were received and the mean age of respondents was 29.89 +or- 11.17 years (range: 20-75 years). Among the study population, 284 (94.67%) perceived the threat of infection highly. Washing hands frequently with water and soap and use of hand sanitizer was reported by 93.33% of participants. Age ( $P = 0.010$ ), sex ( $P = 0.002$ ) and occupation field ( $P = 0.010$ ) were significantly associated with danger control responses. Data identified that those oral health care providers that were on the danger control response adopted preventive behaviors more strictly than those on fear control response. **Conclusion:** The results of this study showed how degrees of perceived threat and perceived efficacy influenced oral health providers' willingness to perform recommended health behaviors. These findings can assist public health agencies in developing educational programs specifically designed for promoting preventive behaviors among oral health providers in pandemic situations.

Publication Type

Journal article.

<551>

Accession Number

20203576137

Author

Bai ChengKe; Yang JingJing; Cao Bo; Xue Ying; Gao PuFan; Liang Hui; Li GuiShuang

Title

Growth years and post-harvest processing methods have critical roles on the contents of medicinal active ingredients of *Scutellaria baicalensis*.

Source

Industrial Crops and Products; 2020. 158. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Optimizing the processing technology is an effective way to improve the yield of active ingredients for the industrial production of medicinal crops. Baikal Skullcap (*Scutellaria baicalensis* Georgi) is a perennial herb in the Lamiaceae family and its dried root is used as a famous traditional Chinese medicine (TCM). Modern pharmacological studies have shown that the active ingredients of *S. baicalensis* have important pharmacological effects including anti-oxidation, anti-bacterial, anti-viral, anti-tumor, and anti-inflammation. Specifically, it is recently found that *S. baicalensis* has significant curative effects on the treatment of corona virus disease 2019 (COVID-19). In recent years, the market demand for the medicinal products of *S. baicalensis* is increasing because of its great medicinal values. However, the annual yield of active ingredients originated from the root of *S. baicalensis* is limited due to that little progress has been made on the traditional processing technology used in the extraction process. A pressing issue faced by both herbalists and scientists is how to improve the processing efficiency, thereby obtaining the maximum yield of products for *S. baicalensis*. In this study, a systematic analysis on the effects of growth years and post-harvest processing on the contents of medicinal active ingredients of *S. baicalensis* was conducted. The contents of eight active ingredients (baicalin, wogonoside, baicalein, wogonin, scutellarin, scutellarein, apigenin, and chrysin) in roots of *S. baicalensis* of different growth years (ranging from 1 year to 15 years) were estimated using high performance liquid chromatography (HPLC) and further analyzed to determine the optimal harvest period. In particular, the contents of six active ingredients in different parts (cortex and stele) of the root of *S. baicalensis* were estimated and compared. Meanwhile, the dynamic changes of the contents of active ingredients in fresh-crush and fresh-cut roots of *S. baicalensis* at room temperature were compared and analyzed to reveal the influence of post-harvest treatment on the contents of active ingredients. In addition, the effects of six different post-harvest treatments on the contents of active ingredients were systematically designed and compared to determine the best primary processing



technology. The results showed that the best harvesting period for *S. baicalensis* should be determined as 2-3 years based on comprehensive evaluation of active ingredient content, annual yield increment, and land use efficiency. The contents of active ingredients including baicalin, wogonoside, baicalein, and wogonin in cortex were significantly higher than those in stele ( $P < 0.05$ ). The contents of baicalin, wogonoside, and scutellarin in fresh roots of *S. baicalensis* significantly reduced as the storage time increased, but the reduction of fresh-cutting was significantly lower than that of fresh-crushing. For the effects of different processing treatments, the contents of four main active ingredients (baicalin, wogonoside, baicalein, and wogonin) under drying (D) and cutting-drying (C-D) treatments were significantly higher than those of the other four treatments ( $P < 0.05$ ). Collectively, the above results will not only provide novel processing methods that will improve the yield of active ingredients for *S. baicalensis*, but also shed light on the optimization of processing technology for the industrial production of medicinal crops.

#### Publication Type

Journal article.

<552>

#### Accession Number

20203574527

#### Author

Mota, G. R.; Santos, I. A. dos; Arriel, R. A.; Marocolo, M.

#### Title

Is it high time to increase elite soccer substitutions permanently?

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(19). 43 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Rules determine how team sport matches occur. Match-induced fatigue is specific to each sport, and may be associated with injury incidence. For example, the injury rate in soccer is distinctly higher during matches than in training sessions. Understanding the differences between team sports rules might be useful for enhancing rules (e.g., safer sport). Therefore, this study aimed to evaluate the impact of the rule-induced physical demands between soccer, futsal, basketball, and handball, focusing on substitution rules. Data from the elite team sports' rules (e.g., absolute and relative court dimensions; the number of players,

substitutions allowed, total game time, time-outs) were collected, including the changes due to the coronavirus disease (COVID-19) pandemic in soccer substitutions, and comparisons were performed. The data showed that soccer has higher rule-induced physical demands: e.g., substantially lower substitution rate, higher dimensions in absolute (eight to fifteen times), and relative (four to eight times) values. Simulations also showed that soccer has extremely large differences, even considering COVID-19 substitution changes (from three to up to five). We conclude that elite soccer has remarkably higher overall rule-induced physical demands than elite futsal, basketball and handball, and increasing soccer substitutions permanently (e.g., unlimited) might mitigate overall soccer demands.

#### Publication Type

Journal article.

<553>

#### Accession Number

20203570928

#### Author

Ruiz-Martinez, I.; Esparcia, J.

#### Title

Internet access in rural areas: brake or stimulus as post-COVID-19 opportunity?

#### Source

Sustainability; 2020. 12(22). 39 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The lack of internet access in most rural areas has become a challenge worldwide. The Covid-19 pandemic has highlighted trends such as teleworking and e-commerce, meaning an opportunity for the local economy of these areas, but with serious difficulties in carrying it out. This paper aims to detect this lack of internet in inland areas of the region of Valencia through local actors, in order to identify clear priorities and real needs through an explorative and replicable approach based on agglomerative hierarchical clustering (AHC). The main findings suggest that there are different patterns in the rural internet access related to adequate infrastructure and planned actions by local councils. In this way, a multitude of contextual elements have emerged that influence the importance of efficient access to the internet in rural areas. It is essential to know the real needs and demands of the population before implementing plans and programs that may not be relevant for the actors involved in territorial development.

Publication Type

Journal article.

<554>

Accession Number

20203566354

Author

Pandeya, K. B.; Aditya Ganeshpurkar; Mishra, M. K.

Title

Natural RNA dependent RNA polymerase inhibitors: molecular docking studies of some biologically active alkaloids of *Argemone mexicana*.

Source

Medical Hypotheses; 2020. 144.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 has become disastrous for world and spread all over. Researchers all around the globe are working to discover a drug to cure from COVID-19. RNA dependent RNA polymerase plays a key role in SARS-CoV-2 replication and thus it could be a potential target for SARS-CoV-2. This study revealed that Protopine, Allocryptopine and (+or-) 6- Acetyldihydrochelerythrine could be potential RdRp inhibitors of SARS-CoV-2.

Publication Type

Journal article.

<555>

Accession Number

20203564326

Author

Wamonje, F. O.

Title

Post-COVID-19 action: guarding Africa's crops against viral epidemics requires research capacity building that unifies a trio of transdisciplinary interventions.

Source

Viruses; 2020. 12(11). 69 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has shown that understanding the genomics of a virus, diagnostics and breaking virus transmission is essential in managing viral pandemics. The same lessons can apply for plant viruses. There are plant viruses that have severely disrupted crop production in multiple countries, as recently seen with maize lethal necrosis disease in eastern and southern Africa. High-throughput sequencing (HTS) is needed to detect new viral threats. Equally important is building local capacity to develop the tools required for rapid diagnosis of plant viruses. Most plant viruses are insect-vectored, hence, biological insights on virus transmission are vital in modelling disease spread. Research in Africa in these three areas is in its infancy and disjointed. Despite intense interest, uptake of HTS by African researchers is hampered by infrastructural gaps. The use of whole-genome information to develop field-deployable diagnostics on the continent is virtually inexistent. There is fledgling research into plant-virus-vector interactions to inform modelling of viral transmission. The gains so far have been modest but encouraging, and therefore must be consolidated. For this, I propose the creation of a new Research Centre for Africa. This bold investment is needed to secure the future of Africa's crops from insect-vectored viral diseases.

Publication Type

Journal article.

<556>

Accession Number

20203560909

Author

Pijl, W. van der

Title

Reflections on Indian shrimp in COVID-19 dominated 2020.

Source

Aqua Culture Asia Pacific; 2020. 16(5):32-34.

Publisher

Aqua Research Pte Ltd

Location of Publisher

Singapore

Country of Publication

Singapore

Publication Type

Journal article.

<557>

Accession Number

20203535189

Author

Ullrich, S.; Cheung MaiJa; Namugga, M.; Sion, M.; Ozgediz, D.

Title

Navigating the COVID-19 pandemic: lessons from global surgery.

Source

Annals of Surgery; 2020. 272(3):e216-e218. 32 ref.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Many hospitals in HIC rely on just-in-time inventory management, which can be an effective method to cut down on costs, as it calls for minimal reserves of healthcare supplies. However, the widespread use of such strategies, which are reliant on consistent and tightly controlled supply chains, have made HIC vulnerable to PPE and supply shortages should demand sharply increase, as has been seen with the COVID-19 pandemic. In some HIC hospitals, healthcare workers facing PPE shortages have already had to adopt common practices from LMIC, such as using bin liners instead of gowns and wearing reusable cloth masks. HIC providers have also implemented evidence based adaptations, such as creating reusable elastomeric respirators, the development of open source ventilators, and reprocessing N95 masks using the hydrogen peroxide vapor sterilization technique. Learning how LMIC providers manage resource limitations through global surgery collaborations can give surgeons working in HIC valuable perspective that has become increasingly relevant during the COVID-19 pandemic. The rapid expansion of social media has facilitated such collaborations, and is a valuable tool for networking, mentorship, and information sharing. Additionally, the rapid sharing of research findings via social media is enhancing our ability as a global health community to respond to this pandemic in a strong evidence based manner. However, it is essential that social media be used responsibly, and that precautions are taken to prevent the spread of misinformation. The most vulnerable populations, often linked to the underlying social determinants of health such as poverty, food security, literacy, sex, and racial and ethnic factors, are most at risk of adverse outcomes during these health and social shocks. There is already data demonstrating that racial and ethnic minorities in the US and UK are at increased risk of death from COVID-19. Difficulty in accessing care for emergent conditions exists at baseline for these populations, and extensive backlogs for essential operations are commonplace, especially in LMIC. This is likely only to get worse during the current crisis and underscores the importance of our professional commitment to health equity - regardless of geography. New estimates of the "collateral damage" caused by the pandemic are very concerning and also illustrate the urgent need to mitigate this impact through local and global coordinated action.

#### Publication Type

Journal article.

<558>

#### Accession Number

20203526916

#### Author

Lam, L. T. M.; Chua YingXian; Tan, D. H. Y.

#### Title

Roles and challenges of primary care physicians facing a dual outbreak of COVID-19 and Dengue in Singapore.

#### Source

Family Practice; 2020. 37(4):578-579. 13 ref.

#### Publisher

Oxford University Press

#### Location of Publisher

Oxford

Country of Publication

UK

Abstract

This article briefly discusses the health-seeking behaviours of the first 162 locally transmitted cases in Singapore and the steps taken in Singapore to reduce community transmission. These include the reactivation of the Public Health Preparedness Clinics (PHPC) which provides government subsidized consultation and treatment for patients diagnosed with respiratory illnesses and hence, encouraging the public to seek medical attention early and to reduce doctor hopping. The subsequent availability of COVID-19 swabs in our public primary care clinic has allowed our primary care doctors a 'swab and send home' strategy, alleviating the load off tertiary institutions by allowing symptomatic patients to rest at home in isolation while their swab results are pending. We are furthering the cause of the battle against COVID-19 by also validating new point-of-care test kits against the gold standard PCR swabs that we are currently carrying out. Currently, there is an unprecedented strain on health care systems worldwide. Primary care doctors will continue to play a key role in early identification and containment of this pandemic. We must obtain accurate contact and epidemiological history based on evolving local cluster transmissions and be alert to the possibility of false positives and multiple infections. Early testing for local endemic conditions should be considered. As most countries are now facing sustained community transmission, there is a need to shift towards rapid and reliable point-of-care testing for COVID-19 and endemic infections, and primary care facilities can help in validating new test kits that are rapidly being made available.

Publication Type

Correspondence.

<559>

Accession Number

20203526528

Author

Araujo Batista, F. M. de; Mascarenhas, M. D. M.; Marinelli, N. P.; Araujo Albuquerque, L. P. de; Rodrigues, M. T. P.; Cunha Silva Vieira, M. A. da; Sousa, I. D. B. de

Title

COVID-19 in Piaui: initial scenario and perspectives for coping.

Source

Revista da Sociedade Brasileira de Medicina Tropical; 2020. 53. 9 ref.

Publisher

Sociedade Brasileira de Medicina Tropical

Location of Publisher

Uberaba

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Country of Publication

Brazil

Abstract

Teresina is the most populous city in Piauí (approximately 865 thousand inhabitants), with high connectivity by roads to other regions of the state and the only airport with direct domestic flights to several states in Brazil. In addition, it is the main site for highly complex care services in the developed Entre Rios region, located in the mid-north region of Piauí, with the remaining regions having fragile, fragmented, and vulnerable healthcare systems. This imposes an additional burden and challenge for health systems and economies in the countryside regions of the state in the face of the imminent scenario of SARS-CoV-2 dissemination. It is noteworthy that COVID-19 is not the only public health challenge today. Until March 2020, 441,224 probable cases (incidence coefficient of 209.9 cases per 100,000 inhabitants) of dengue were reported in the country. The Northeast Region had an incidence of 49.5 cases/100,000 inhabitants, with an increasing trend, but still within the expected level (endemic channel). Simultaneously, 2,184 suspected cases of measles were reported, of which 338 (15.5%) were confirmed (incidence rate of 0.8/100,000 inhabitants). In this difficult epidemiological scenario, there is a clear expectation of witnessing a measles, dengue, and COVID-19 syndemia, among other conditions that afflict the Brazilian population. Therefore, the government must immediately pay attention to the need to expand healthcare infrastructure to combat COVID-19. It is necessary for the population and healthcare professionals to be guided to adopt the preventive measures recommended by experts and public health officials. The population must perform hand hygiene and avoid closed environments and avoid contact with people from regions with COVID-19 outbreaks. Healthcare professionals should use protective glasses or face shields, surgical/N95 masks, disposable aprons, and procedure gloves and always wash their hands, especially when aiding suspected or confirmed cases of COVID-19. In this scenario, there is a need for governments to establish their commitment to offering the entire population the mitigation measures recommended to overcome this crisis. In addition, the present scenario highlights the need to strengthen the Brazilian Unified Health System as well as the need for massive investment in research, technology, and innovation to effectively combat public health emergencies in our country.

Publication Type

Correspondence.

<560>

Accession Number

20203399833

Title

Special Issue: Puppetry, disability, health and well-being. (Special Issue: Puppetry, disability, health and well-being.)

Source

Journal of Applied Arts & Health; 2020. 11(1/2):3-207.

Publisher

Intellect Ltd.

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Location of Publisher

Bristol

Country of Publication

UK

Abstract

The contributors to this issue explore discrete areas of their practice and thinking through detailed examination of the principles and practices of puppetry in relation to narratives of illness, disability and 'otherness'. Key to this enquiry is the idea that puppetry provides a place for exploration of identity in relation to body-self; three of the writers within the theoretical section draw upon their own personal experiences of body/disability/illness. The issue is divided into four sections: the first includes academic articles interrogating approaches, terminologies and practices within puppetry and healthcare or disability research; the second, notes from the field, explores case studies drawn from diverse geographical and cultural contexts, including a discussion of work under COVID-19; the third includes interviews with puppetry practitioners and the fourth, a reviews section, discusses the Broken Puppet symposia and the UNIMA Research Commission.

Publication Type

Journal issue.

<561>

Accession Number

20210003585

Author

Yu Wei; Ou XianHong; Liu XiaoFan; Zhang ShuaiXu; Gao XinXin; Cheng HongJu; Zhu BaoLiang; Yan Jing

Title

ACE2 contributes to the maintenance of mouse epithelial barrier function.

Source

Biochemical and Biophysical Research Communications; 2020. 533(4):1276-1282.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The whole world was hit hard by the coronavirus disease-19 (COVID-19). Given that angiotensin I converting enzyme 2 (ACE2) is the viral entry molecule, understanding ACE2 has become a major focus of current COVID-19 research. ACE2 is highly expressed in the gut, but its role has not been fully understood and thus COVID-19 treatments intending to downregulate ACE2 level may cause untoward side effects. Gaining insight into the functions of ACE2 in gut homeostasis therefore merits closer examination, and is beneficial to find potential therapeutic alternatives for COVID-19. Methods: We took advantage of Ace2 knockout mice and isolated intestinal organoids to examine the role of ACE2 in intestinal stemness. Inflammatory bowel disease (IBD) mouse model was established by 4% dextran sodium sulfate. LGR5 and KI67 levels were quantitated to reflect the virtue of intestinal stem cells (ISCs). FITC-dextran 4 (FD-4) assay was used to assess intestinal barrier function. Results: Western blotting identified the expression of ACE2 in colon, which was consistent with the results of immunofluorescence and RT-PCR. Moreover, Ace2<sup>-/-</sup> organoids showed decreased LRG5 and KI67 levels, and elevated calcium concentration. Furthermore, the permeability of ace2<sup>-/-</sup> organoids was markedly increased compared with ace2<sup>+/+</sup> organoids. Collectively, ace2<sup>-/-</sup> mice were more susceptible than ace2<sup>+/+</sup> mice to IBD, including earlier bloody stool, undermined intestinal architecture and more pronounced weight loss. Conclusions: Our data reveal that ACE2 contributes to the proliferation of intestinal stem cells and hence orchestrates the mucosal homeostasis.

#### Publication Type

Journal article.

<562>

#### Accession Number

20210003580

#### Author

Qiao JiaLu; Li WeiLing; Bao JiAn; Peng QiAn; Wen DongMei; Wang JiaNing; Sun BinLian

#### Title

The expression of SARS-CoV-2 receptor ACE2 and CD147, and protease TMPRSS2 in human and mouse brain cells and mouse brain tissues.

#### Source

Biochemical and Biophysical Research Communications; 2020. 533(4):867-871.

#### Publisher

Elsevier

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been discovered as the pathogenic cause of the coronavirus disease 19 (COVID-19). Cellular entry of SARS-CoV-2 are mediated by the spike glycoprotein of virus, and the host specific receptors and proteases. Recently, besides pulmonary complications as the chief symptom, investigations have also revealed that SARS-CoV-2 can trigger neurological manifestations. Herein, to investigate the expression level of receptors and related proteases is important for understanding the neuropathy in COVID-19. We determined the expression levels of receptor ACE2 and CD147, and serine protease TMPRSS2 in human and mouse brain cell lines and mouse different region of brain tissues with qRT-PCR and Western blot. The results showed that the expression pattern of all them was very different to that of lung. ACE2 is lower but CD147 is higher expressed in mostly brain cell lines and mouse brain tissues comparing with lung cell line and tissue, and TMPRSS2 has consistent expression in brain cell lines and mouse lung tissues. It is suggested that SARS-CoV-2 might have a different way of infection to cerebral nervous system. Our finding will offer the clues to predict the possibility of SARS-CoV-2 infection to human brain nervous system and pathogenicity.

#### Publication Type

Journal article.

<563>

#### Accession Number

20210002883

#### Author

Klimstra, W. B.; Tilston-Lunel, N. L.; Nambulli, S.; Boslett, J.; McMillen, C. M.; Gilliland, T.; Dunn, M. D.; Sun, C.; Wheeler, S. E.; Wells, A.; Hartman, A. L.; McElroy, A. K.; Reed, D. S.; Rennick, L. J.; Duprex, W. P.

#### Title

SARS-CoV-2 growth, furin-cleavage-site adaptation and neutralization using serum from acutely infected hospitalized COVID-19 patients.

#### Source

Journal of General Virology; 2020. 101(11):1156-1169. 63 ref.

#### Publisher

Microbiology Society

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of coronavirus disease 2019 (COVID-19), emerged at the end of 2019 and by mid-June 2020 the virus had spread to at least 215 countries, caused more than 8 000 000 confirmed infections and over 450 000 deaths, and overwhelmed

healthcare systems worldwide. Like severe acute respiratory syndrome coronavirus (SARS-CoV), which emerged in 2002 and caused a similar disease, SARS-CoV-2 is a betacoronavirus. Both viruses use human angiotensin-converting enzyme 2 (hACE2) as a receptor to enter cells. However, the SARS-CoV-2 spike (S) glycoprotein has a novel insertion that generates a putative furin cleavage signal and this has been postulated to expand the host range. Two low-passage (P) strains of SARS-CoV-2 (Wash1: P4 and Munich: P1) were cultured twice in Vero E6 cells and characterized virologically. Sanger and MinION sequencing demonstrated significant deletions in the furin cleavage signal of Wash1 : P6 and minor variants in the Munich : P3 strain. Cleavage of the S glycoprotein in SARS-CoV-2-infected Vero E6 cell lysates was inefficient even when an intact furin cleavage signal was present. Indirect immunofluorescence demonstrated that the S glycoprotein reached the cell surface. Since the S protein is a major antigenic target for the development of neutralizing antibodies, we investigated the development of neutralizing antibody titres in serial serum samples obtained from COVID-19 human patients. These were comparable regardless of the presence of an intact or deleted furin cleavage signal. These studies illustrate the need to characterize virus stocks meticulously prior to performing either in vitro or in vivo pathogenesis studies.

#### Publication Type

Journal article.

<564>

#### Accession Number

20210002840

#### Author

Porta, A. della; Bornstein, K.; Coye, A.; Montrief, T.; Long, B.; Parris, M. A.

#### Title

Acute chloroquine and hydroxychloroquine toxicity: a review for emergency clinicians.

#### Source

American Journal of Emergency Medicine; 2020. 38(10):2209-2217. 121 ref.

#### Publisher

Elsevier Inc.

#### Location of Publisher

St. Louis

#### Country of Publication

USA

#### Abstract

Background: Acute chloroquine and hydroxychloroquine toxicity is characterized by a combination of direct cardiovascular effects and electrolyte derangements with resultant dysrhythmias and is associated with significant morbidity and mortality. Background: This review describes acute chloroquine and hydroxychloroquine toxicity, outlines the complex pathophysiologic derangements, and addresses the

emergency department (ED) management of this patient population. Discussion: Chloroquine and hydroxychloroquine are aminoquinoline derivatives widely used in the treatment of rheumatologic diseases including systemic lupus erythematosus and rheumatoid arthritis as well as for malaria prophylaxis. In early 2020, anecdotal reports and preliminary data suggested utility of hydroxychloroquine in attenuating viral loads and symptoms in patients with SARS-CoV-2 infection. Aminoquinoline drugs pose unique and significant toxicological risks, both during their intended use as well as in unsupervised settings by laypersons. The therapeutic range for chloroquine is narrow. Acute severe toxicity is associated with 10-30% mortality owing to a combination of direct cardiovascular effects and electrolyte derangements with resultant dysrhythmias. Treatment in the ED is focused on decontamination, stabilization of cardiac dysrhythmias, hemodynamic support, electrolyte correction, and seizure prevention. Conclusions: An understanding of the pathophysiology of acute chloroquine and hydroxychloroquine toxicity and available emergency treatments can assist emergency clinicians in reducing the immediate morbidity and mortality associated with this disease.

Publication Type

Journal article.

<565>

Accession Number

20210002829

Author

Sun Hao; Liu KeQin; Li Meng; Tang ShaoWen; Monte, A. A.; Wang Jun; Nie ShiNan; Rui QingLin; Liu WenGe; Qin HaiDong; Tan Xiao; Ni HaiBin; Yang WenXin; Zhu CongJian; Yang RunHua; Yu TianHao; Wang ShengWei; Jiang Hao; Chen XiaoFeng; Zhang Wei; Zhu Yi; Zhao HuaTou; Yang ShiYu; Yin KeJin; Shao DanBing; Xiao Liang; Chen ZhengWei; Yuan WeiZhong; Hu DongDong; Wan XiaoYong; Wu LanFu; Zhang JinSong

Title

The influence of coronavirus disease 2019 on emergency department visits in Nanjing, China: a multicentre cross-sectional study.

Source

American Journal of Emergency Medicine; 2020. 38(10):2101-2109.

Publisher

Elsevier Inc.

Location of Publisher

St. Louis

Country of Publication

USA

Abstract

Introduction: Influenza has been linked to the crowding in emergency departments (ED) across the world. The impact of the Coronavirus Disease 2019 (COVID-19) pandemic on China EDs has been quite different from those during past influenza outbreaks. Our objective was to determine if COVID-19 changed ED visit disease severity during the pandemic. Methods: This was a retrospective cross sectional study conducted in Nanjing, China. We captured ED visit data from 28 hospitals. We then compared visit numbers from October 2019 to February 2020 for a month-to-month analysis and every February from 2017 to 2020 for a year-to-year analysis. Inter-group chi-square test and time series trend tests were performed to compare visit numbers. The primary outcome was the proportion of severe disease visits in the EDs. Results: Through February 29 th 2020, there were 93 laboratory-confirmed COVID-19 patients in Nanjing, of which 40 cases (43.01%) were first seen in the ED. The total number of ED visits in Nanjing in February 2020, were dramatically decreased (n = 99,949) in compared to January 2020 (n = 313,125) and February 2019 (n = 262,503). Except for poisoning, the severe diseases in EDs all decreased in absolute number, but increased in proportion both in year-to-year and month-to-month analyses. This increase in proportional ED disease severity was greater in higher-level referral hospitals when compared year by year. Conclusion: The COVID-19 outbreak has been associated with decreases in ED visits in Nanjing, China, but increases in the proportion of severe ED visits.

#### Publication Type

Journal article.

<566>

#### Accession Number

20210002236

#### Author

Satyan Nanda; Rahul Handa; Atul Prasad; Rajiv Anand; Dhruv Zutshi; Dass, S. K.; Bedi, P. K.; Aarti Pahuja; Shah, P. K.; Bipan Sharma

#### Title

COVID-19 associated Guillain-Barre Syndrome: contrasting tale of four patients from a tertiary care centre in India.

#### Source

American Journal of Emergency Medicine; 2021. 39:125-128.

#### Publisher

Elsevier Inc.

#### Location of Publisher

St. Louis

#### Country of Publication

USA

#### Abstract

Background: Globally, more than 12 million people have been infected with COVID -19 infection till date with more than 500,000 fatalities. Although, Covid-19 commonly presents with marked respiratory symptoms in the form of cough and dyspnoea, a neurotropic presentation has been described of late as well. Background: In this brief communication we report four cases of Covid-19 who presented to our hospital with features suggestive of Guillain-Barre Syndrome (GBS). Discussion: The mechanisms by which SARS-CoV-2 causes neurologic damage are multifaceted, including direct damage to specific receptors, cytokine-related injury, secondary hypoxia, and retrograde travel along nerve fibres. The pathogenesis of GBS secondary to Covid-19 is not well understood. It is hypothesised that viral illnesses related GBS could be due to autoantibodies or direct neurotoxic effects of viruses. Conclusion: Nervous system involvement in Covid-19 may have been grossly underestimated. In this era of pandemic, it is very important for the physicians to be aware of association of GBS with Covid-19, as early diagnosis and treatment of this complication could have gratifying results. To the best of our knowledge, this is the first such case series of Guillain-Barre Syndrome associated with Covid-19 to be reported from India.

#### Publication Type

Journal article.

<567>

#### Accession Number

20210002013

#### Author

Pandiyan Muthuramalingam; Rajendran Jeyasri; Alaguvel Valliammai; Anthonyimuthu Selvaraj; Chandrasekar Karthika; Shanmugaraj Gowrishankar; Pandian, S. K.; Manikandan Ramesh; Chen JenTsung

#### Title

Global multi-omics and systems pharmacological strategy unravel the multi-targeted therapeutic potential of natural bioactive molecules against COVID-19: an in silico approach.

#### Source

Genomics (San Diego); 2020. 112(6):4486-4504. 40 ref.

#### Publisher

Elsevier Science

#### Location of Publisher

San Diego

#### Country of Publication

USA

#### Abstract

Understanding the immunological behavior of COVID-19 cases at molecular level is essential for therapeutic development. In this study, multi-omics and systems pharmacology analyses were performed to unravel the multi-targeted mechanisms of novel bioactives to combat COVID-19. Immuno-transcriptomic

dataset of healthy controls and COVID-19 cases was retrieved from ArrayExpress. Phytocompounds from ethnobotanical plants were collected from PubChem. Differentially expressed 98 immune genes associated with COVID-19 were derived through NetworkAnalyst 3.0. Among 259 plant derived compounds, 154 compounds were targeting 13 COVID-19 immune genes involved in diverse signaling pathways. In addition, pharmacological properties of these phytocompounds were compared with COVID-19 drugs prescribed by WHO, and 25 novel phytocompounds were found to be more efficient with higher bioactive scores. The current study unravels the virogenomic signatures which can serve as therapeutic targets and identified phytocompounds with anti-COVID-19 efficacy. However, further experimental validation is essential to bring out these molecules as commercial drug candidates.

#### Publication Type

Journal article.

<568>

#### Accession Number

20210002008

#### Author

Zhou LiQian; Wang JuanJuan; Liu GuangYi; Lu QingQing; Dong RuYi; Tian Geng; Yang JiaLiang; Peng LiHong

#### Title

Probing antiviral drugs against SARS-CoV-2 through virus-drug association prediction based on the KATZ method.

#### Source

Genomics (San Diego); 2020. 112(6):4427-4434. 46 ref.

#### Publisher

Elsevier Science

#### Location of Publisher

San Diego

#### Country of Publication

USA

#### Abstract

It is urgent to find an effective antiviral drug against SARS-CoV-2. In this study, 96 virus-drug associations (VDAs) from 12 viruses including SARS-CoV-2 and similar viruses and 78 small molecules are selected. Complete genomic sequence similarity of viruses and chemical structure similarity of drugs are then computed. A KATZ-based VDA prediction method (VDA-KATZ) is developed to infer possible drugs associated with SARS-CoV-2. VDA-KATZ obtained the best AUCs of 0.8803 when the walking length is 2. The predicted top 3 antiviral drugs against SARS-CoV-2 are remdesivir, oseltamivir, and zanamivir. Molecular docking is conducted between the predicted top 10 drugs and the virus spike protein/human ACE2. The results showed that the above 3 chemical agents have higher molecular binding energies with ACE2. For the



first time, we found that zidovudine may be effective clues of treatment of COVID-19. We hope that our predicted drugs could help to prevent the spreading of COVID.

Publication Type

Journal article.

<569>

Accession Number

20210001932

Author

Costa, A.; Weinstein, E. S.; Sahoo, D. R.; Thompson, S. C.; Faccincani, R.; Ragazzoni, L.

Title

How to build the plane while flying: VTE/PE thromboprophylaxis clinical guidelines for COVID-19 patients. (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(3):391-405. 86 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

Over the years, the practice of medicine has evolved from authority-based to experience-based to evidence-based with the introduction of the scientific process, clinical trials, and outcomes-based data analysis (Tebala GD. Int J Med Sci. 2018;15(12):1397-1405). The time required to perform the necessary randomized controlled trials, a systematic literature review, and meta-analysis of these trials to then create, accept, promulgate, and educate the practicing clinicians to use the evidence-based clinical guidelines is typically measured in years. When the severe acute respiratory syndrome novel coronavirus-2 (SARS-nCoV-2) pandemic commenced in Wuhan, China at the end of 2019, there were few available clinical guidelines to deploy, let alone adapt and adopt to treat the surge of coronavirus disease 2019 (COVID-19) patients. The aim of this study is to first explain how clinical guidelines, on which bedside clinicians have grown accustomed, can be created in the midst of a pandemic, with an evolving scientific understanding of the pathophysiology of the hypercoagulable state. The second is to adapt and adopt current venous thromboembolism diagnostic and treatment guidelines, while relying on the limited available observational reporting of COVID-19 patients to create a comprehensive clinical guideline to treat COVID-19 patients.

Publication Type

<570>

Accession Number

20210001931

Author

Vishwesh Agarwal; Supriya Sharma; Latika Gupta; Misra, D. P.; Samira Davalbhakta; Vikas Agarwal; Ashish Goel; Shelley Aggarwal

Title

COVID-19 and psychological disaster preparedness - an unmet need. (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(3):387-390. 15 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

**Objective:** The coronavirus disease (COVID-19) pandemic is a disaster of unprecedented proportions with global repercussions. Psychological preparedness, the primed cognitive awareness and anticipation of dealing with emotional responses in an adverse situation, has assumed a compelling relevance during a health disaster of this magnitude. **Methods:** An anonymized eSurvey was conducted in India to assess psychological preparedness toward the ongoing pandemic with a focus on knowledge, management of own and others' emotional response, and anticipatory coping mechanisms among the survey population. An adapted version of the qualitative Psychological Preparedness for Natural Disaster Scale validated by the World Health Organization was widely circulated over the Internet and various social media platforms for assessment. Results are expressed as median +or- standard deviation. Descriptive statistics were used and figures downloaded from surveymonkey.com. **Results:** Of the 1120 respondents (M:F 1.7:1, age 35 years +or-14.1), most expressed a high level of perceived knowledge and confidence of managing COVID-19, such as awareness of the symptoms of the illness (95.1%), actions needed (94.4%), hospital to report to (88.9%), and emergency contact number (89.1%). A majority (95%) monitored regularly the news bulletins and scientific journals regarding COVID-19. However, nearly one-third (29.2%) could not assess their likelihood of developing COVID-19, and 17.5% were unaware of the difference between a mild and severe infection. Twenty-three percent (23.3%) were unfamiliar with the materials needed in an acute illness situation. **Conclusion:** Psychological disaster preparedness is reasonable, although lacking in specific domains. Timely but focused interventions can be a cost-efficient administrative exercise, which federal agencies may prioritize working on.

Publication Type

Journal article.

<571>

Accession Number

20210001905

Author

Piszczatoski, C. R.; Powell, J.

Title

Emergency authorization of chloroquine and hydroxychloroquine for treatment of COVID-19.

Source

Annals of Pharmacotherapy; 2020. 54(8):827-831. 27 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

The world is suffering a respiratory pandemic disease caused by a novel coronavirus (2019-nCoV), commonly known as COVID-19 (coronavirus disease 2019). The Food and Drug Administration issued an emergency authorization for chloroquine and hydroxychloroquine as experimental treatments for COVID-19 leading to a shortage of both medications. A literature review conducted in April 2020 shows a lack of high-quality data available, resulting in ambiguous guideline recommendations. Decisions to use either drug should be made with careful consideration of risks versus benefits along with proper monitoring. Because of its higher potency and better safety profile, hydroxychloroquine may be the more reasonable treatment option if treatment is initiated.

Publication Type

Journal article.

<572>

Accession Number

20210001904

Author

Adams, K. K.; Baker, W. L.; Sobieraj, D. M.

Title

Myth busters: dietary supplements and COVID-19.

Source

Annals of Pharmacotherapy; 2020. 54(8):820-826. 71 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

News and social media platforms have implicated dietary supplements in the treatment and prevention of coronavirus disease 2019 (COVID-19). During this pandemic when information quickly evolves in the presence of contradicting messages and misinformation, the role of the pharmacist is essential. Here, we review theoretical mechanisms and evidence related to efficacy and safety of select supplements in the setting of COVID-19, including vitamin C, vitamin D, zinc, elderberry, and silver. Evidence evaluating these supplements in COVID-19 patients is lacking, and providers and patients should not rely on dietary supplements to prevent or treat COVID-19. Rather, reference to evidence-based guidelines should guide treatment decisions.

Publication Type

Journal article.

<573>

Accession Number

20210001879

Author

Hewitt, J. A.; Lutz, C.; Florence, W. C.; Pitt, M. L. M.; Srinivas Rao; Rappaport, J.; Haigwood, N. L.

Title

Activating resources for the COVID-19 pandemic: in vivo models for vaccines and therapeutics.

Source

Cell Host & Microbe; 2020. 28(5):646-659.

Publisher

Cell Press

Location of Publisher

Cambridge

Country of Publication

USA

Abstract

Therapeutic Interventions and Vaccines (ACTIV), a public-private partnership spearheaded by the National Institutes of Health, has been charged with identifying, prioritizing, and communicating SARS-CoV-2 preclinical resources. Reviewing SARS-CoV-2 animal model data facilitates standardization and harmonization and informs knowledge gaps and prioritization of limited resources. To date, mouse, hamster, ferret, guinea pig, and non-human primates have been investigated. Several species are permissive for SARS-CoV-2 replication, often exhibiting mild disease with resolution, reflecting most human COVID-19 cases. More severe disease develops in a few models, some associated with advanced age, a risk factor for human disease. This review provides a snapshot that recommends the suitability of models for testing vaccines and therapeutics, which may evolve as our understanding of COVID-19 disease biology improves. COVID-19 is a complex disease, and individual models recapitulate certain aspects of disease; therefore, the coordination and assessment of animal models is imperative.

Publication Type

Journal article.

<574>

Accession Number

20210001648

Author

Mpango, R.; Kalha, J.; Shamba, D.; Ramesh, M.; Ngakongwa, F.; Kulkarni, A.; Korde, P.; Nakku, J.; Ryan, G. K.

Title

Challenges to peer support in low- and middle-income countries during COVID-19.

Source

Globalization and Health; 2020. 16(90). 14 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: A recent editorial urged those working in global mental health to "change the conversation" on coronavirus disease (Covid-19) by putting more focus on the needs of people with severe mental health conditions. UPSIDES (Using Peer Support In Developing Empowering mental health Services) is a six-country consortium carrying out implementation research on peer support for people with severe mental health conditions in high- (Germany, Israel), lower middle- (India) and low-income (Tanzania, Uganda) settings. This commentary briefly outlines some of the key challenges faced by UPSIDES sites in low- and middle-income countries as a result of Covid-19, sharing early lessons that may also apply to other services seeking to address the needs of people with severe mental health conditions in similar contexts. Challenges and lessons learned: The key take-away from experiences in India, Tanzania and Uganda is that inequalities in terms of access to mobile technologies, as well as to secure employment and benefits, put peer support workers in particularly vulnerable situations precisely when they and their peers are also at their most isolated. Establishing more resilient peer support services requires attention to the already precarious situation of people with severe mental health conditions in low-resource settings, even before a crisis like Covid-19 occurs. While it is essential to maintain contact with peer support workers and peers to whatever extent is possible remotely, alternatives to face-to-face delivery of psychosocial interventions are not always straightforward to implement and can make it more difficult to observe individuals' reactions, talk about emotional issues and offer appropriate support. Conclusions: In environments where mental health care was already heavily medicalized and mostly limited to medications issued by psychiatric institutions, Covid-19 threatens burgeoning efforts to pursue a more holistic and person-centered model of care for people with severe mental health conditions. As countries emerge from lockdown, those working in global mental health will need to redouble their efforts not only to make up for lost time and help individuals cope with the added stressors of Covid-19 in their communities, but also to regain lost ground in mental health care reform and in broader conversations about mental health in low-resource settings.

Publication Type

Journal article.

<575>

Accession Number

20210001568

Author

Fhon, J. R. S.; Silva, L. M.; Leiton-Espinoza, Z. E.; Brito Matiello, F. de; Araujo, J. S. de; Rodrigues, R. A. P.

Title

Hospital care for elderly COVID-19 patients.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3396). 43 ref.

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 the newspaper articles on hospital care for elderly COVID-19 patients in online newspapers. Method: documentary, retrospective, descriptive and exploratory research. The data were collected from articles published on open-access websites of 12 newspapers from the following countries: Brazil, Spain, United States, France, Italy and Portugal. Results: out of 4,220 newspaper articles identified in this regard, 101 were selected after applying the inclusion criteria, the majority coming from Italy. The data analysis revealed three thematic categories: the care for patients with COVID-19 in the health system; the work process of the health team and its concern with contagion; and ethical dilemma in care for the elderly during hospitalization. Conclusion: the COVID-19 pandemic presented itself quickly and was widely reported in all countries. The health systems need to reorganize for care to the global population, especially the elderly, considering their weaknesses and also the lack of prior professional training to offer care to this population.

Publication Type

Journal article.

<576>

Accession Number

20210001223

Author

Aggarwal, S.; Larson, A.; McDermott, C.; Katila, P.; Giessen, L.

Title

Tenure reform for better forestry: an unfinished policy agenda.

Source

Forest Policy and Economics; 2021. 123.

Publisher

Elsevier B.V.

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Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The global community is currently grappling with multiple and overlapping social and environmental threats. These include the climate emergency, COVID-19 and the threat of widespread hunger, and the accelerating loss of biodiversity. All of these threats point to an urgent need to restore and sustainably manage land and forests. Studies are pointing to the critical role of tenure reform, and in particular strengthening collective forest tenure, as an effective means to reduce deforestation, mitigate climate change, restore ecosystem services and maintain biodiversity. Since the 1970s, countries worldwide have attempted to better recognize the customary rights of local communities. Yet despite over 40 years of effort, collective forest tenure reforms have yielded only moderate results. This article draws on recent assessments conducted in 23 countries by the Food and Agriculture Organization of the United Nations (FAO) on community-based forestry and associated forest tenure regimes based on the internationally endorsed Voluntary Guidelines on the Responsible Governance of Tenure (the VGGT). The findings suggest that governments are increasingly giving legal recognition to community rights to use both timber and non-timber forest products for commercial purposes. Yet, the tenure provided to collective forestry is less robust than that held by companies and smallholders in a number of ways. These include fewer legal protections, more barriers to the use of these rights, inadequate access to justice, and less administrative support in documenting rights. Furthermore, in many cases the existing community forestry legal provisions are not implemented. The relatively successful cases suggest that with robust tenure, communities and smallholders can be potent vehicles for moving towards sustainable forest management and mitigating climate change, improving local livelihoods, contributing to timber and non-timber product economies, and achieving several of the Sustainable Development Goals. But for this, governments will need to strengthen community and local rights within their legal frameworks and mainstream implementation in government policies and practices. Non-governmental organizations, civil society organizations, donors, research institutions and academia can provide important support through policy implementation, research, and ensuring inclusive policy formulation processes.

Publication Type

Journal article.

<577>

Accession Number

20210001146

Author

Mohammad Ali; Ahsan, G. U.; Risliana Khan; Khan, H. R.; Ahmed Hossain

Title

Immediate impact of stay-at-home orders to control COVID-19 transmission on mental well-being in Bangladeshi adults: patterns, explanations, and future directions.



Source

BMC Research Notes; 2020. 13(494). 27 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Objective:** We aim to evaluate the immediate impacts of COVID-19 stay-at-home orders on the mental well-being of Bangladeshi adults. We recruited 1404 healthy adults following the Bangladesh government's lockdown announcement. A questionnaire comprising the Warwick Edinburgh Mental Well-being Scale was used to define mental health. **Results:** The overall mean score for well-being was 42.4, indicating that 51.9% of adults suffered from poor mental health. And within that 48% of males and 57% of females were depressed. The mean scores for government workers, unemployed workers, and business employees were 45.1, 39.6, and 39.5, respectively. Confounding adjustments in multivariable linear regression models revealed that married women, unemployed and business communities, and individuals returning to villages were heavily depressed. Stay-at-home orders had significant repercussions on mental health and created a gender disparity in depression among adults. Suggestions include promoting mental health for women, unemployed, and business individuals. Married women need to be taken into special consideration as their mental well-being is worse. Older people (50 years of age and over) reported a high day-to-day variation in their mental health. These results should be factored in when discussing the mental health of adults and communities to cope with quarantine.

Publication Type

Journal article.

<578>

Accession Number

20210000877

Author

Mostafa, A.; Kandeil, A.; Elshaier, Y. A. M. M.; Kutkat, O.; Moatasim, Y.; Rashad, A. A.; Shehata, M.; Gomaa, M. R.; Mahrous, N.; Mahmoud, S. H.; GabAllah, M.; Abbas, H.; El-Taweel, A.; Kayed, A. E.; Kamel, M. N.; El-Sayes, M.; Mahmoud, D. B.; El-Shesheny, R.; Kayali, G.; Ali, M. A.

Title

FDA-approved drugs with potent in vitro antiviral activity against severe acute respiratory syndrome coronavirus 2.

Source

Pharmaceuticals; 2020. 13(12). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

**Background:** Drug repositioning is an unconventional drug discovery approach to explore new therapeutic benefits of existing drugs. Currently, it emerges as a rapid avenue to alleviate the COVID-19 pandemic disease. **Methods:** Herein, we tested the antiviral activity of anti-microbial and anti-inflammatory Food and Drug Administration (FDA)-approved drugs, commonly prescribed to relieve respiratory symptoms, against Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the viral causative agent of the COVID-19 pandemic. **Results:** Of these FDA-approved antimicrobial drugs, Azithromycin, Niclosamide, and Nitazoxanide showed a promising ability to hinder the replication of a SARS-CoV-2 isolate, with IC50 of 0.32, 0.16, and 1.29 micro M, respectively. We provided evidence that several antihistamine and anti-inflammatory drugs could partially reduce SARS-CoV-2 replication in vitro. Furthermore, this study showed that Azithromycin can selectively impair SARS-CoV-2 replication, but not the Middle East Respiratory Syndrome Coronavirus (MERS-CoV). A virtual screening study illustrated that Azithromycin, Niclosamide, and Nitazoxanide bind to the main protease of SARS-CoV-2 (Protein data bank (PDB) ID: 6lu7) in binding mode similar to the reported co-crystalized ligand. Also, Niclosamide displayed hydrogen bond (HB) interaction with the key peptide moiety GLN: 493A of the spike glycoprotein active site. **Conclusions:** The results suggest that Piroxicam should be prescribed in combination with Azithromycin for COVID-19 patients.

Publication Type

Journal article.

<579>

Accession Number

20210000544

Author

Weber, J.; Shin, Y. M.; Sykes, J. S.; Archer-Nicholls, S.; Abraham, N. L.; Archibald, A. T.

Title

Minimal climate impacts from short-lived climate forcers following emission reductions related to the COVID-19 pandemic. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(20). 28 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

We present an assessment of the impacts on atmospheric composition and radiative forcing of short-lived pollutants following a worldwide decrease in anthropogenic activity and emissions comparable to what has occurred in response to the COVID-19 pandemic, using the global composition-climate model United Kingdom Chemistry and Aerosols Model (UKCA). Emission changes reduce tropospheric hydroxyl radical and ozone burdens, increasing methane lifetime. Reduced SO<sub>2</sub> emissions and oxidizing capacity lead to a decrease in sulfate aerosol and increase in aerosol size, with accompanying reductions to cloud droplet concentration. However, large reductions in black carbon emissions increase aerosol albedo. Overall, the changes in ozone and aerosol direct effects (neglecting aerosol-cloud interactions which were statistically insignificant but whose response warrants future investigation) yield a radiative forcing of -33 to -78 mWm<sup>-2</sup>. Upon cessation of emission reductions, the short-lived climate forcers rapidly return to pre-COVID levels; meaning, these changes are unlikely to have lasting impacts on climate assuming emissions return to pre-intervention levels.

Publication Type

Journal article.

<580>

Accession Number

20210000543

Author

Su TianNing; Li ZhanQing; Zheng YouTong; Luan QingZu; Guo JianPing

Title

Abnormally shallow boundary layer associated with severe air pollution during the COVID-19 lockdown in China. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(20). 45 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

After the 2020 Lunar New Year, the Chinese government implemented a strict nationwide lockdown to inhibit the spread of the Coronavirus Disease 2019 (COVID-19). Despite the abrupt decreases in gaseous emissions caused by record-low anthropogenic activities, severe haze pollution occurred in northern China during the COVID lockdown. This paradox has attracted the attention of both the public and the scientific community. By analyzing comprehensive measurements of air pollutants, planetary boundary layer (PBL) height, and surface meteorology, we show that the severe air pollution episode over northern China coincided with the abnormally low PBL height, which had reduced by 45%, triggering strong aerosol-PBL interactions. After dynamical processes initiated the temperature inversion, the Beijing metropolitan area experienced a period with continuously shallow PBLs during the lockdown. This unprecedented event provided an experiment showcasing the role of meteorology, in particular aerosol-PBL interactions in affecting air quality.

Publication Type

Journal article.

<581>

Accession Number

20210000122

Author

Pan Wei; Hu JuAn; Yi LiangYing

Title

Mental state of central sterile supply department staff during COVID-19 epidemic and CART analysis.

Source

BMC Health Services Research; 2020. 20(1006). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: During the COVID-19 epidemic, the central sterile supply department (CSSD) staff handled many devices, implements and non-disposable protective articles used by suspected or confirmed COVID-19 patients. As a result, the CSSD staff may have experienced psychological stress, however, the mental state of the CSSD staff during the COVID-19 epidemic has been rarely studied. We aim to investigate the mental state of the CSSD staff and relevant influencing factors experienced during the COVID-19 epidemic. Methods: The survey utilising a general information questionnaire, Chinese perceived stress scale (CPSS), self-rating anxiety scale (SAS), and Connor-Davidson resilience scale (CD-RISC) was conducted with 423 CSSD staff members from 35 hospitals in Sichuan Province, China. Data was analysed in SPSS24.0. Classification and regression tree (CART) was utilised to analyse variables and find variation between groups. A chi-square test was performed on enumeration data, and t-test and analysis of variance were performed on measurement data. Results: The CSSD staff's SAS score was 37.39 +or- 8.458, their CPSS score was 19.21 +or- 7.265, and their CD-RISC score was 64.26 +or- 15.129 (Tenacity factor score: 31.70 +or- 8.066, Strength factor score: 21.60 +or- 5.066, Optimism factor scores: 10.96 +or- 3.189). The CPSS score was positively correlated with the SAS score ( $r = 0.66$ ;  $P < 0.01$ ), the CPSS score was negatively correlated with the CD-RISC score ( $r = - 0.617$ ,  $P < 0.01$ ), and the SAS score was negatively correlated with the CD-RISC score ( $r = - 0.477$ ,  $P < 0.01$ ). The job position, age, and political status of the CSSD staff were the main factors affecting their mental state; for example, the CPSS score and SAS score of the CSSD nurses were significantly different from those of the CSSD logistic staff ( $P < 0.01$ ). Conclusion: During the epidemic, the CSSD staff's psychological resilience was at a low level; the anxiety level of the CSSD nurses was higher than that of the CSSD logistic staff. Therefore, more attention should be given to the mental health of the CSSD staff, including taking protective measures regarding the risk factors to ensure they can maintain a healthy mental state.

#### Publication Type

Journal article.

<582>

#### Accession Number

20203601865

#### Author

Francisqueti-Ferron, F. V.; Garcia, J. L.; Ferron, A. J. T.; Nakandakare-Maia, E. T.; Gregolin, C. S.; Silva, J. P. D. C.; Santos, K. C. dos; Lo, A. T. C.; Siqueira, J. S.; Mattei, L. de; Paula, B. H. de; Sarzi, F.; Silva, C. C. V. de A.; Moreto, F.; Costa, M. R.; Ferreira, A. L. A.; Minatel, I. O.; Correa, C. R.

#### Title

Gamma-oryzanol as a potential modulator of oxidative stress and inflammation via PPAR- $\gamma$  in adipose tissue: a hypothetical therapeutic for cytokine storm in COVID-19?

#### Source

Molecular and Cellular Endocrinology; 2021. 520. 36 ref.

#### Publisher

Elsevier Ireland Ltd

#### Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

The literature has reported a higher prevalence of negative clinical outcomes due to Coronavirus disease 19 (COVID-19) in obese individuals. This can be explained by the cytokine storm, result from the cytokine production from both obesity and viral infection. Gamma-oryzanol (POz) is a compound with anti-inflammatory and antioxidant activities. However, little is known about the POz action as a possible agonist of peroxisome proliferator-activated receptor gamma (PPAR-P). The aim of this study was to test the hypothesis that POz attenuates the cytokine storm by stimulating PPAR-P in the adipose tissue. Methods: Male Wistar rats were randomly divided into three experimental groups and fed ad libitum for 30 weeks with control diet (C, n = 6), high sugar-fat diet (HSF, n = 6) or high sugar-fat diet + POz (HSF + POz, n = 6). HSF groups also received water + sucrose (25%). The POz dose was 0.5% in the chow. Evaluation in animals included caloric intake, body weight, adiposity index, plasma triglycerides, and HOMA-IR. In adipose tissue was evaluated: PPAR-P gene and protein expression, inflammatory and oxidative stress parameters, and histological analysis. Results: Adipose tissue dysfunction was observed in HSF group, which presented remarkable PPAR-P underexpression and increased levels of cytokines, other inflammatory markers and oxidative stress. The POz treatment prevented adipose tissue dysfunction and promoted PPAR-P overexpression. Conclusion: Natural compounds as POz can be considered a coadjuvant therapy to prevent the cytokine storm in COVID-19 patients with obesity conditions.

Publication Type

Journal article.

<583>

Accession Number

20203601787

Author

Shrabanti Maity; Nandini Ghosh; Barlaskar, U. R.

Title

Interstate disparities in the performances in combatting COVID-19 in India: efficiency estimates across states.

Source

BMC Public Health; 2020. 20(1925). 36 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

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## Country of Publication

UK

## Abstract

**Background:** Currently, the novel coronavirus or COVID-19 pandemic poses the greatest global health threat worldwide, and India is no exception. As an overpopulated developing country, it is very difficult to maintain social distancing to restrict the spread of the disease in India. Under these circumstances, it is necessary to examine India's interstate performances to combat COVID-19. This study aims to explore twin objectives: to investigate the comparative efficiency of Indian states to combat COVID-19 and to unfold the factors responsible for interstate disparities in the efficiency in combatting COVID-19. **Methods:** The stochastic production frontier model was utilized for data analysis. The empirical analysis was facilitated by the inefficiency effects model, revealing the factors that influence interstate variability in disease management efficiency. Three types of variables, namely, output, inputs, and exogenous, were used to measure health system efficiency. The relevant variables were compiled from secondary sources. The recovery rate from COVID-19 was the output variable and health infrastructures were considered as the input variable. On the contrary, the non-health determinants considered to have a strong influence on the efficiency of states' disease management, but could not be considered as input variables, were recognised as exogenous variables. These exogenous variables were specifically used for the inefficiency analysis. **Results:** The empirical results demonstrated the existence of disparities across Indian states in the level of efficiency in combatting COVID-19. A non-trivial outcome of this study was that Tamil Nadu was the best performer and Manipur was the worst performer of the investigated states. Variables such as elderly people, sex ratio, literacy rate, population density, influenced the efficiency of states, and thus, affected the recovery rate. **Conclusion:** This study argues for the efficient utilisation of the existing health infrastructures in India. Simultaneously, the study suggests improving the health infrastructure to achieve a long-run benefit.

## Publication Type

Journal article.

<584>

## Accession Number

20203601765

## Author

Nira Tamang; Punam Rai; Siddhartha Dhungana; Binod Sherchan; Bikash Shah; Prajjwal Pyakurel; Saroj Rai

## Title

COVID-19: a National Survey on perceived level of knowledge, attitude and practice among frontline healthcare Workers in Nepal.

## Source

BMC Public Health; 2020. 20(1905). 26 ref.

## Publisher

BioMed Central Ltd

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The aim of this study was to determine the knowledge, attitude and practice (KAP) regarding the COVID-19 among frontline healthcare workers (F-HCWs) working at different hospitals in Nepal and to identify the factors significantly associated with KAP. Methods: We used a web-based survey, and a convenience sampling method was adopted to collect data from 603 F-HCWs working at different hospitals in Nepal during the first week of June 2020. A self-administered questionnaire was utilized to assess the KAP perceived by the F-HCWs. It was divided into 4-parts consisting of 30-items, demographic characteristics (10-items), knowledge (10-items), attitude (5-items), and practice (5-items). It consisted of both multiple-choice questions and Likert scale items questionnaire. Results: Among the participants, 76% reported adequate knowledge, 54.7% reported positive attitude, and 78.9% reported appropriate practice. Statistically significant differences regarding the perceived level of knowledge among F-HCWs were observed among independent variables, including age, gender, level of education, marital status, profession, work experience, source of information, infection prevention and control (IPC) training, and online course ( $p < 0.05$ ). Similarly, statistically significant differences regarding the attitude among F-HCWs were observed among independent variables, including age, gender, level of education, profession, and online course ( $p < 0.05$ ). Moreover, only 2-independent variables, including the profession and online course, showed statistically significant differences with practice ( $p < 0.05$ ). Pearson correlation analysis showed a significant association between knowledge, attitude and practice at the level of  $p = 0.01$ . The factors significantly associated with adequate knowledge were male gender, nurse and doctor, websites and IPC training. Similarly, factors significantly associated with positive attitude were online course related to COVID-19 only. Moreover, factors significantly associated with appropriate practice were master's degree or above and online course related to COVID-19. Conclusions: F-HCWs reported adequate overall knowledge with a positive attitude and adopted the appropriate practice. The experienced F-HCWs with higher education and who received IPC training and online course regarding COVID-19 had better KAP. So, the stakeholders must arrange the educational programs and training for F-HCWs for better preparedness tackling with COVID-19.

Publication Type

Journal article.

<585>

Accession Number

20203601454

Author

Feng ShuZhuang; Jiang Fei; Wang HengMao; Wang HaiKun; Ju WeiMin; Shen Yang; Zheng YanHua; Wu Zheng; Ding AiJun

Title



NOx emission changes over China during the COVID-19 epidemic inferred from surface NO2 observations. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(19). 34 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

The COVID-19 epidemic has substantially limited human activities and affected anthropogenic emissions. In this work, daily NOx emissions are inferred using a regional data assimilation system and hourly surface NO2 measurement over China. The results show that because of the coronavirus outbreak, NOx emissions across the whole mainland China dropped sharply after 31 January, began to rise slightly in certain areas after 10 February, and gradually recover across the country after 20 February. Compared with the emissions before the outbreak, NOx emissions fell by more than 60% and ~30% in many large cities and most small to medium cities, respectively. Overall, NOx emissions were reduced by 36% over China, which were mainly contributed by transportation. Evaluations show that the inverted changes over eastern China are credible, whereas those in western China might be underestimated. These findings are of great significance for exploring the reduction potential of NOx emissions in China.

Publication Type

Journal article.

<586>

Accession Number

20203601443

Author

Xu JianZhong; Ge XinLei; Zhang XingHua; Zhao WenHui; Zhang RuiXiong; Zhang YuZhong

Title

COVID-19 impact on the concentration and composition of submicron particulate matter in a typical city of Northwest China. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(19). many ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

In this study, we evaluated the variations of air quality in Lanzhou, a typical city in Northwestern China impacted by the COVID-19 lockdown. The mass concentration and chemical composition of non-refractory submicron particulate matter (NR-PM<sub>1</sub>) were determined by a high-resolution aerosol mass spectrometer during January-March 2020. The concentration of NR-PM<sub>1</sub> dropped by 50% from before to during control period. The five aerosol components (sulfate, nitrate, ammonium, chloride, and organic aerosol [OA]) all decreased during the control period with the biggest decrease observed for secondary inorganic species (70% of the total reduction). Though the mass concentration of OA decreased during the control period, its source emissions varied differently. OA from coal and biomass burning remained stable from before to during control period, while traffic and cooking related emissions were reduced by 25% and 50%, respectively. The low concentration during the control period was attributed to the lower production rate for secondary aerosols.

Publication Type

Journal article.

<587>

Accession Number

20203601438

Author

You YongFa; Pan ShuFen

Title

Urban vegetation slows down the spread of Coronavirus Disease (COVID-19) in the United States. (Special Section: The COVID-19 pandemic: linking health, society, and environment.)

Source

Geophysical Research Letters; 2020. 47(18). many ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

#### Abstract

Coronavirus Disease 2019 (COVID-19) is spreading around the world, and the United States has become the epicenter of the global pandemic. However, little is known about the causes behind the large spatial variability of the COVID-19 incidence. Here we use path analysis model to quantify the influence of four potential factors (urban vegetation, population density, air temperature, and baseline infection) in shaping the highly heterogeneous transmission patterns of COVID-19 across the United States. Our results show that urban vegetation can slow down the spread of COVID-19, and each 1% increase in the percentage of urban vegetation will lead to a 2.6% decrease in cumulative COVID-19 cases. Additionally, the mediating role of urban vegetation suggests that urban vegetation could reduce increases in cumulative COVID-19 cases induced by population density and baseline infection. Our findings highlight the importance of urban vegetation in strengthening urban resilience to public health emergencies.

#### Publication Type

Journal article.

<588>

#### Accession Number

20203601220

#### Author

Mani, A.; Estedlal, A. R.; Kamali, M.; Ghaemi, S. Z.; Zarei, L.; Shokrpour, N.; Heydari, S. T.; Lankarani, K. B.

#### Title

Mental health status during COVID-19 pandemic in fars province, Iran: timely measures.

#### Source

BMC Public Health; 2020. 20(1866). 59 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** The current corona virus pandemic is acting as a stressor or trauma, which not only threatens physical health status, but also threatens mental health status and well-being of people. Currently, COVID-19 pandemic is a life-threatening unpredictable condition accompanied with a large number of uncertainties. The present study has mainly aimed to assess mental health and the relevant social factors during this pandemic in Fars province. **Methods:** This cross-sectional study was performed on 922 participants in Fars

province, Iran, using internet-based data collection technique. All the included participants filled out the General Health Questionnaire (GHQ-28). Moreover, demographic variables and some social factors were evaluated by asking some questions. All the participants were ensured of the confidentiality of the collected data, and willingly completed the questionnaire. Results: Among the participants, there were 629 women (68.2%) and 293 men (31.2%). The mean age of the participants was 36.98 +or- 11.08 years old. Four hundred twenty-five subjects (46.1%) obtained GHQ-28 scores above the cut-off point, and accordingly, they were suspected of having poor mental health statuses. Women, in comparison to men (OR = 2.034, 95%:1.62 - 3.28), and individuals aged < 50 years old, in comparison to those aged > 50 years old (OR: 4.01 95%:2.15 - 7.50), have poorer mental health statuses. Trusting on media, health authorities, and cooperation with policy makers, as well as having uncertainty on information about Coronavirus pandemic were also shown to be associated with poor mental health condition (P < 0.05). Conclusion: The present study revealed that the number of those people with suspected poor mental health in Fars province significantly increased compared to a previous study using the same questionnaire. Furthermore, the participants who had less trust in media and policymakers were more prone to mental health problems. Therefore, it can be concluded that supporting people in these life-threatening pandemic crises is of great importance, so the policy makers and media must present reliable and valid information to people as soon as possible.

#### Publication Type

Journal article.

<589>

#### Accession Number

20203601029

#### Author

Kohler, J. C.; Bowra, A.

#### Title

Exploring anti-corruption, transparency, and accountability in the World Health Organization, the United Nations Development Programme, the World Bank Group, and the Global Fund to Fight AIDS, Tuberculosis and Malaria.

#### Source

Globalization and Health; 2020. 16(101). 83 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

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Corruption is recognized by the global community as a threat to development generally and to achieving health goals, such as the United Nations Sustainable Development Goal #3: ensuring healthy lives and promoting well-being for all. As such, international organizations such as the World Health Organizations and the United Nations Development Program are creating an evidence base on how best to address corruption in health systems. At present, the risk of corruption is even more apparent, given the need for quick and nimble responses to the COVID-19 pandemic, which may include a relaxation of standards and the rapid mobilization of large funds. As international organizations and governments attempt to respond to the ever-changing demands of this pandemic, there is a need to acknowledge and address the increased opportunity for corruption. In order to explore how such risks of corruption are addressed in international organizations, this paper focuses on the question: How are international organizations implementing measures to promote accountability and transparency, and anti-corruption, in their own operations? The following international organizations were selected as the focus of this paper given their current involvement in anti-corruption, transparency, and accountability in the health sector: the World Health Organization, the United Nations Development Program, the World Bank Group, and the Global Fund to Fight Aids, Tuberculosis and Malaria. Our findings demonstrate that there has been a clear increase in the volume and scope of anti-corruption, accountability, and transparency measures implemented by these international organizations in recent years. However, the efficacy of these measures remains unclear. Further research is needed to determine how these measures are achieving their transparency, accountability, and anti-corruption goals.

#### Publication Type

Journal article.

<590>

#### Accession Number

20203601014

#### Author

Rosenke, K.; Meade-White, K.; Letko, M.; Clancy, C.; Hansen, F.; Liu YanAn; Okumura, A.; Tang-Huau TsingLee; Li Rong; Saturday, G.; Feldmann, F.; Scott, D.; Wang ZhongDe; Munster, V.; Jarvis, M. A.; Feldmann, H.

#### Title

Defining the Syrian hamster as a highly susceptible preclinical model for SARS-CoV-2 infection.

#### Source

Emerging Microbes and Infections; 2020. 9(2673-2684):2673-2684. 41 ref.

#### Publisher

Taylor & Francis

#### Location of Publisher

Abingdon

#### Country of Publication

UK

Abstract

Following emergence in late 2019, SARS-CoV-2 rapidly became pandemic and is presently responsible for millions of infections and hundreds of thousands of deaths worldwide. There is currently no approved vaccine to halt the spread of SARS-CoV-2 and only very few treatment options are available to manage COVID-19 patients. For development of preclinical countermeasures, reliable and well-characterized small animal disease models will be of paramount importance. Here we show that intranasal inoculation of SARS-CoV-2 into Syrian hamsters consistently caused moderate broncho-interstitial pneumonia, with high viral lung loads and extensive virus shedding, but animals only displayed transient mild disease. We determined the infectious dose 50 to be only five infectious particles, making the Syrian hamster a highly susceptible model for SARS-CoV-2 infection. Neither hamster age nor sex had any impact on the severity of disease or course of infection. Finally, prolonged viral persistence in interleukin 2 receptor gamma chain knockout hamsters revealed susceptibility of SARS-CoV-2 to adaptive immune control. In conclusion, the Syrian hamster is highly susceptible to SARS-CoV-2 making it a very suitable infection model for COVID-19 countermeasure development.

Publication Type

Journal article.

<591>

Accession Number

20203601012

Author

Li Cun; Chu Hin; Liu XiaoJuan; Chiu ManChun; Zhao XiaoYu; Wang Dong; Wei YuXuan; Hou YuXin; Shuai HuiPing; Cai JianPiao; Chan FukWoo [Chan, F. W. J.]; Zhou Jie; Yuen KwokYung

Title

Human coronavirus dependency on host heat shock protein 90 reveals an antiviral target.

Source

Emerging Microbes and Infections; 2020. 9(2663-2672):2663-2672. 34 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Rapid accumulation of viral proteins in host cells render viruses highly dependent on cellular chaperones including heat shock protein 90 (Hsp90). Three highly pathogenic human coronaviruses, including MERS-CoV, SARS-CoV and SARS-CoV-2, have emerged in the past 2 decades. However, there is no approved antiviral agent against these coronaviruses. We inspected the role of Hsp90 for coronavirus propagation. First, an Hsp90 inhibitor, 17-AAG, significantly suppressed MERS-CoV propagation in cell lines and physiological-relevant human intestinal organoids. Second, siRNA depletion of Hsp90beta, but not Hsp90a, significantly restricted MERS-CoV replication and abolished virus spread. Third, Hsp90beta interaction with MERS-CoV nucleoprotein (NP) was revealed in a co-immunoprecipitation assay. Hsp90beta is required to maintain NP stability. Fourth, 17-AAG substantially inhibited the propagation of SARS-CoV and SARS-CoV-2. Collectively, Hsp90 is a host dependency factor for human coronavirus MERS-CoV, SARS-CoV and SARS-CoV-2. Hsp90 inhibitors can be repurposed as a potent and broad-spectrum antiviral against human coronaviruses.

#### Publication Type

Journal article.

<592>

#### Accession Number

20203600888

#### Author

Kyle, M. H.; Glassman, M. E.; Khan, A.; Fernandez, C. R.; Hanft, E.; Emeruwa, U. N.; Scripps, T.; Walzer, L.; Liao, G. V.; Saslaw, M.; Rubenstein, D.; Hirsch, D. S.; Keown, M. K.; Stephens, A.; Mollicone, I.; Bence, M. L.; Gupta, A.; Sultan, S.; Sibblies, C.; Whittier, S.; Abreu, W.; Akita, F.; Penn, A.; Orange, J. S.; Saiman, L.; Welch, M. G.; Gyamfi-Bannerman, C.; Stockwell, M. S.; Dumitriu, D.

#### Title

A review of newborn outcomes during the COVID-19 pandemic. (Special Issue: COVID preparedness: lessons learned from the pandemic center: issue 2.)

#### Source

Seminars in Perinatology; 2020. 44(7). 101 ref.

#### Publisher

Elsevier Inc.

#### Location of Publisher

Philadelphia

#### Country of Publication

USA

#### Abstract

As the COVID-19 pandemic continues to spread worldwide, it is crucial that we determine populations that are at-risk and develop appropriate clinical care policies to protect them. While several respiratory illnesses

are known to seriously impact pregnant women and newborns, preliminary data on the novel SARS-CoV-2 Coronavirus suggest that these groups are no more at-risk than the general population. Here, we review the available literature on newborns born to infected mothers and show that newborns of mothers with positive/suspected SARS-CoV-2 infection rarely acquire the disease or show adverse clinical outcomes. With this evidence in mind, it appears that strict postnatal care policies, including separating mothers and newborns, discouraging breastfeeding, and performing early bathing, may be more likely to adversely impact newborns than they are to reduce the low risk of maternal transmission of SARS-CoV-2 or the even lower risk of severe COVID-19 disease in otherwise healthy newborns.

#### Publication Type

Journal article.

<593>

#### Accession Number

20203600876

#### Author

Saiman, L.; Acker, K. P.; Dumitru, D.; Messina, M.; Johnson, C.; Zachariah, P.; Abreu, W.; Saslaw, M.; Keown, M. K.; Hanft, E.; Liao, G.; Johnson, D.; Robinson, K.; Streltsova, S.; Valderrama, N.; Markan, A.; Rosado, M.; Ganga Krishnamurthy; Rakesh Sahni; Penn, A. A.; Sheen, J. J.; Zork, N.; Aubey, J.; Oxford-Horrey, C.; Goffman, D.

#### Title

Infection prevention and control for labor and delivery, well baby nurseries, and neonatal intensive care units. (Special Issue: COVID preparedness: lessons learned from the pandemic center: issue 2.)

#### Source

Seminars in Perinatology; 2020. 44(7).

#### Publisher

Elsevier Inc.

#### Location of Publisher

Philadelphia

#### Country of Publication

USA

#### Abstract

During the early months of the COVID-19 pandemic, infection prevention and control (IP&C) for women in labor and mothers and newborns during delivery and receiving post-partum care was quite challenging for staff, patients, and support persons due to a relative lack of evidence-based practices, high rates of community transmission, and shortages of personal protective equipment (PPE). We present our IP&C policies and procedures for the obstetrical population developed from mid-March to mid-May 2020 when New York City served as the epicenter of the pandemic in the U.S. For patients, we describe screening for



COVID-19, testing for SARS-CoV-2, and clearing patients from COVID-19 precautions. For staff, we address self-monitoring for symptoms, PPE in different clinical scenarios, and reducing staff exposures to SARS-CoV-2. For visitors/support persons, we address limiting them in labor and delivery, the postpartum units, and the NICU to promote staff and patient safety. We describe management of SARS-CoV-2-positive mothers and their newborns in both the well-baby nursery and in the neonatal ICU. Notably, in the well-baby nursery we do not separate SARS-CoV-2-positive mothers from their newborns, but emphasize maternal mask use and social distancing by placing newborns in isolates and asking mothers to remain 6 feet away unless feeding or changing their newborn. We also encourage direct breastfeeding and do not advocate early bathing. Newborns of SARS-CoV-2-positive mothers are considered persons under investigation (PUIs) until 14 days of life, the duration of the incubation period for SARS-CoV-2. We share two models of community-based care for PUI neonates. Finally, we provide our strategies for enhancing communication and education during the early months of the pandemic.

#### Publication Type

Journal article.

<594>

#### Accession Number

20203600828

#### Author

Boer, M. G. J. de; Gieling, E. M.; Linden, P. D. van der; Sinha, B. N. M.; Vollaard, A. M.

#### Title

The medicinal treatment of COVID-19: a brief update. [Dutch]

#### Source

Nederlands Tijdschrift voor Geneeskunde; 2020. 164(49).

#### Publisher

Bohn Stafleu Van Loghum

#### Location of Publisher

Houten

#### Country of Publication

Netherlands

#### Abstract

Much has changed in the medical treatment of COVID-19 after the first patient with an infection with SARS-CoV-2 in the Netherlands was diagnosed in February 2020. On the basis of limited data, at first only off-label use of (hydroxy)chloroquine seemed to be a treatment option. However, now based on the findings of several randomized studies, other medicines have been included in the Dutch guidelines about the treatment of COVID-19. In this article, we will briefly discuss the current state of affairs with regard to

the drugs (hydroxy) chloroquine, remdesivir and corticosteroids. Again, it appears that only well-executed randomized clinical trials can determine the status of various supposedly effective drugs.

#### Publication Type

Journal article.

<595>

#### Accession Number

20203600785

#### Author

Roy, V. K.; Jyoti Arora; Nimarpreet Kaur; Asha Gandhi

#### Title

Effect of the present situation of coronavirus disease-2019 pandemic on the academic and personal life of undergraduate medical and paramedical students.

#### Source

National Journal of Physiology, Pharmacy and Pharmacology; 2020. 10(9):795-798. 19 ref.

#### Publisher

Association of Physiologists, Pharmacists and Pharmacologists (APPP)

#### Location of Publisher

New Delhi

#### Country of Publication

India

#### Abstract

Background: Coronavirus disease-2019 (COVID-19) was declared a pandemic by the WHO (WORLD HEALTH ORGANIZATION), on March 11, 2020. There is no doubt in the fact that this infection has marked its great effects on various aspects of one's life, may it be a personal, familial, social, economic, psychological, academic, professional, financial, emotional, either directly or indirectly. At present, a number of studies are being done so as to study the impact of coronavirus on the different spheres of our life, either directly affecting their own health or of family members, or indirectly, by influencing thorough lockdowns, quarantine, or isolation. Aims and Objectives: Due permission was taken from the screening ethical committee. Thereafter, this study was conducted on the students of medical, dental and nursing courses, in our institute, as these three professions are the only ones that are at the frontline as far as provision of healthcare services to the public is concerned. Materials and Methods: This was a cross-sectional study that was carried out on undergraduate students of three courses from our own university, i.e., M.B.B.S, B.D.S., and B.Sc. Nursing. The participation was only voluntarily. The subjects were asked a questionnaire, including 18 questions regarding the impact of this corona infection on their personal and academics part of their life. Results: According to the results of this online study, this infection has markedly affected the personal and academics of these students as they are attending lectures through online mode only, but

even then the majority of them are really much determined to continue pursuing their respective courses. Conclusion: Throughout the world, right now, no specific treatment is available for this infection, though a number of researches are being carried out to know about this novel virus, its characteristic features in details, response to various drugs and vaccines that are now undergoing a number of trials, everywhere in the world.

#### Publication Type

Journal article.

<596>

#### Accession Number

20203600760

#### Author

Shafia Sarfi; Sana Farooq

#### Title

Knowledge, awareness, attitude and skills of dental surgeons of Kashmir on COVID-19.

#### Source

Annals of International Medical and Dental Research; 2020. 6(4). 11 ref.

#### Publisher

Society for Health Care & Research Development

#### Location of Publisher

Moradabad

#### Country of Publication

India

#### Abstract

**Background:** The role of dental professionals in preventing the transmission of COVID-19 is critically essential. **Aim:** This study aimed to evaluate the knowledge, attitude, skills and preparedness of dentists of Kashmir on Covid-19. **Methods:** A cross-sectional survey was carried out in March 2020 on 100 dentists of Srinagar treating the patients daily to assess knowledge, perception, attitude, awareness regarding Covid-19 and various challenges faced as well. The collected data were subjected to statistical analysis in software SPSS (version 20.0) and summarized as frequencies and percentages. Chi-square test or Fisher's exact test was used for comparison of categorical variables and a P-value < 0.05 was considered statistically significant. **Results:** A total of 96 were filled by respondents, amongst which 58 were graduates and 38 were postgraduate dentists. 57.9% of postgraduate dentists were aware of the CDC (Centers for Disease Control and Prevention) guidelines about COVID-19, whereas only 32.8% dental graduates knew about it. 81.3% of the overall dentists screened patients for respiratory symptoms and delayed non-emergencies procedures. **Conclusion:** This survey stresses on the importance of awareness, preparedness, education of dental graduates on latest CDC guidelines and the need of addressing only the emergency dental procedures after

taking proper travel history, use of preprocedural mouth rinses, advocating proper hand hygiene instructions and use of appropriate PPE and face shield to prevent the contamination of dental health care professionals and operator.

Publication Type

Journal article.

<597>

Accession Number

20203600755

Author

Dogra, R. S.; Rajesh Chaudhary; Poonam; Vikrant Dharwal; Arjun Thakur; Ragini Bhatia

Title

Honey is an ideal biological agent in the management of Necrotizing Fasciitis: a case report.

Source

Annals of International Medical and Dental Research; 2020. 6(4). 17 ref.

Publisher

Society for Health Care & Research Development

Location of Publisher

Moradabad

Country of Publication

India

Abstract

Necrotizing Fasciitis is dangerous, spreading inflammation and necrosis of the subcutaneous tissue and fascia. The treatment of choice is immediate and radical debridement along with broad-spectrum antibiotics and supportive therapy. We present the case of a 63 years old man who came with Necrotising Fasciitis of the gluteal skin; following intramuscular injection. After the initial debridement, honey debridement was started, and the patient showed an excellent recovery. Honey is a gift of nature, available freely and throughout the globe. It is an excellent debriding agent with antibacterial properties, which promotes tissue growth at the same time. During the desperate times like COVID-19 when the routine surgery is not available, or in areas where the plastic surgery facilities are not developed, honey can still be an excellent alternative.

Publication Type

Journal article.

<598>

Accession Number

20203600702

Author

Carvalho, E. C.; Oliveira Souza, P. H. D. de; Varella, T. C. M. Y. M. L.; Oliveira Souza, N. V. D. de; Farias, S. N. P. de; Soares, S. S. S.

Title

COVID-19 pandemic and the judicialization of health care: an explanatory case study.

Source

Revista Latino-Americana de Enfermagem; 2020. 28(e3354). 29 ref.

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 identify the reasons that led to the judicialization of health care in the context of the COVID-19 pandemic; describe the outcomes of lawsuits concerning health care involving the COVID-19; and analyze the cases of health care judicialization intended to ensure the population's right to health. Method: qualitative, explanatory case study. Data were collected from the websites of the Federal Prosecution Service, Regional Labor Court (1st Region), and the Court of Justice of Rio de Janeiro. The inclusion criterion was public civil actions that concerned health care and situations involving the COVID-19 pandemic. Two categories emerged from data analysis. Results: four cases were identified. Conclusion: the judicialization of health care consists of obtaining assets and rights in the courts. These assets and rights are essential to ensure the health of citizens but have been denied in various instances, often due to the omission of the executive and legislative powers. Analyzing the judicialization of health care amidst the pandemic brings focus and highlights the importance of giving voice and visibility to the enormous contingent of the Brazilian society unassisted by public authorities.

Publication Type

Journal article.

<599>

Accession Number

20203600629

Author

Soma-Pillay, P.; Moodley, J.; Pattinson, R.; Fawcus, S.; Gebhardt, S.; Niit, R.

Title

Obstetrics and Gynaecology Forum - the effect of the first wave of COVID-19 on use of maternal and reproductive health services and maternal deaths in South Africa.

Source

Obstetrics and Gynaecology Forum; 2020. 30(4):38-46.

Publisher

In-House Publications

Location of Publisher

Craighall

Country of Publication

South Africa

Abstract

Aim: To monitor the impact of the first wave of the Covid-19 pandemic on use of maternal and reproductive health services, and maternal mortality. Compared with the second quarter of 2019, but in many provinces there were discrepancies between DHIS and PPIP data so national still birth data is not presented in this report.

Publication Type

Journal article.

<600>

Accession Number

20203600611

Author

Kassa, M. D.; Grace, J. M.

Title

Race against death or starvation? COVID-19 and its impact on African populations.

Source

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Born in the Chinese city of Wuhan, the consequences of the coronavirus pandemic on global health and economies have been and continue to be devastating. In Africa, its countries grieve for unprecedented burdens of caseloads and mortality due to COVID-19, the virus responsible for the disease. This narrative review aims to establish the scale of the health and economic crisis wrought by the pandemic in Africa, including its impact on the informal economic sector, projections of the effect on national GDP, as well as its political dimensions. Methods: Documentary evidence issued between January and 8 August 2020 was sought from the Google Scholar, PubMed, Scopus, and Web of Science databases. Searches of published and unpublished abstracts were also conducted from appropriate websites, government documents, organizational reports, newspaper commentaries, and reports issued by global, regional, and local centers of disease control and prevention. Results: The COVID-19 pandemic is responsible for a fourfold crisis in Africa: (1) a health crisis: the victimization of frontline healthcare workers and the looming caseload and death tolls with 1.039 million (12%) cases being confirmed and over 22,966 (2.4%) deaths as of 8 August 2020. The highest death toll was recorded in Southern Africa of 11,024 (48%) followed by North Africa with 6,989 (29.2%) deaths; (2) a social crisis: with the violation of human rights, the killing of citizens by security forces and increased crime. This, in turn, exacerbates social inequalities, the breakdown of households, instances of social unrest, and general impoverishment; (3) an economic crisis: manifested by a decline in GDP and mass unemployment; (4) a political crisis: implementation of measures that may not be appropriate for Africa, discrimination of refugees and immigrants, evacuation of citizens to their home countries, resulting in distrust of political leaders and postponement of national elections, and mounting cases of conflicts and unrest. Conclusion: Lockdown during the COVID-19 outbreak is a prevention mechanism in affluent countries, in contrast to developing regions such as Africa, where it is a race against death and starvation. Policymakers must apply novel and locally relevant prevention and management strategies to cope with this growing disaster.

Publication Type

Journal article.

<601>

Accession Number

20203600603

Author

Wang ZeJun; Zhang HuaJun; Lu Jia; Xu KangWei; Peng Cheng; Guo Jing; Gao XiaoXiao; Wan Xin; Wang WenHui; Shan Chao; Zhang SuCai; Wu Jie; Yang AnNa; Zhu Yan; Xiao Ao; Zhang Lei; Fu Lie; Si HaoRui; Cai Qian; Yang XingLou; You Lei; Zhou YanPing; Liu Jing; Pang DeQing; Jin WeiPing; Zhang XiaoYu; Meng ShengLi; Sun YunXia; Desselberger Ulrich; Wang JunZhi; Li XinGuo; Duan Kai; Li ChangGui; Xu Miao; Shi ZhengLi; Yuan ZhiMing; Yang XiaoMing; Shen Shuo

#### Title

Low toxicity and high immunogenicity of an inactivated vaccine candidate against COVID-19 in different animal models.

#### Source

Emerging Microbes and Infections; 2020. 9(2606-2618):2606-2618. 39 ref.

#### Publisher

Taylor & Francis

#### Location of Publisher

Abingdon

#### Country of Publication

UK

#### Abstract

The ongoing COVID-19 pandemic is causing huge impact on health, life, and global economy, which is characterized by rapid spreading of SARS-CoV-2, high number of confirmed cases and a fatality/case rate worldwide reported by WHO. The most effective intervention measure will be to develop safe and effective vaccines to protect the population from the disease and limit the spread of the virus. An inactivated, whole virus vaccine candidate of SARS-CoV-2 has been developed by Wuhan Institute of Biological Products and Wuhan Institute of Virology. The low toxicity, immunogenicity, and immune persistence were investigated in preclinical studies using seven different species of animals. The results showed that the vaccine candidate was well tolerated and stimulated high levels of specific IgG and neutralizing antibodies. Low or no toxicity in three species of animals was also demonstrated in preclinical study of the vaccine candidate. Biochemical analysis of structural proteins and purity analysis were performed. The inactivated, whole virion vaccine was characterized with safe double-inactivation, no use of DNases and high purity. Dosages, boosting times, adjuvants, and immunization schedules were shown to be important for stimulating a strong humoral immune response in animals tested. Preliminary observation in ongoing phase I and II clinical trials of the vaccine candidate in Wuzhi County, Henan Province, showed that the vaccine is well tolerant. The results were characterized by very low proportion and low degree of side effects, high levels of neutralizing antibodies, and seroconversion. These results consistent with the results obtained from preclinical data on the safety.

#### Publication Type

Journal article.

<602>

#### Accession Number

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20203600502

Author

Onosakponome, E. O.; Wogu, M. N.

Title

The role of sex in malaria-COVID19 coinfection and some associated factors in Rivers state, Nigeria.

Source

Journal of Parasitology Research; 2020. 2020(8829848). 13 ref.

Publisher

Hindawi

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives.** Data on the coinfection of malaria and COVID-19 is highly limited especially in Africa due to the novel nature of the pandemic COVID-19. Malaria and COVID-19 share striking similarities in their symptoms. A cross-sectional randomized study was conducted to investigate the role of sex in the coinfection of malaria and COVID-19 as well as some associated factors in Rivers State, Nigeria. **Methods.** Ethical approval was obtained from the Rivers State Health and Ethics Committee before the commencement of this study, and the study was conducted at the COVID-19 Treatment Center Medical Laboratory, Rivers State, Nigeria. Intravenous blood samples from three hundred randomly selected consenting study participants were examined for Plasmodium species using Giemsa microscopy, while pretested questionnaires were used to obtain data on sex, risk factors, and symptoms. All data generated were analyzed statistically using the Chi-square test with a  $P < 0.05$  value considered significant. **Results.** All study participants had Plasmodium species (100% prevalence) with varying parasite loads, and *P. falciparum* was the only species observed. Study participants (irrespective of sex) with low and high parasitaemia had the highest and least prevalence, respectively ( $P > 0.05$ ). Male study participants experienced more symptoms than females ( $P > 0.05$ ) except for sore throat which had an equal value among males and females. Travel history was the only risk factor that showed significant association with sex, and males had a higher value than females ( $P < 0.05$ ). **Conclusion.** Malaria and COVID-19 are major public health issues in Nigeria; more researches on these diseases especially in epidemiology, pathology, diagnosis, treatment, and vaccine production are vital.

Publication Type

Journal article.

<603>

Accession Number

20203600258

Author

Taypea, W.; Amado, J.

Title

Response of the emergency department of a tertiary hospital during the start of the COVID-19 pandemic in Peru. [Spanish]

Source

Anales de la Facultad de Medicina; 2020. 81(2):218-223. 28 ref.

Publisher

Universidad Nacional Mayor de San Marcos

Location of Publisher

Lima

Country of Publication

Peru

Abstract

New coronavirus disease was detected in Peru in March 2020, spreading rapidly, producing serious respiratory conditions and high mortality. In the emergency service, isolation measures must be implemented for patients with specific environments for suspected and confirmed cases (depending on severity). Define care flow charts based on objective and easily evaluable data. Guidelines should be established for conducting ancillary examinations and adopting treatment based on the best available evidence. Hygiene measures and personal protective equipment must be ensured to avoid contagion, as well as suspending visits and accompaniment of family members; but at the same time, an adequate flow of information (preferably virtual) must be ensured for family members and the staff themselves. Rapid adaptation of plans and resources (material and human) is necessary to respond to the growing demand for patients; Interdisciplinary participation is essential.

Publication Type

Journal article.

<604>

Accession Number

20203600239

Author

Mohammad Alshahrani; Ghaleb Elyamany; Qanita Sedick; Walid Ibrahim; Amal Mohamed; Mohamed Othman; Nour Al-Thibani; Omar Alsuhaibani; Mohamed Al-Amro; Ali Gharawi; Omar Al-Sharif; Yasser Elborai; Fahad Alabbas; Amal Binhassan; May Al-Moshary; Eman Al-Mussaead; Nawaf Alkhayat

Title

The impact of COVID-19 pandemic in children with cancer: a report from Saudi Arabia.

Source

Health Services Insights; 2020. 13(1178632920984161). 23 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

In January 2020, the WHO declared the novel coronavirus (2019-nCoV) outbreak as a public health emergency of international concern. Due to the rapid spread of 2019-nCoV, all countries started preventive and precautionary measures to prevent COVID-19 infection spread. These measures limited the population mobility and services provided, which subsequently impact of on children with cancer and cancer care delivery in the many health centers in Saudi Arabia. We did a cross-sectional study to assess the impact of this outbreak on children with cancer concerning all aspects of life including medical services provided, the specific precautions to prevent spread in cancer patients, mental, psychological effects, and its effect on the quality of life. We collected 204 responses during a survey that assessed the impact on the treatment of cancer children at a tertiary institution during the COVID-19 pandemic. The majority of patients were receiving ongoing chemotherapy for leukemia/lymphoma. The majority of these patients (60.5%) reported a delay in treatment received due to hospital cancellation of appointments due to the pandemic. Although the majority of patients in our cohort complained of delayed treatment, fortunately, none of the delays led to fatalities. In the context of global lockdowns and physical distancing to help flatten the COVID-19 curve, telemedicine has proved fundamental to keeping patients and their healthcare providers connected and safe. Children also faced multiple other difficulties such as psychosocial issues during the COVID-19 pandemic. Our long-term goals are to develop new programs that will enable children with cancer to emerge successfully during a pandemic.

Publication Type

Journal article.

<605>

Accession Number

20203600231

Author

Latifi, A.

Title

Reviewing the effects of miltefosine and suggesting it for the treatment of coronavirus disease (COVID-19).

Source

Infectious Diseases: Research and Treatment; 2020. 13(1178633720977488). 39 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Objective:** Miltefosine is an anti-cancer drug used to treat leishmaniasis and deadly opportunistic free-living amoeba and other deadly pathogenic microorganisms. Several studies have demonstrated its antiviral effect. In this study, we discuss the effectiveness of this drug on pathogenic microorganisms, and according to the functional system of the medicine, we present this drug as a therapeutic proposal to treat Coronavirus disease (COVID-19) **Methods:** A literature search was conducted in electronic databases, including Pubmed, Science Direct, Elsevier, and Google Scholar, and articles published from 2006 to 2020 (the last decade) were selected. The search keywords included Miltefosine, microorganism, pathogen, and treatment. **Results:** The studies indicated that Miltefosine had therapeutic effects on leishmaniasis and deadly opportunistic free-living amoeba and other deadly pathogenic microorganisms. Several studies have proven its antiviral effect. **Conclusion:** Owing to the beneficial effects of this drug on pathogenic and deadly microorganisms and antiviral effects, and due to the epidemic of Coronavirus and the lack of effective treatment and vaccine, this drug is recommended as one of the treatment options for this disease.

Publication Type

Journal article.

<606>

Accession Number

20203600000

Author

McLoughlin, G. M.; McCarthy, J. A.; McGuirt, J. T.; Singleton, C. R.; Dunn, C. G.; Gadhoke, P.

Title

Addressing food insecurity through a health equity lens: a case study of large urban school districts during the COVID-19 pandemic.

Source

Journal of Urban Health: Bulletin of the New York Academy of Medicine; 2020. 97(6):759-775. 67 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

Reduced access to school meals during public health emergencies can accelerate food insecurity and nutritional status, particularly for low-income children in urban areas. To prevent the exacerbation of health disparities, there is a need to understand the implementation of meal distribution among large urban school districts during emergencies and to what degree these strategies provide equitable meal access. Our case study of four large urban school districts during the COVID-19 pandemic aims to address these knowledge gaps. Guided by the Getting to Equity (GTE) framework, we conducted a mixed-methods study evaluating emergency meal distribution and strategy implementation in four large urban school districts (Chicago Public Schools, Houston Independent School District, Los Angeles Unified School District, and New York City Department of Education). We gathered data from school district websites on (1) meal service and delivery sites and (2) district documents, policies, communication, and resources. Using qualitative coding approaches, we identified unique and shared district strategies to address meal distribution and communications during the pandemic according to the four components of the GTE framework: increase healthy options, reduce deterrents, build on community capacity, and increase social and economic resources. We matched district census tract boundaries to demographic data from the 2018 American Community Survey and United States Department of Agriculture food desert data, and used geographic information systems (GIS) software to identify meal site locations relative to student population, areas of high poverty and high minority populations, and food deserts. We found that all districts developed strategies to optimize meal provision, which varied across case site. Strategies to increase healthy options included serving adults and other members of the general public, providing timely information on meal site locations, and promoting consumption of a balanced diet. The quantity and frequency of meals served varied, and the degree to which districts promoted high-quality nutrition was limited. Reducing deterrents related to using inclusive language and images and providing safety information on social distancing practices in multiple languages. Districts built community capacity through partnering with first responder, relief, and other community organizations. Increased social and economic resources were illustrated by providing technology assistance to families, childcare referrals for essential workers, and other wellness resources. Geospatial analysis suggests that service locations across cities varied to some degree by demographics and food environment, with potential gaps in reach. This study identifies strategies that have the potential to increase equitable access to nutrition assistance programs. Our findings can support (1) ongoing efforts to address child food insecurity during the pandemic and (2) future meal provision through programs like the Summer Food Service Program and Seamless Summer Option. Future research should further examine the rationale behind meal site placement and how site availability changed over time.

Publication Type

Journal article.

<607>

Accession Number

20203599727

Author

Chavez, E. T.; Leveau, C. S.; Huaroto, C. T.; Garcia, A. H.

Title

COVID-19: antiviral treatment in mild cases could be useful at this time. [Spanish]

Source

Anales de la Facultad de Medicina; 2020. 81(1):87-91. 39 ref.

Publisher

Universidad Nacional Mayor de San Marcos

Location of Publisher

Lima

Country of Publication

Peru

Abstract

COVID-19's lethality as well as its rapid spread are responsible for the current world crisis; therefore, from the beginning, drugs with antiviral action against this agent were sought. It is impossible, for now, to know which person in a mild state will develop a high viral load or have a predisposition to develop an extreme response from the immune system, but early treatment in mild cases would not only guarantee greater efficacy, but would avoid severe cases. Currently, there are no double blind, randomized clinical trials or meta-analyses available to make safe decisions; meanwhile, the pandemic is advancing in our country, generating pain and death. In this context, in Peru, scientific societies have expressed the need for the use of antiviral drugs, even with little evidence, based on the probability of success prior to treatment, for their in vitro effects and for their early clinical effects, such as: chloroquine, hydroxychloroquine, azithromycin, lopinavir, ritonavir. Thus, in the country since march 29, 2020, there is a technical standard from the Ministry of Health, which facilitates the use of these at the national level for moderate and severe cases. We believe that under a structured system, first-level care centers could treat mild cases of COVID-19. Our country, through strategies for the prevention and control of TB and ITS/HIV/AIDS, has experience in managing treatment programs at this level. The costs will be less than those required to strengthen the third level of care.

Publication Type

Journal article.

<608>

Accession Number

20203599690

Author

Wang LiXia; Yan, B.; Boasson, V.

Title

A national fight against COVID-19: lessons and experiences from China.

Source

Australian and New Zealand Journal of Public Health; 2020. 44(6):502-507. 35 ref.

Publisher

Wiley

Location of Publisher

Melbourne

Country of Publication

Australia

Abstract

**Objective:** This paper aims to review the public health measures and actions taken during the fight against COVID-19 in China, to generate a model for prevention and control public health emergency by summarising the lessons and experiences gained. **Methods:** This paper adopts a widely accepted qualitative research and coding method to form an analysis on word materials. **Results:** Although Chinese CDC didn't work effectively in the early stages on risk identification and warning, China was able to respond quickly and successfully to this medical emergency after the initial shock of the awareness of a novel epidemic with a swift implementation of national-scale health emergency management. **Conclusions:** The success in fighting against COVID-19 in China can be attributed to: (1) adaptable governance to changing situations; (2) culture of moral compliance with rules; (3) trusted collaboration between government and people; (4) an advanced technical framework ABCD+5G (A-Artificial intelligence; B-Block chain; C-Cloud computing; D-Big data). **Implications for public health:** This paper constructs a conceptual model for pandemic management based on the lessons and experiences of fighting COVID-19 in China. It provides insights for pandemic control and public emergency management in similar context.

Publication Type

Journal article.

<609>

Accession Number

20203599588

Author

Gaurav Pant; Alka; Deviram Garlapati; Ashish Gaur; Kaizar Hossain; Shoor Vir Singh; Ashish Kumar Gupta

Title

Air quality assessment among populous sites of major metropolitan cities in India during COVID-19 pandemic confinement.

Source

Environmental Science and Pollution Research; 2020. 27(35):44629-44636. 12 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

The present study aims to determine the impact of COVID-19 pandemic confinement on air quality among populous sites of four major metropolitan cities in India (Delhi, Mumbai, Kolkata, and Chennai) from January 1, 2020 to May 31, 2020 by analyzing particulate matter (PM2.5 and PM10), nitrogen dioxide (NO2), ammonia (NH3), sulfur dioxide (SO2), carbon monoxide (CO), and ozone levels. The most prominent pollutant concerning air quality index (AQI) was determined by Pearson's correlation analysis and unpaired Welch's two-sample t test was carried out to measure the statistically significant reduction in average AQI for all the four sites. AQI significantly plummeted by 44%, 59%, 59%, and 6% in ITO-Delhi, Worli-Mumbai, Jadavpur-Kolkata, and Manali Village-Chennai respectively. The findings conclude a significant improvement in air quality with respect to reduction of 49-73%, 17-63%, 30-74%, and 15-58% in the mean concentration of PM2.5, PM10, NH3, and SO2 respectively during the confinement for the studied locations. The p values for all of the four studied locations were found significantly less than the 5% level of significance for Welch's t test analysis. In addition, reduced AQI values were highly correlated with prominent pollutants (PM2.5 and PM10) during Pearson's correlation analysis. These positive results due to pandemic imprisonment might aid to alter the current policies and strategies of pollution control for a safe and sustainable environment.

Publication Type

Journal article.

<610>

Accession Number

20203599503

Author

Alola, A. A.; Olowu, F. B.

Title



The health scare of COVID-19 amidst pandemics and the immune-related pharmaceutical products spillovers in the USA.

Source

Environmental Science and Pollution Research; 2020. 27(36):45949-45956. 21 ref.

Publisher

Springer Berlin

Location of Publisher

Heidelberg

Country of Publication

Germany

Abstract

In view of the sector-wide effect of the nCOVID-19 pandemic in the USA and the probable effect on certain over-the-counter (OTC) pharmaceutical products, the current study examined potential inflation in the pharmaceutical industry arising from the pandemic-related uncertainty. In this case, the USA's producer price indexes vis-a-vis inflation of the immune-related pharmaceutical items: multivitamin, vitamins nutrients and hematinic (V-N-H), other vitamins (other-V), antidepressant, and antidiabetic were examined alongside the uncertainties arising from the world pandemic and economic policy. Thus, the (Diebold and Yilmaz in Int J Forecast 28(1): 57-66, 2012) result implied that the world pandemic uncertainty contributed a significantly huge shock to the examined pharmaceutical compounds, thus affirming the vulnerability of certain pharmaceuticals to pandemic-related uncertainty. The total spillover increased from 34.2% (with economic policy uncertainty) to 47.6% (when pandemic uncertainty is incorporated). In specific, there are negative net spillovers from the multivitamins, other vitamins, antidiabetic, and antidepressant especially due to high pandemic and economic policy uncertainties. However, the statistical evidence implied that higher uncertainty arising from the pandemic is responsible for the severity of shock received by the indicated pharmaceutical products as against economic policy uncertainty. Thus, a relevant policy inference is posited from the result of the study.

Publication Type

Journal article.

<611>

Accession Number

20203599431

Author

Alvarez, C. V.; Loaiza, D. P. B.; Zuluaga, J. A. H.

Title

Public health and bioethics, reflections on SARS-CoV-2 (COVID-19) in Colombia.

Source

Revista Cuidarte; 2020. 12(1). 7 ref.

Publisher

Universidad de Santander UDES

Location of Publisher

Bucaramanga

Country of Publication

Colombia

Publication Type

Correspondence.

<612>

Accession Number

20203599368

Author

Gao HuiJie; Li Xiao; Yu Yan; Liu Chao

Title

Exploration on introducing relevant knowledge of COVID-19 into online teaching of medical immunology.  
[Chinese]

Source

Chinese Journal of Immunology; 2020. 36(19):2343-2345. 8 ref.

Publisher

Editorial Board of Chinese Journal of Immunology

Location of Publisher

Changchun

Country of Publication

China

Abstract

Objective: The Global pandemic of novel coronavirus pneumonia (COVID-19) has brought great challenges to teaching work in higher medical colleges. During the epidemic, introducing relevant knowledge of the COVID-19 into Medical Immunology in online and offline teaching work, combined with the application of Medical Immunology theory and technology in epidemic prevention and control, increased students'

interest in learning Medical Immunology and deepened students' understanding of COVID-19, and finally achieved a win-win effect.

Publication Type

Journal article.

<613>

Accession Number

20203599298

Author

Sylaja, P. N.; Srivastava, M. V. P.; Sudhir Shah; Rohit Bhatia; Dheeraj Khurana; Arvind Sharma; Pandian, J. D.; Kiran Kalia; Deepaneeta Sarmah; Nair, S. S.; Yavagal, D. R.; Pallab Bhattacharya

Title

The SARS-CoV-2/COVID-19 pandemic and challenges in stroke care in India. (Annals reports.)

Source

Annals of the New York Academy of Sciences; 2020. 1473:3-10. 33 ref.

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

Stroke care in India has evolved rapidly in the last decade with a focus on stroke awareness, prevention, rapid triage, treatment, and rehabilitation. But acute stroke care and poststroke rehabilitation in the country have limitations owing to the economic constraints and poor access to health care. The SARS-CoV-2/COVID-19 pandemic has made stroke care even more challenging. We outline the unfavorable circumstances in stroke care induced by the pandemic; propose mitigating measures; crisis management; and provide a comparative evaluation of stroke care between India and the United States during the pandemic. There is a need for public health systems in both developed and developing countries to improve awareness, implement proper strategies of triage, acute treatment, well-defined rehabilitation plans, telemedicine services, and virtual check-ins.

Publication Type

Journal article.

<614>

Accession Number

20203599293

Author

Bilezikian, J. P.; Bikle, D.; Hewison, M.; Lazaretti-Castro, M.; Formenti, A. M.; Gupta, A.; Madhavan, M. V.; Nair, N.; Babalyan, V.; Hutchings, N.; Napoli, N.; Accili, D.; Binkley, N.; Landry, D. W.; Giustina, A.

Title

Mechanisms in endocrinology: vitamin D and COVID-19.

Source

European Journal of Endocrinology; 2020. 183(5):R133-R147. many ref.

Publisher

BioScientifica Ltd

Location of Publisher

Bristol

Country of Publication

UK

Abstract

The SARS-CoV-2 virus responsible for the COVID-19 pandemic has generated an explosion of interest both in the mechanisms of infection leading to dissemination and expression of this disease, and in potential risk factors that may have a mechanistic basis for disease propagation or control. Vitamin D has emerged as a factor that may be involved in these two areas. The focus of this article is to apply our current understanding of vitamin D as a facilitator of immunocompetence both with regard to innate and adaptive immunity and to consider how this may relate to COVID-19 disease. There are also intriguing potential links to vitamin D as a factor in the cytokine storm that portends some of the most serious consequences of SARS-CoV-2 infection, such as the acute respiratory distress syndrome. Moreover, cardiac and coagulopathic features of COVID-19 disease deserve attention as they may also be related to vitamin D. Finally, we review the current clinical data associating vitamin D with SARS-CoV-2 infection, a putative clinical link that at this time must still be considered hypothetical.

Publication Type

Journal article.

<615>

Accession Number

20203599171

Author

Her MinYoung

Title

How is COVID-19 affecting South Korea? What is our current strategy? (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(5):684-686. 6 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

The outbreak of coronavirus disease 2019 (COVID-19) caused by the virus SARS-CoV-2 is expanding globally. South Korea is one of the countries most affected by COVID-19 from the very early stages of this pandemic. Explosive outbreaks occurred across South Korea in the first two months, and efforts to control this new virus have involved everyone across the country. To curb the transmission of the virus, health-care professionals, committees, and governments have combined many approaches, such as extensive COVID-19 screening, effective patient triage, the transparent provision of information, and the use of information technology. This experience could provide some valuable ideas and lessons to others who are fighting against COVID-19.

Publication Type

Journal article.

<616>

Accession Number

20203599146

Author

Zhu YunEr; Fu KingWa; Grepin, K. A.; Liang Hai; Fung ChunHai [Fung, C. H. I.]

Title

Limited early warnings and public attention to coronavirus disease 2019 in China, January-February, 2020: a longitudinal cohort of randomly sampled Weibo users. (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(5):e24-e27. 9 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

**Objective:** Awareness and attentiveness have implications for the acceptance and adoption of disease prevention and control measures. Social media posts provide a record of the public's attention to an outbreak. To measure the attention of Chinese netizens to coronavirus disease 2019 (COVID-19), a pre-established nationally representative cohort of Weibo users was searched for COVID-19-related key words in their posts. **Methods:** COVID-19-related posts (N = 1101) were retrieved from a longitudinal cohort of 52 268 randomly sampled Weibo accounts (December 31, 2019-February 12, 2020). **Results:** Attention to COVID-19 was limited prior to China openly acknowledging human-to-human transmission on January 20. Following this date, attention quickly increased and has remained high over time. Particularly high levels of social media traffic appeared around when Wuhan was first placed in quarantine (January 23-24, 8-9% of the overall posts), when a scandal associated with the Red Cross Society of China occurred (February 1, 8%), and, following the death of Dr Li Wenliang (February 6-7, 11%), one of the whistleblowers who was reprimanded by the Chinese police in early January for discussing this outbreak online. **Conclusion:** Limited early warnings represent missed opportunities to engage citizens earlier in the outbreak. Governments should more proactively communicate early warnings to the public in a transparent manner.

Publication Type

Journal article.

<617>

Accession Number

20203599142

Author

Seddighi, H.

Title

Trust in humanitarian aid from the earthquake in 2017 to COVID-19 in Iran: a policy analysis. (Special Section: COVID-19.)

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(5):e7-e10. 22 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

The earthquake of November 2017, the great flood of April 2019, and the COVID-19 outbreak in 2020 are 3 major emergencies in Iran during the last 3 years. A common issue in all of these crises seems to be the issue of "trust." Official authorities, including the Iranian President, ministers, and the judiciary system, tried to gain people's trust by either changing policies or developing new ones. In August 2019, the new law on crisis management in Iran went into effect and the issue of public donation has been considered, too. Also, in their response to the COVID-19 outbreak, Iranian officials ordered all sectors to cooperate with the Ministry of Health and provide it with all necessary facilities. Therefore, it seems that new policies are still needed to overcome mistrust in Iran at times of emergency. Developing a policy on donation management was the first step, and there are several factors that could have contributed to the perception of the mistrust and failure in emergency missions. Mistrust can be the result of different causes, including but not limited to lack of knowledge on capabilities and efficiencies of humanitarian organizations, engagement of a wide range of organizations from different categories, extension of mistrust of an organization to other emergency organizations in the area or all of operation, lack of unity in emergency response, and poor public relations.

Publication Type

Journal article.

<618>

Accession Number

20203598934

Author

States, S.

Title

Epidemic/pandemic emergency planning for water utilities.

Source

Journal AWWA; 2020. 112(12):26-33. 7 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

The year 2020 will be remembered for the coronavirus (SARS-CoV-2) that spread across the globe and became a major pandemic. Daily life everywhere has been severely disrupted, and lacking clarity as to the final outcome of this public health emergency, it is important to recognize the tremendous challenges that water and wastewater utilities must overcome. In the United States, water and wastewater systems are designated as critical infrastructure, meaning that they are vital to public confidence and the nation's safety, prosperity, and wellbeing (Presidential Policy Directive/PPD-21 2013). Furthermore, drinking water and wastewater services are designated as essential community lifelines per the US National Response Framework (USDHS 2019), which means these services enable the continuous operation of critical government and business functions essential to human health, safety, and economic wellbeing.

Publication Type

Journal article.

<619>

Accession Number

20203598660

Author

Joachim, U. M.; Placide, K. M.; Jean-Pierre, M. M.; Marlene, M. M.

Title

Environmental and health assessment of slaughter areas at the time of COVID-19 located in the town of Matete city-province of Kinshasa (DR Congo). [French]

Source

Journal of Animal and Plant Sciences (JAPS); 2020. 46(2):8256-8270.

Publisher

Elewa Biosciences F.a.C.T. Ltd

Location of Publisher

Nairobi

Country of Publication

Kenya

Abstract

In an increasingly interconnected world, prevention against the risks of food-related diseases is the subject of debate. Food quality control is becoming a public health issue. Being of animal origin, Covid-19 which, as

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such is an emerging zoonosis, has aroused great scientific interest. The fundamental question that arises is to know whether in certain developing countries the chain which goes from the farmer-breeder, to the slaughterhouses as well as to the distribution chain is subject to strict marking. What could be the hygiene rules in slaughterhouses in some countries such as DR Congo? this proposes to assess, make an inventory of the slaughter areas of the Municipality of Matete and popularize the rules of health security because the meat slaughtered in here is exposed to microorganisms. They emerge that the slaughtering in the Municipality of Matete is characterized by major failures concerning mainly veterinary and medical control, hygiene (of the personnel, the place of slaughter and the equipment used), the fight against pests, the absence of blood collection system and pre-treatment of wastewater, the direct discharge of these effluents into the water environment, thus seriously affecting the environment.

#### Publication Type

Journal article.

<620>

#### Accession Number

20203598574

#### Author

Storopoli, J.; Silva Neto, W. L. B. da; Mesch, G. S.

#### Title

Confidence in social institutions, perceived vulnerability and the adoption of recommended protective behaviors in Brazil during the COVID-19 pandemic.

#### Source

Social Science & Medicine; 2020. 265. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The current worldwide COVID19 pandemic has required the rapid and drastic adoption of social distancing and protective measures as the leading method for reducing the spread of the disease and death. The purpose of this study is to investigate the factors associated with the adoption of such measures in a large sample of the Brazilian population. We relied on recreancy theory, which argues that confidence in the ability of social institutions and perceived vulnerability to the disease are central factors predicting the adoption of these behaviors. Our results, drawn from 7554 respondents, indicate that self-confidence in the ability to carry out these behaviors, confidence in the ability of social institutions such as the

government, hospitals, health workers and the media to cope with the pandemic crisis, and risk perceptions are associated with the adoption of preventive behaviors. Our results expand the reciprocity theory and show that beyond the main effects, the effect of perceived vulnerability depends on the values of self-confidence and confidence in social institutions. The theoretical implications of the findings are discussed.

#### Publication Type

Journal article.

<621>

#### Accession Number

20203598544

#### Author

Borgonovi, F.; Andrieu, E.

#### Title

Bowling together by bowling alone: social capital and COVID-19.

#### Source

Social Science & Medicine; 2020. 265.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Social capital describes the social bonds that exist within a community and comprises norms of reciprocity and trust as well as social relationships and social networks. We use data from counties in the United States to identify if community level responses to COVID-19 during the early phase of the pandemic (February 17- May 10) depended on levels of social capital. We find that individuals who lived in counties with high levels of social capital reduced mobility faster than individuals living in counties with low levels of social capital and that they especially reduced mobility directed at retail and recreational activities, i.e. non-essential activities with higher potential risk. Difference-in-difference results show that the adoption of shelter-in-place orders (SIPOs) in a county, an increase in the number of diagnosed COVID-19 cases and a rainy weather were all associated with a decline in mobility, but that effects were heterogeneous and depended on community level social capital. Effects were more pronounced in high social capital communities. Based on these findings, we map the level of vulnerability of communities in the United States to COVID-19: counties with a large share of the population suffering from pre-existing medical conditions and low levels

of community level social capital are especially susceptible to experiencing severe health outcomes because of COVID-19.

Publication Type

Journal article.

<622>

Accession Number

20203598490

Author

Popescu, S.

Title

Roadblocks to infection prevention efforts in health care: SARS-CoV-2/COVID-19 response.

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(4):538-540. 13 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

The outbreak of a novel coronavirus, SARS-CoV-2, is challenging international public health and health care efforts. As hospitals work to acquire enough personal protective equipment and brace for potential cases, the role of infection prevention efforts and programs has become increasingly important. Lessons from the 2003 SARS-CoV outbreak in Toronto and 2015 MERS-CoV outbreak in South Korea have unveiled the critical role that hospitals play in outbreaks, especially of novel coronaviruses. Their ability to amplify the spread of disease can rapidly fuel transmission of the disease, and often those failures in infection prevention and general hospital practices contribute to such events. While efforts to enhance infection prevention measures and hospital readiness are underway in the United States, it is important to understand why these programs were not able to maintain continued, sustainable levels of readiness. History has shown that infection prevention programs are primarily responsible for preparing hospitals and responding to biological events but face understaffing and focused efforts defined by administrators. The current US health care system, though, is built upon a series of priorities that often view biopreparedness as a costly endeavor. Awareness of these competing priorities and the challenges that infection prevention programs face when working to maintain biopreparedness is critical in adequately addressing this critical infrastructure in the face of an international outbreak.

Publication Type

Journal article.

<623>

Accession Number

20203598487

Author

Nakazawa, E.; Ino, H.; Akabayashi, A.

Title

Chronology of COVID-19 cases on the diamond princess cruise ship and ethical considerations: a report from Japan.

Source

Disaster Medicine and Public Health Preparedness; 2020. 14(4):506-513. 55 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

The Diamond Princess cruise ship has been anchored at the Yokohama port in Japan since February 3, 2020. A total of 691 cases of the coronavirus disease 2019 (COVID-19) infection had been confirmed as of February 23. The government initially assumed that the infection was not spreading aboard and therefore indicated that any persons who either tested negative for the virus or were asymptomatic should immediately disembark. However, on February 5, the government set a 14-day health observation period because of the severity of the infection. Passengers confirmed to be free from infection began disembarking on Day 15 (February 19) of the quarantine. The effectiveness and validity of infection control, justification for the timing of inspections, and even the nature of COVID-19 itself now are all in question. The ethical considerations related to cruise ship infection control include the reasonable justification for isolation, the psychological fragility and quality of life of the isolated passengers and crew members, the procedural justice inherent in a forced quarantine, and the optimization of control measures. The international coordination framework and the global ramifications of such outbreaks should be reevaluated by the international community. Denying a ship's entry based on local politics is incompatible with global justice. Events such as these require an international response and global regulations that seek to reduce disparities.

Publication Type

<624>

Accession Number

20203598387

Author

Khamis, F.; Al-Mahyijari, N.; Al-Lawati, F.; Badahdah, A. M.

Title

The mental health of female physicians and nurses in Oman during the COVID-19 pandemic.

Source

Oman Medical Journal; 2020. 35(6). 33 ref.

Publisher

Oman Medical Specialty Board

Location of Publisher

Al-Azaiba

Country of Publication

Oman

Abstract

**Objectives:** We sought to assess the impact of the COVID-19 pandemic on female doctors and nurses' mental health in Oman. **Methods:** We conducted a cross-sectional, web-based survey of 402 female doctors and nurses recruited from several health facilities in Oman. We used the Generalized Anxiety Disorder (GAD-7) scale, the Perceived Stress Scale (PSS-10), the WHO-5 Well-Being Index (WHO-5), and the Sleep Quality Scale to determine the prevalence rates of anxiety, stress, well-being, and sleep quality. **Results:** A total of 231 (57.5%) Omanis and 171 (42.5%) non-Omanis participated in this study. Of the total 402 participants, 28.4% were physicians and 71.6% were nurses. One in four (27.9%) participants reported caring for COVID-19 patients. One in four (27.9%) had moderate to severe anxiety. A higher proportion of Omanis (32.0%) had moderate to severe anxiety than non-Omanis (22.2%). Six in 10 (60.7%) scored at or above the mean on the PSS-10. Doctors and nurses who cared for COVID-19 patients reported higher levels of stress than those who did not. Almost half (45.3%) of the participants scored 50% or less on the well-being scale. A higher proportion of Omanis and those who cared for COVID-19 cases scored 50. Four in 10 (39.3%) had poor sleep quality; this was particularly prevalent among Omanis. A multiple regression analysis revealed that anxiety, stress, and well-being were significant predictors of poor sleep quality. **Conclusions:** The COVID-19 pandemic is having a significant effect on the mental health of health care workers in Oman. In this study, nurses, Omanis, and frontline health care workers were the most impacted by the global health crisis. Urgent psychological, social, and administrative interventions and support should be implemented to mitigate mental health risks in these groups.

Publication Type

<625>

Accession Number

20203598213

Author

Vivek-Ananth, R. P.; Abhijit Rana; Nithin Rajan; Biswal, H. S.; Areejit Samal

Title

In silico identification of potential natural product inhibitors of human proteases key to SARS-CoV-2 infection.

Source

Molecules; 2020. 25(17). 95 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Presently, there are no approved drugs or vaccines to treat COVID-19, which has spread to over 200 countries and at the time of writing was responsible for over 650,000 deaths worldwide. Recent studies have shown that two human proteases, TMPRSS2 and cathepsin L, play a key role in host cell entry of SARS-CoV-2. Importantly, inhibitors of these proteases were shown to block SARS-CoV-2 infection. Here, we perform virtual screening of 14,011 phytochemicals produced by Indian medicinal plants to identify natural product inhibitors of TMPRSS2 and cathepsin L. AutoDock Vina was used to perform molecular docking of phytochemicals against TMPRSS2 and cathepsin L. Potential phytochemical inhibitors were filtered by comparing their docked binding energies with those of known inhibitors of TMPRSS2 and cathepsin L. Further, the ligand binding site residues and non-covalent interactions between protein and ligand were used as an additional filter to identify phytochemical inhibitors that either bind to or form interactions with residues important for the specificity of the target proteases. This led to the identification of 96 inhibitors of TMPRSS2 and 9 inhibitors of cathepsin L among phytochemicals of Indian medicinal plants. Further, we have performed molecular dynamics (MD) simulations to analyze the stability of the protein-ligand complexes for the three top inhibitors of TMPRSS2 namely, qingdainone, edgeworoside C and adlumidine, and of cathepsin L namely, ararobinol, (+)-oxoturkiyenine and 3a,17a-cinchophylline. Interestingly, several herbal sources of identified phytochemical inhibitors have antiviral or anti-inflammatory use in traditional medicine. Further in vitro and in vivo testing is needed before clinical trials of the promising phytochemical inhibitors identified here.

Publication Type

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<626>

Accession Number

20203598048

Author

Elaswad, A.; Fawzy, M.; Basiouni, S.; Shehata, A. A.

Title

Mutational spectra of SARS-CoV-2 isolated from animals.

Source

PeerJ; 2020. 8(10609). many ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Coronaviruses are ubiquitous and infect a wide spectrum of animals and humans. The newly emerged severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has become a worldwide pandemic. To address the role that animals may play in the evolution of SARS-CoV-2, the full genome sequences of SARS-CoV-2 isolated from animals were compared with SARS-CoV-2 human isolates from the same clade and geographic region. Phylogenetic analysis of SARS-CoV-2 isolated from the cat, dog, mink, mouse, and tiger revealed a close relationship with SARS-CoV-2 human isolates from the same clade and geographic region with sequence identities of 99.94-99.99%. The deduced amino acid sequence of spike (S) protein revealed the presence of a furin cleavage site (682RRAR-685), which did not differ among all SARS-CoV-2 isolates from animals and humans. SARS-CoV-2 isolates from minks exhibited two amino acid substitutions (G261D, A262S) in the N-terminal domain of S protein and four (L452M, Y453F, F486L, N501T) in the receptor-binding motif (RBM). In the mouse, the S protein had two amino acid substitutions, one in the RBM (Q498H) and the other (N969S) in the heptad repeat 1. SARS-CoV-2 isolated from minks furtherly exhibited three unique amino acid substitutions in the nucleocapsid (N)protein. In the cat, two unique amino acid substitutions were discovered in the N (T247I) and matrix (T175M) proteins. Additionally, SARS-CoV-2 isolated from minks possessed sixteen, four, and two unique amino acid substitutions in the open reading frame 1ab (ORF1ab), ORF3a, and ORF6, respectively. Dog and cat SARS-CoV-2 isolates showed one and seven unique amino acid substitutions in ORF1ab, respectively. Further studies may be necessary to determine the pathogenic significance of these amino acid substitutions to understand the molecular epidemiology and evolution of SARS-CoV-2.

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<627>

Accession Number

20203598014

Author

Elshaarawy, O.; Lashen, S. A.; Makhlof, N. A.; Abdeltawab, D.; Zaghloul, M. S.; Ahmed, R. M.; Fathy, H.; Afifi, S.; Abdel-Gawad, M.; Abdelsameea, E.; Abd-Elsalam, S.; Mohamed, S. Y.; Tag-Adeen, M.; Tharwat, M.; Alzamzamy, A.; Bekhit, A. N.; Eid, A. M.; Awad, A.; Aamr, M.; El-Dayem, W. A. A.; Wifi, M. N.; Alborai, M.

Title

Barriers for resuming endoscopy service in the context of COVID-19 pandemic: a multicenter survey from Egypt.

Source

World Journal of Gastroenterology; 2020. 26(43):6880-6890. 25 ref.

Publisher

Beijing Baishideng BioMed Scientific Co., Ltd.

Location of Publisher

Beijing

Country of Publication

China

Abstract

**BACKGROUND:** The current coronavirus disease 2019 (COVID-19) pandemic has affected routine endoscopy service across the gastroenterology community. This led to the suspension of service provision for elective cases. **AIM:** To assess the potential barriers for resuming the endoscopy service in Egypt. **METHODS:** A national online survey, four domains, was disseminated over a period of 4 wk in August 2020. The primary outcome of the survey was to determine the impact of the COVID-19 pandemic on the endoscopy service and barriers to the full resumption of a disabled center(s). **RESULTS:** A hundred and thirteen Egyptian endoscopy centers participated in the survey. The waiting list was increased by 50% in 44.9% of areas with clusters of COVID-19 cases (n = 49) and in 35.5% of areas with sporadic cases (n = 62). Thirty nine (34.8%) centers suffered from staff shortage, which was considered a barrier against service resumption by 86.4% of centers in per-protocol analysis. In multivariate analysis, the burden of cases in the unit locality, staff shortage/recovery and the availability of separate designated rooms for COVID-19 cases could markedly affect the resumption of endoscopy practice (P = 0.029, < 0.001 and 0.02, respectively) and Odd's ratio (0.15, 1.8 and 0.16, respectively). **CONCLUSION:** The COVID-19 pandemic has led to restrictions in endoscopic volumes. The staff shortage/recovery and the availability of COVID-19 designed rooms are the most important barriers against recovery. Increasing working hours and dividing endoscopy staff into teams may help to overcome the current situation.

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<628>

Accession Number

20203597824

Author

Brutto, O. H. del; Costa, A. F.; Mera, R. M.; Recalde, B. Y.; Bustos, J. A.; Garcia, H. H.

Title

Late incidence of SARS-CoV-2 infection in a highly-endemic remote rural village. A prospective population-based cohort study.

Source

Pathogens and Global Health; 2020. 114(8):457-462. 32 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Data on SARS-CoV-2 transmission in rural communities is scarce or non-existent. A previous cross-sectional study in middle-aged and older adults enrolled in the Atahualpa Project Cohort demonstrated that 45% of participants had SARS-CoV-2 antibodies, 77% of whom were symptomatic. Here, we assessed the incidence of SARS-CoV-2 infection in the above-mentioned rural population. One month after baseline testing, 362 of 370 initially seronegative individuals were re-tested to assess incidence of seroconversion and associated risk factors. Twenty-eight of them (7.7%) became seropositive. The overall incidence rate ratio was 7.4 per 100 person months of potential virus exposure (95% C.I.: 4.7-10.2). Six seroconverted individuals (21.4%) developed SARS-CoV-2-related symptomatology. The only covariate significantly associated with seroconversion was the use of an open latrine. Predictive margins showed that these individuals were 2.5 times more likely to be infected (95% C.I.: 1.03-6.1) than those using a flushing toilet. Therefore, along one month, approximately 8% of seronegative individuals became infected, even after almost half of the population was already seropositive. Nevertheless, a smaller proportion of incident cases were symptomatic (21% versus 77% of the earlier cases), and no deaths were recorded. Whether this decreased clinical expression resulted from a lower viral load in new infections cannot be determined. Increased seroconversion in individuals using latrines is consistent with a contributory role of fecal-oral transmission, although we cannot rule out the possibility that latrines are acting as a proxy for poverty or other unknown interacting variables.

Publication Type

Journal article.

<629>

Accession Number

20203597793

Author

Havranek, K. E.; Jimenez, A. R.; Acciani, M. D.; Mendoza, M. F. L.; Ballista, J. M. R.; Diaz, D. A.; Brindley, M. A.

Title

SARS-CoV-2 spike alterations enhance pseudoparticle titers and replication-competent VSV-SARS-CoV-2 virus.

Source

Viruses; 2020. 12(12). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the causative agent of the most recent global pandemic that has caused more than a million deaths around the world. The spike glycoprotein (S) drives the entry and fusion of this virus and is the main determinant of cell tropism. To explore S requirements for entry under BSL2 conditions, S has been pseudotyped onto vesicular stomatitis virus (VSV) or retroviral particles with varied success. Several alterations to S were demonstrated to improve pseudoparticle titers, but they have not been systematically compared. In this study, we produced pseudotyped VSV particles with multiple modifications to S, including truncation, mutation, and tagging strategies. The main objective of this study was to determine which modifications of the S protein optimize cell surface expression, incorporation into pseudotyped particles, and pseudoparticle entry. Removal of the last 19 residues of the cytoplasmic tail produced a hyper-fusogenic S, while removal of 21 residues increased S surface production and VSV incorporation. Additionally, we engineered a replication-competent VSV (rVSV) virus to produce the S-D614G variant with a truncated cytoplasmic tail. While the particles can be used to assess S entry requirements, the rVSVG/SMet1D614G21 virus has a poor specific infectivity (particle to infectious titer ratio).

Publication Type

Journal article.

<630>

Accession Number

20203597768

Author

Tampere, M.; Pettke, A.; Salata, C.; Wallner, O.; Koolmeister, T.; Cazares-Korner, A.; Visnes, T.; Hesselman, M. C.; Kunold, E.; Wiita, E.; Kalderen, C.; Lightowler, M.; Jemth, A. S.; Lehtio, J.; Rosenquist, A.; Warpman-Berglund, U.; Helleday, T.; Mirazimi, A.; Jafari, R.; Puumalainen, M. R.

Title

Novel broad-spectrum antiviral inhibitors targeting host factors essential for replication of pathogenic RNA viruses.

Source

Viruses; 2020. 12(12). 56 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Recent RNA virus outbreaks such as Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and Ebola virus (EBOV) have caused worldwide health emergencies highlighting the urgent need for new antiviral strategies. Targeting host cell pathways supporting viral replication is an attractive approach for development of antiviral compounds, especially with new, unexplored viruses where knowledge of virus biology is limited. Here, we present a strategy to identify host-targeted small molecule inhibitors using an image-based phenotypic antiviral screening assay followed by extensive target identification efforts revealing altered cellular pathways upon antiviral compound treatment. The newly discovered antiviral compounds showed broad-range antiviral activity against pathogenic RNA viruses such as SARS-CoV-2, EBOV and Crimean-Congo hemorrhagic fever virus (CCHFV). Target identification of the antiviral compounds by thermal protein profiling revealed major effects on proteostasis pathways and disturbance in interactions between cellular HSP70 complex and viral proteins, illustrating the supportive role of HSP70 on many RNA viruses across virus families. Collectively, this strategy identifies new small molecule inhibitors with broad antiviral activity against pathogenic RNA viruses, but also uncovers novel virus biology urgently needed for design of new antiviral therapies.

Publication Type

Journal article.

<631>

Accession Number

20203597745

Author

Hahn, F.; Wangen, C.; Hage, S.; Peter, A. S.; Dobler, G.; Hurst, B.; Julander, J.; Fuchs, J.; Ruzsics, Z.; Uberla, K.; Jack, H. M.; Ptak, R.; Muehler, A.; Groppe, M.; Vitt, D.; Peelen, E.; Kohlhof, H.; Marschall, M.

Title

IMU-838, a developmental DHODH inhibitor in phase II for autoimmune disease, shows anti-SARS-CoV-2 and broad-spectrum antiviral efficacy in vitro.

Source

Viruses; 2020. 12(12). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The ongoing pandemic spread of the severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2) demands skillful strategies for novel drug development, drug repurposing and cotreatments, in particular focusing on existing candidates of host-directed antivirals (HDAs). The developmental drug IMU-838, currently being investigated in a phase 2b trial in patients suffering from autoimmune diseases, represents an inhibitor of human dihydroorotate dehydrogenase (DHODH) with a recently proven antiviral activity in vitro and in vivo. Here, we established an analysis system for assessing the antiviral potency of IMU-838 and DHODH-directed back-up drugs in cultured cell-based infection models. By the use of SARS-CoV-2-specific immunofluorescence, Western blot, in-cell ELISA, viral yield reduction and RT-qPCR methods, we demonstrated the following: (i) IMU-838 and back-ups show anti-SARS-CoV-2 activity at several levels of viral replication, i.e., protein production, double-strand RNA synthesis, and release of infectious virus; (ii) antiviral efficacy in Vero cells was demonstrated in a micromolar range (IMU-838 half-maximal effective concentration, EC<sub>50</sub>, of 7.6 ± 5.8 µM); (iii) anti-SARS-CoV-2 activity was distinct from cytotoxic effects (half-cytotoxic concentration, CC<sub>50</sub>, >100 µM); (iv) the drug in vitro potency was confirmed using several Vero lineages and human cells; (v) combination with remdesivir showed enhanced anti-SARS-CoV-2 activity; (vi) vidofludimus, the active determinant of IMU-838, exerted a broad-spectrum activity against a selection of major human pathogenic viruses. These findings strongly suggest that developmental DHODH inhibitors represent promising candidates for use as anti-SARS-CoV-2 therapeutics.

Publication Type

Journal article.

<632>

Accession Number

20203597714

Author

Butt, A. A.; Azad, A. M.; Kartha, A. B.; Masoodi, N. A.; Bertollini, R.; Abou-Samra, A. B.

Title

Volume and acuity of emergency department visits prior to and after COVID-19.

Source

Journal of Emergency Medicine; 2020. 59(5):730-734. 5 ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Background: There are scant data regarding the change in volume and acuity of patients presenting to emergency departments (EDs) after Coronavirus Disease 2019 (COVID-19), compared with the pre-COVID-19 era. Background: To determine ED volumes and triage acuity prior to and after COVID-19. Methods: We determined the volume of patients presenting to four large EDs affiliated with general, cardiac, cancer, and obstetrics hospitals, and the acuity of presenting illness (using the Canadian Triage Acuity Scale [CTAS]) for March and April 2020 and compared them with the same months in 2019 and January 2020. Together, these facilities see over 80% of the ED visits in Qatar. The first COVID-19 patient in Qatar was diagnosed on February 29, 2020. Results: A total of 192,157 ED visits were recorded during the study period. There was a 20-43% overall drop in number of ED visits, with significant variability across hospitals. The Heart Hospital experienced the sharpest decline (33-89%), and the National Center for Cancer Care and Research experienced the least decline in volumes. The decline was observed across all CTAS levels, with the largest decline observed in individuals presenting with CTAS 1 and 2 (26-69% decline month by month). No increase in overall number of deaths or crude mortality rate was observed in the COVID-19 era, according to national statistics. Conclusions: Sharp declines in ED visits and the triage acuity seen in both general and specialty hospitals raise the concern that severely ill patients may not be seeking timely care, and a surge may be expected once current restrictions on movement are lifted.

Publication Type

Journal article.

<633>

Accession Number

20203597581

Author

Correa-Salazar, C.; Amon, J. J.

Title

Cross-border COVID-19 spread amidst malaria re-emergence in Venezuela: a human rights analysis.

Source

Globalization and Health; 2020. 16(118). 68 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since 2016 Venezuela has seen a collapse in its economy and public health infrastructure resulting in a humanitarian crisis and massive outward migration. With the emergence of the novel coronavirus SARS-CoV-2 at the end of 2019, the public health emergency within its borders and in neighboring countries has become more severe and as increasing numbers of Venezuelans migrants return home or get stuck along migratory routes, new risks are emerging in the region. Results: Despite clear state obligations to respect, protect and fulfil the rights to health and related economic, social, civil and political rights of its population, in Venezuela, co-occurring malaria and COVID-19 epidemics are propelled by a lack of public investment in health, weak governance, and violations of human rights, especially for certain underserved populations like indigenous groups. COVID-19 has put increased pressure on Venezuelan and regional actors and healthcare systems, as well as international public health agencies, to deal with a domestic and regional public health emergency. Conclusions: International aid and cooperation for Venezuela to deal with the re-emergence of malaria and the COVID-19 spread, including lifting US-enforced economic sanctions that limit Venezuela's capacity to deal with this crisis, is critical to protecting rights and health in the country and region.

Publication Type

Journal article.

<634>

Accession Number

20203597208

Author

Chee, M. J.; Ly, N. K. K.; Anisman, H.; Matheson, K.

Title

Piece of cake: coping with COVID-19.

Source

Nutrients; 2020. 12(12). 71 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To limit the spread of coronavirus disease 2019 (COVID-19), many individuals were instructed to stay at home, and teleworking became commonplace. Meanwhile, many others were laid off or worked reduced hours, and some front line workers were required to work longer hours. Concurrently, a surge in reports of "pandemic baking" suggested a cascade effect on eating behaviors, which may be an inadvertent strategy to cope with stress. We conducted an online survey of people living in Canada or the United States (N = 680) to assess how employment change may have been experienced as stressful and linked to a shift in food choices. Regression models suggested that reduced hours and being laid off were associated with greater stress appraisals, avoidant- and emotion-focused coping responses, and negative affect. In turn, negative affect was associated with eating to cope and unhealthy snack choices, like salty or sweet treats. Our study emphasizes that under stressful conditions, such as those experienced during the COVID-19 pandemic, some coping strategies may contribute to the greater vulnerability to downstream effects, particularly those relating to eating choices and nutritional balances.

Publication Type

Journal article.

<635>

Accession Number

20203597204

Author

Ling, S. F.; Broad, E.; Murphy, R.; Pappachan, J. M.; Pardesi-Newton, S.; Kong MarieFrance; Jude, E. B.

Title

High-dose cholecalciferol booster therapy is associated with a reduced risk of mortality in patients with covid-19: a cross-sectional multi-centre observational study.

Source

Nutrients; 2020. 12(12). 29 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The worldwide pandemic of 2019 novel coronavirus disease (COVID-19) has posed the most substantial and severe public health issue for several generations, and therapeutic options have not yet been optimized. Vitamin D (in its parent form, cholecalciferol) has been proposed in the pharmacological management of COVID-19 by various sources. We aimed to determine whether COVID-19 mortality was affected by serum 25-hydroxyvitamin D (25(OH)D) levels, vitamin D status, or cholecalciferol therapy, and to elucidate any other predictors of COVID-19 mortality. Patients hospitalized with COVID-19 were opportunistically recruited from three UK hospitals, and their data were collected retrospectively. Logistic regression was used to determine any relationships between COVID-19 mortality and potential predictors, including 25(OH)D levels and cholecalciferol booster therapy. A total of 986 participants with COVID-19 were studied, of whom 151 (16.0%) received cholecalciferol booster therapy. In the primary cohort of 444 patients, cholecalciferol booster therapy was associated with a reduced risk of COVID-19 mortality, following adjustment for potential confounders (ORadj 0.13, 95% CI 0.05-0.35,  $p < 0.001$ ). This finding was replicated in a validation cohort of 541 patients (ORadj 0.38, 95% CI 0.17-0.84,  $p = 0.018$ ). In this observational study, treatment with cholecalciferol booster therapy, regardless of baseline serum 25(OH)D levels, appears to be associated with a reduced risk of mortality in acute in-patients admitted with COVID-19. Further work with large population studies needs to be carried out to determine adequate serum 25(OH)D levels, as well as multi-dose clinical trials of cholecalciferol therapy to assess maximum efficacy.

Publication Type

Journal article.

<636>

Accession Number

20203596859

Author



Tell, J. G.; Coller, B. A. G.; Dubey, S. A.; Jenal, U.; Lapps, W.; Wang LiMan; Wolf, J.

Title

Environmental risk assessment for rVSVG-ZEBOV-GP, a genetically modified live vaccine for Ebola virus disease.

Source

Vaccines; 2020. 8(4). 94 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

rVSVG-ZEBOV-GP is a live, attenuated, recombinant vesicular stomatitis virus (rVSV)-based vaccine for the prevention of Ebola virus disease caused by Zaire ebolavirus. As a replication-competent genetically modified organism, rVSVG-ZEBOV-GP underwent various environmental evaluations prior to approval, the most in-depth being the environmental risk assessment (ERA) required by the European Medicines Agency. This ERA, as well as the underlying methodology used to arrive at a sound conclusion about the environmental risks of rVSVG-ZEBOV-GP, are described in this review. Clinical data from vaccinated adults demonstrated only infrequent, low-level shedding and transient, low-level viremia, indicating a low person-to-person infection risk. Animal data suggest that it is highly unlikely that vaccinated individuals would infect animals with recombinant virus vaccine or that rVSVG-ZEBOV-GP would spread within animal populations. Preclinical studies in various hematophagous insect vectors showed that these species were unable to transmit rVSVG-ZEBOV-GP. Pathogenicity risk in humans and animals was found to be low, based on clinical and preclinical data. The overall risk for non-vaccinated individuals and the environment is thus negligible and can be minimized further through defined mitigation strategies. This ERA and the experience gained are relevant to developing other rVSV-based vaccines, including candidates under investigation for prevention of COVID-19.

Publication Type

Journal article.

<637>

Accession Number

20203596821

Author

Seo SangHeui; Jang Yunyueng

Title

Cold-adapted live attenuated SARS-CoV-2 vaccine completely protects human ACE2 transgenic mice from SARS-CoV-2 infection.

Source

Vaccines; 2020. 8(4). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

A safe and effective vaccine that can provide herd immunity against severe acute respiratory syndrome coronavirus (SARS-CoV-2) is urgently needed to stop the spread of this virus among humans. Many human viral vaccines are live, attenuated forms of viruses that elicit humoral and cellular immunity. Here, we describe a cold-adapted live-attenuated vaccine (SARS-CoV-2/human/Korea/CNUHV03-CA22 degrees C/2020) developed by gradually adapting the growth of SARS-CoV-2 from 37 degrees C to 22 degrees C in Vero cells. This vaccine can be potentially administered to humans as a nasal spray. Its single dose strongly induced neutralising antibodies (titre > 640), cellular immunity, and mucosal IgA antibodies in intranasally immunised K18-hACE2 mice, which are very susceptible to SARS-CoV-2 and SARS-CoV infections. The one-dose vaccinated mice were completely protected from SARS-CoV-2 infection and did not show body weight loss, death, or the presence of virus in tissues, such as the nasal turbinates, brain, lungs, and kidneys. These results demonstrate that the cold-adapted live attenuated SARS-CoV-2 vaccine we have developed may be a candidate SARS-CoV-2 vaccine for humans.

Publication Type

Journal article.

<638>

Accession Number

20203596808

Author

Costantini, C.; Veerdonk, F. L. van de; Romani, L.

Title

COVID-19-associated pulmonary aspergillosis: the other side of the coin.

Source

Vaccines; 2020. 8(4). 78 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The immune response to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a critical factor in the clinical presentation of COVID-19, which may range from asymptomatic to a fatal, multi-organ disease. A dysregulated immune response not only compromises the ability of the host to resolve the viral infection, but may also predispose the individual to secondary bacterial and fungal infections, a risk to which the current therapeutic immunomodulatory approaches significantly contribute. Among the secondary infections that may occur in COVID-19 patients, coronavirus-associated pulmonary aspergillosis (CAPA) is emerging as a potential cause of morbidity and mortality, although many aspects of the disease still remain unresolved. With this opinion, we present the current view of CAPA and discuss how the same mechanisms that underlie the dysregulated immune response in COVID-19 increase susceptibility to *Aspergillus* infection. Likewise, resorting to endogenous pathways of immunomodulation may not only restore immune homeostasis in COVID-19 patients, but also reduce the risk for aspergillosis. Therefore, CAPA represents the other side of the coin in COVID-19 and our advances in the understanding and treatment of the immune response in COVID-19 should represent the framework for the study of CAPA.

Publication Type

Journal article.

<639>

Accession Number

20203596669

Author

Zahran, E. M.; Albohy, A.; Khalil, A.; Ibrahim, A. H.; Ahmed, H. A.; El-Hossary, E. M.; Bringmann, G.; Abdelmohsen, U. R.

Title

Bioactivity potential of marine natural products from scleractinia-associated microbes and in silico anti-SARS-CoV-2 evaluation.

Source

Marine Drugs; 2020. 18(12). 78 ref.

Publisher

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MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Marine organisms and their associated microbes are rich in diverse chemical leads. With the development of marine biotechnology, a considerable number of research activities are focused on marine bacteria and fungi-derived bioactive compounds. Marine bacteria and fungi are ranked on the top of the hierarchy of all organisms, as they are responsible for producing a wide range of bioactive secondary metabolites with possible pharmaceutical applications. Thus, they have the potential to provide future drugs against challenging diseases, such as cancer, a range of viral diseases, malaria, and inflammation. This review aims at describing the literature on secondary metabolites that have been obtained from Scleractinian-associated organisms including bacteria, fungi, and zooxanthellae, with full coverage of the period from 1982 to 2020, as well as illustrating their biological activities and structure activity relationship (SAR). Moreover, all these compounds were filtered based on ADME analysis to determine their physicochemical properties, and 15 compounds were selected. The selected compounds were virtually investigated for potential inhibition for SARS-CoV-2 targets using molecular docking studies. Promising potential results against SARS-CoV-2 RNA dependent RNA polymerase (RdRp) and methyltransferase (nsp16) are presented.

Publication Type

Journal article.

<640>

Accession Number

20203596393

Author

Bolanos-Almeida, C. E.; Espitia Segura, O. M.

Title

Clinical and epidemiologic analysis of COVID-19 children cases in Colombia PEDIACOVID.

Source

Pediatric Infectious Disease Journal; 2021. 40(1):e7-e11.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

## Country of Publication

USA

## Abstract

**Objective:** The COVID pandemic has affected Colombia with a high number of cases and deceases; however, no studies have been published regarding pediatric population. An epidemiologic analysis of the nationwide COVID register, therefore, is necessary to outline and describe the impact in such population. **Methods:** A retrospective analysis was made of the characteristics of a cohort of 5062 patients <18 years of age, until June 16, 2020, reported at the National Institute of Health-INS (<https://www.ins.gov.co/News./Pages/Coronavirus.aspx>), through the national public access database, with all subjects confirmed with COVID-19 or severe acute respiratory syndrome-CoV-2. **Results:** Reviewed on June 16, 2020, a total of 54,971 confirmed cases were reported nationwide for COVID-19, of which 5062 (9.2%) are cases in patients under 18 years of age. There was a statistically significant difference between groups; age was statistically significantly higher in the asymptomatic, compared with: deceased, severe and moderate cases; moreover, age was statistically significantly higher in the mild, compared with: deceased, severe and moderate. Statistically significant difference determined with one-way ANOVA was found between groups ( $F = 16.08$ ,  $P < 0.001$ ). Post hoc analysis reveals significant differences between groups, the age of patients at home (9.39 years) and those recovered (9.3 years) being significantly higher than those in intensive care unit (4.9 years), in hospital (6.1 years), or than the deceased (2.9 years). **Conclusion:** The results of this study show that, at the nationwide level, patients in more severe states (deceased, severe and moderate), are significantly younger than those in the milder state (asymptomatic and mild).

## Publication Type

Journal article.

<641>

## Accession Number

20203596303

## Author

Li Jia; Yuan Yuan; He Xue; Zhang Wei; Li Xue; Zhang YuHua; Li ShaoXiang; Guan ChunYan; Gao ZiFen; Dong GeHong

## Title

Meta-analysis investigating the relationship between clinical features, outcomes, and severity of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pneumonia.

## Source

AJIC - American Journal of Infection Control; 2021. 49(1):82-89. 24 ref.

## Publisher

Elsevier Inc.

## Location of Publisher

St. Louis

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Country of Publication

USA

Abstract

**Objective:** We aimed to investigate the relationship between clinical characteristics, outcomes and the severity of severe acute respiratory syndrome coronavirus 2 pneumonia. **Methods:** We performed a systematic review and meta-analysis using PubMed, Embase, and Cochrane Library databases to assess the clinical characteristics and outcomes of confirmed COVID-19 cases and compared severe (ICU) and nonsevere (non-ICU) groups. **Results:** We included 12 cohort studies including 2,445 patients with COVID-19. Compared with nonsevere (non-ICU) patients, severe (ICU) disease was associated with a smoking history ( $P=.003$ ) and comorbidities including chronic obstructive pulmonary disease ( $OR=5.08, P < .001$ ), diabetes ( $OR=3.17, P < .001$ ), hypertension ( $OR=2.40, P < .001$ ), coronary heart disease ( $OR=2.66, P < .001$ ), cerebrovascular diseases ( $OR=2.68, P=.008$ ), and malignancy ( $OR=2.21, P=.040$ ). We found significant differences between the 2 groups for fever, dyspnea, decreased lymphocyte and platelet counts, and increased leukocyte count, C-creative protein, procalcitonin, lactose dehydrogenase, aspartate aminotransferase, alanine aminotransferase, creatinine kinase, and creatinine levels ( $P < .05$ ). Significant differences were also observed for multiple treatments ( $P < .05$ ). Patients in the severe (ICU) group were more likely to have complications and had a much higher mortality rate and lower discharge rate than those with nonsevere (non-ICU) disease ( $P < .05$ ). **Conclusions:** Investigation of clinical characteristics and outcomes of severe cases of COVID-19 will contribute to early prediction, accurate diagnosis, and treatment to improve the prognosis of patients with severe illness.

Publication Type

Journal article.

<642>

Accession Number

20203595939

Author

Kashour, Z.; Muhammad Riaz; Garbati, M. A.; Oweida AlDosary; Haytham Tlayjeh; Gerberi, D.; Murad, M. H.; Sohail, M. R.; Tarek Kashour; Tleyjeh, I. M.

Title

Efficacy of chloroquine or hydroxychloroquine in COVID-19 patients: a systematic review and meta-analysis.

Source

Journal of Antimicrobial Chemotherapy; 2021. 76(1):30-42. 74 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

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Country of Publication

UK

Abstract

Objectives: Clinical studies of chloroquine (CQ) and hydroxychloroquine (HCQ) in COVID-19 disease reported conflicting results. We sought to systematically evaluate the effect of CQ and HCQ with or without azithromycin on outcomes of COVID-19 patients. Methods: We searched multiple databases, preprints and grey literature up to 17 July 2020. We pooled only adjusted-effect estimates of mortality using a random-effect model. We summarized the effect of CQ or HCQ on viral clearance, ICU admission/mechanical ventilation and hospitalization. Results: Seven randomized clinical trials (RCTs) and 14 cohort studies were included (20 979 patients). Thirteen studies (1 RCT and 12 cohort studies) with 15 938 hospitalized patients examined the effect of HCQ on short-term mortality. The pooled adjusted OR was 1.05 (95% CI 0.96-1.15, I<sup>2</sup> = 0%). Six cohort studies examined the effect of the HCQ+azithromycin combination with a pooled adjusted OR of 1.32 (95% CI 1.00-1.75, I<sup>2</sup> = 68.1%). Two cohort studies and four RCTs found no effect of HCQ on viral clearance. One small RCT demonstrated improved viral clearance with CQ and HCQ. Three cohort studies found that HCQ had no significant effect on mechanical ventilation/ICU admission. Two RCTs found no effect for HCQ on hospitalization risk in outpatients with COVID-19. Conclusions: Moderate certainty evidence suggests that HCQ, with or without azithromycin, lacks efficacy in reducing short-term mortality in patients hospitalized with COVID-19 or risk of hospitalization in outpatients with COVID-19.

Publication Type

Journal article.

<643>

Accession Number

20203595787

Author

Grossman, E. R.; Benjamin-Neelon, S. E.; Sonnenschein, S.

Title

Alcohol consumption during the COVID-19 pandemic: a cross-sectional survey of US adults.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

## Abstract

Emerging but limited evidence suggests that alcohol consumption has increased during the COVID-19 pandemic. This study assessed: (1) whether drinking behaviors changed during the pandemic; and, (2) how those changes were impacted by COVID-19-related stress. We conducted a cross-sectional online survey with a convenience sample of U.S. adults over 21 years in May 2020. We conducted adjusted linear regressions to assess COVID-19 stress and alcohol consumption, adjusting for gender, race, ethnicity, age, and household income. A total of 832 responded: 84% female, 85% White, and 72% ages 26-49. Participants reported consuming 26.8 alcohol drinks on 12.2 of the past 30 days. One-third of participants (34.1%) reported binge drinking and 7.0% reported extreme binge drinking. Participants who experienced COVID-19-related stress (versus not) reported consuming more drinks (beta = 4.7; CI (0.2, 9.1); p = 0.040) and a greater number of days drinking (beta = 2.4; CI (0.6, 4.1); p = 0.007). Additionally, 60% reported increased drinking but 13% reported decreased drinking, compared to pre-COVID-19. Reasons for increased drinking included increased stress (45.7%), increased alcohol availability (34.4%), and boredom (30.1%). Participants who reported being stressed by the pandemic consumed more drinks over a greater number of days, which raises concerns from both an individual and public health perspective.

## Publication Type

Journal article.

<644>

## Accession Number

20203595738

## Author

Sun Yao; Lin ShiangYi; Chung KienHoa [Chung, K. H. K.]

## Title

University students' perceived peer support and experienced depressive symptoms during the COVID-19 pandemic: the mediating role of emotional well-being.

## Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 64 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract



The coronavirus (COVID-19) pandemic has adversely affected individuals' mental health. Social isolation as a result of social distancing during the pandemic potentially affects the associations among perceived available peer support, emotional well-being, and depression in university students. The present study examined the associations among university students' perceived available peer support, emotional well-being (as indicated negatively by loneliness and negative affects and positively by positive affects and hope), and depressive symptoms. During the third wave of the COVID-19 outbreak in July, 2020, 255 students at a public university in Hong Kong participated in an online-based survey that assessed their perceived available peer support, emotional well-being, and depressive symptoms. Results showed that perceived available peer support negatively contributed to depressive symptoms; both negative and positive indicators of emotional well-being mediated the association between perceived available peer support and depressive symptoms. Our results also suggested that university students showed signs of elevated depressive symptoms during the pandemic. Thus, our study advanced the theoretical understanding of university students' mental health in the time of a global pandemic. Our study also highlighted the practical needs for preventive efforts and accessible care to support the psychological and emotional needs of young people during the COVID-19 pandemic.

#### Publication Type

Journal article.

<645>

#### Accession Number

20203595735

#### Author

Fiasca, F.; Minelli, M.; Maio, D.; Minelli, M.; Vergallo, I.; Necozone, S.; Mattei, A.

#### Title

Associations between COVID-19 incidence rates and the exposure to PM2.5 and NO2: a nationwide observational study in Italy.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 28 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The COVID-19 outbreak disproportionately affected the elderly and areas with higher population density. Among the multiple factors possibly involved, a role for air pollution has also been hypothesized. This

nationwide observational study demonstrated the significant positive relationship between COVID-19 incidence rates and PM2.5 and NO2 levels in Italy, both considering the period 2016-2020 and the months of the epidemic, through univariate regression models, after logarithmic transformation of the variables, as the data were not normally distributed. That relationship was confirmed by a multivariate analysis showing the combined effect of the two pollutants, adjusted for the old-age index and population density. An increase in PM2.5 and NO2 concentrations by one unit (1 micro g/m3) corresponded to an increase in incidence rates of 1.56 and 1.24 x 104 people, respectively, taking into account the average levels of air pollutants in the period 2016-2020, and 2.79 and 1.24 x 104 people during March-May 2020. Considering the entire epidemic period (March-October 2020), these increases were 1.05 and 1.01 x 104 people, respectively, and could explain 59% of the variance in COVID-19 incidence rates (R2=0.59). This evidence could support the implementation of targeted responses by focusing on areas with low air quality to mitigate the spread of the disease.

#### Publication Type

Journal article.

<646>

#### Accession Number

20203595661

#### Author

Dong HongJie; Zhou MinLi; Che DeWei; Bodomo, A.

#### Title

If the coronavirus doesn't scare you, the banners will - a case study of early COVID-19 banners.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 15 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

As a crucial element of China's political and cultural life, "banners", or biaoyu, have been around for decades, in support of national-level policies such as family planning and the governing mottos of Presidents. The banners that have emerged during the Covid-19 pandemic which was also the subject of a national-level driven policy, have been involved in a nation-wide public debate over the language styles of banners used to urge people to stay indoors. Based on the analysis of the early COVID-19 banners and the related online comments, this article analyzes the language style patterns of the banners and the mode of

banner circulation. The study found that the manner in which the banners are circulated goes beyond a unidirectional path of on-site instant communication. This process is facilitated by social networks and mass media, which, during circulation, twice created a banner upgrade. The upgrades created decontextualization and function extension of the banners, whereas audience feedback triggered an adaptive adjustment of the language style of the banners. This article suggests that the study of the use and spread of banners, especially the early COVID-19 banners, sheds light on the study of mass communication and discourse style, and also how measures to contain pandemics such as COVID-19 can be communicated.

#### Publication Type

Journal article.

<647>

#### Accession Number

20203595658

#### Author

Kim SoYoung; Kim YaeJean; Peck KyongRan; Ko YoungSuk; Lee JongGul; Jung EunOk

#### Title

Keeping low reproductive number despite the rebound population mobility in Korea, a country never under lockdown during the COVID-19 pandemic.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 20 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Nonpharmaceutical intervention has been one of the most important strategies to prevent the spread of the SARS-CoV-2 in the communities during the COVID-19 pandemic. Korea has a unique experience that we had the first large outbreak during the early pandemic and could flatten the epidemic curve without lockdown. In this study, the effective reproductive numbers were calculated for the entire nation and Seoul (the capital city) Metropolitan Area from February 16-15 July, where 60% of the population reside. We compared the changes in population mobility data and reproductive number trends according to the changes in the government's nonpharmaceutical intervention strategy. The total daily mobility decreased when Korea had the first wave of a large outbreak in February-March 2020, which was mainly caused by the decrease of daily noncommuting mobility. However, daily commuting mobility from 16 February to 30 June 2020 was maintained at a similar level since there was no national lockdown for workers who

commute between home and work. During the first half-year of 2020, Korea could control the outbreak to a manageable level without a significant decrease in daily public mobility. However, it may be only possible when the public follows personal hygiene principles and social distancing without crisis fatigue or reduced compliance.

Publication Type

Journal article.

<648>

Accession Number

20203595140

Author

Garigliany, M.; Laere, A. S. van; Clercx, C.; Giet, D.; Escriou, N.; Huon, C.; Werf, S. van der; Eloit, M.; Desmecht, D.

Title

SARS-CoV-2 natural transmission from human to cat, Belgium, March 2020.

Source

Emerging Infectious Diseases; 2020. 26(12):3069-3071. 1 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

In March 2020, a severe respiratory syndrome developed in a cat, 1 week after its owner received positive test results for severe acute respiratory syndrome coronavirus 2. Viral RNA was detected in the cat's nasopharyngeal swab samples and vomitus or feces; immunoglobulin against the virus was found in convalescent-phase serum. Human-to-cat transmission is suspected.

Publication Type

Journal article.

<649>

Accession Number

20203595102

Author

Laiton-Donato, K.; Villabona-Arenas, C. J.; Usme-Ciro, J. A.; Franco-Munoz, C.; Alvarez-Diaz, D. A.; Villabona-Arenas, L. S.; Echeverria-Londono, S.; Cucunuba, Z. M.; Franco-Sierra, N. D.; Florez, A. C.; Ferro, C.; Ajami, N. J.; Walteros, D. M.; Prieto, F.; Duran, C. A.; Ospina-Martinez, M. L.; Mercado-Reyes, M.

Title

Genomic epidemiology of severe acute respiratory syndrome coronavirus 2, Colombia.

Source

Emerging Infectious Diseases; 2020. 26(12):2854-2862. 48 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

Coronavirus disease (COVID-19) in Colombia was first diagnosed in a traveler arriving from Italy on February 26, 2020. However, limited data are available on the origins and number of introductions of COVID-19 into the country. We sequenced the causative agent of COVID-19, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), from 43 clinical samples we collected, along with another 79 genome sequences available from Colombia. We investigated the emergence and importation routes for SARS-CoV-2 into Colombia by using epidemiologic, historical air travel, and phylogenetic observations. Our study provides evidence of multiple introductions, mostly from Europe, and documents >12 lineages. Phylogenetic findings validate the lineage diversity, support multiple importation events, and demonstrate the evolutionary relationship of epidemiologically linked transmission chains. Our results reconstruct the early evolutionary history of SARS-CoV-2 in Colombia and highlight the advantages of genome sequencing to complement COVID-19 outbreak investigations.

Publication Type

Journal article.

<650>

Accession Number

20203595087

Author

Belhadi, A.; Kamble, S. S.; Khan, S. A. R.; Touriki, F. E.; Dileep, K. M.

Title

Infectious waste management strategy during COVID-19 pandemic in Africa: an integrated decision-making framework for selecting sustainable technologies.

Source

Environmental Management; 2020. 66(6):1085-1104. many ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

The emerging and underdeveloped countries in Africa face numerous difficulties managing infectious waste during the SARS-CoV-2 disease, known as the COVID-19 pandemic. Hence, the main aim of this paper is to help decision-makers in African countries to select the best available waste management strategy during the COVID-19 pandemic. The present research undertakes seamless assessment and prioritization of infectious solid waste (SW) and wastewater (WW) treatment technologies based on a criteria system involving four dimensions, i.e., environment-safety, technology, economics, and sociopolitics. A combined approach that integrates the results of life-cycle assessments and life-cycle costs (LCA-LCC), analytic hierarchy process (AHP), and VIKOR method in an interval-valued fuzzy (IVF) environment is proposed. The results reveal that combined incineration and chemical disinfection approach, and combined chlorination and ultraviolet irradiation are the most sustainable technologies for managing infectious SW and WW treatment in the present context. The proposed approach, alongside the findings of the study, constitutes a reference to devise urgent planning for contagious waste management in African countries as well as developing countries worldwide.

Publication Type

Journal article.

<651>

Accession Number

20203594515

Author

Hiedra, R.; Bryan, K.; Elbashabsheh, M.; Gul, F.; Wright, R. M.; Albano, J.; Azmaiparashvili, Z.; Aponte, G. P.

Title

The use of IV vitamin C for patients with COVID-19: a case series.

Source

Expert Review of Anti-Infective Therapy; 2020. 18(12):1259-1261. 18 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic has affected almost 2.5 million people worldwide with almost 170,000 deaths reported to date. So far, there is scarce evidence for the current treatment options available for COVID-19. Vitamin C has previously been used for treatment of severe sepsis and septic shock. We reviewed the feasibility of using vitamin C in the setting of COVID-19 in a series of patients. Methods: We sequentially identified a series of patients who were requiring at least 30% of FiO<sub>2</sub> or more who received IV vitamin C as part of the COVID-19 treatment and analyzed their demographic and clinical characteristics. We compared inflammatory markers pre and post treatment including D-dimer and ferritin. Results: We identified a total of 17 patients who received IV vitamin C for COVID-19. The inpatient mortality rate in this series was 12% with 17.6% rates of intubation and mechanical ventilation. We noted a significant decrease in inflammatory markers, including ferritin and D-dimer, and a trend to decreasing FiO<sub>2</sub> requirements, after vitamin C administration. Conclusion: The use of IV vitamin C in patients with moderate to severe COVID-19 disease may be feasible.

Publication Type

Journal article.

<652>

Accession Number

20203593976

Author

Habashy, N. H.; Abu-Serie, M. M.

Title

The potential antiviral effect of major royal jelly protein2 and its isoform X1 against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2): insight on their sialidase activity and molecular docking.

Source

Journal of Functional Foods; 2020. 75. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Severe acute respiratory syndrome-coronavirus (SARS-CoV)-2 is a newly emerging type of CoV. We evaluated the predicted anti-SARS-CoV-2 effect of major royal jelly protein (MRJP)2 and MRJP2 isoform X1, which recently showed high efficacy against other enveloped RNA-viruses (HCV and HIV). Some in-silico analyses have been performed to predict the impact of these proteins on viral entry, replication, and complications. These proteins have shown a high potency in sialic acid hydrolysis from the lung cells (WI-38) surface. Docking analysis showed that these proteins have a high binding affinity to viral receptor-binding sites in the receptor-binding domain, causing attachment prevention. Moreover, MRJPs can exert an inhibitory influence, via different mechanisms, for SARS-CoV-2 non-structural proteins (main and papain proteases, RNA replicase, RNA-dependent RNA polymerase, and methyltransferase). Also, they can bind to hemoglobin-binding sites on viral-nsp5 and prevent their hemoglobin attack. Thus, MRJP2 and MRJP2 X1 can be a promising therapy for SARS-CoV-2 infection.

Publication Type

Journal article.

<653>

Accession Number

20203593462

Author

Yuan Dan; Gao WenFeng; Liang Shu; Yang ShuJuan; Jia Peng

Title

Biosafety threats of the rapidly established labs for SARS-CoV-2 tests in China.

Source

Environment International; 2020. 143. 17 ref.

Publisher

Pergamon Press

Location of Publisher

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Oxford

Country of Publication

UK

Abstract

To increase the capacity of identifying coronavirus disease 2019 (COVID-19) infection, many Biosafety Level 2 (BSL-2) labs have been established in a short period of time for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) nucleic acid tests all over the world. However, their biosafety has not been evaluated, which could have been the first gateway to SARS-CoV-2 transmission. During 9-11 March 2020, the first comprehensive evaluation of the biosafety in all 89 labs qualified for conducting SARS-CoV-2 tests in Sichuan Province of China was conducted. The degree of compliance with 39 criteria in five categories was evaluated: biosafety requirements for lab activities (14 criteria), sample transfer, acceptance and management (6 criteria), waste management (9 criteria), personnel training and protection (4 criteria), and lab environmental disinfection, emergency plans and accident handling (6 criteria). Our results revealed that, although an overall median compliance rate of 94.6% for 39 criteria, only four of 89 labs met all of them. Criteria in personnel training and protection have been most satisfactorily met, followed by lab environmental disinfection, emergency plans and accident handling. The most severe risk was the lack of automatic doors at the main entrance or in core operation areas, especially among labs in CDC and hospitals. This risk, together with failure for keeping pressure in the core operation areas 25 +or- 5 Pa (mainly among labs in the third-party testing agencies), may cause accidental exposure to biological agents from lab activities. Other severe risk included failure for standard labeling of SARS-CoV-2 wastes and lacking regular monitoring of sterilization effects. Our findings would provide experiences and lessons for strengthening lab biosafety in other Chinese provinces, and also serve as an important reference for many other countries where such labs are being or will be quickly built for fighting the COVID-19. The information of lab safety should be considered to be internally linked to the national intelligent syndromic surveillance system (NISS), for better improving the safety of the labs at the greatest need and facilitating more comprehensive surveillance of risk for disease outbreak.

Publication Type

Journal article.

<654>

Accession Number

20203592662

Author

Bonilla-Aldana, D. K.; Jimenez-Diaz, S. D.; Arango-Duque, J. S.; Aguirre-Florez, M.; Balbin-Ramon, G. J.; Paniz-Mondolfi, A.; Suarez, J. A.; Pachar, M. R.; Perez-Garcia, L. A.; Delgado-Noguera, L. A.; Sierra, M. A.; Munoz-Lara, F.; Zambrano, L. I.; Rodriguez-Morales, A. J.

Title

Bats in ecosystems and their wide spectrum of viral infectious potential threats: SARS-CoV-2 and other emerging viruses.

Source

International Journal of Infectious Diseases; 2021. 102:87-96. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Bats have populated earth for approximately 52 million years, serving as natural reservoirs for a variety of viruses through the course of evolution. Transmission of highly pathogenic viruses from bats has been suspected or linked to a spectrum of potential emerging infectious diseases in humans and animals worldwide. Examples of such viruses include Marburg, Ebolavirus, Nipah, Hendra, Influenza A, Dengue, Equine Encephalitis viruses, Lyssaviruses, Madariaga and Coronaviruses, involving the now pandemic Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Herein, we provide a narrative review focused in selected emerging viral infectious diseases that have been reported from bats.

Publication Type

Journal article.

<655>

Accession Number

20203588882

Author

Hawryluk, I.; Mellan, T. A.; Hoeltgebaum, H.; Mishra, S.; Schnekenberg, R. P.; Whittaker, C.; Zhu, H.; Gandy, A.; Donnelly, C. A.; Flaxman, S.; Bhatt, S.

Title

Inference of COVID-19 epidemiological distributions from Brazilian hospital data.

Source

Journal of the Royal Society Interface; 2020. 17(172). 46 ref.

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

## Abstract

Knowing COVID-19 epidemiological distributions, such as the time from patient admission to death, is directly relevant to effective primary and secondary care planning, and moreover, the mathematical modelling of the pandemic generally. We determine epidemiological distributions for patients hospitalized with COVID-19 using a large dataset (N = 21 000 - 157 000) from the Brazilian Sistema de Informacao de Vigilancia Epidemiologica da Gripe database. A joint Bayesian subnational model with partial pooling is used to simultaneously describe the 26 states and one federal district of Brazil, and shows significant variation in the mean of the symptom-onset-to-death time, with ranges between 11.2 and 17.8 days across the different states, and a mean of 15.2 days for Brazil. We find strong evidence in favour of specific probability density function choices: for example, the gamma distribution gives the best fit for onset-to-death and the generalized lognormal for onset-to-hospital-admission. Our results show that epidemiological distributions have considerable geographical variation, and provide the first estimates of these distributions in a low and middle-income setting. At the subnational level, variation in COVID-19 outcome timings are found to be correlated with poverty, deprivation and segregation levels, and weaker correlation is observed for mean age, wealth and urbanicity.

## Publication Type

Journal article.

<656>

## Accession Number

20203588330

## Author

Walsh, M. G.; Shailendra Sawleshwarkar; Shah Hossain; Mor, S. M.

## Title

Whence the next pandemic? The intersecting global geography of the animal-human interface, poor health systems and air transit centrality reveals conduits for high-impact spillover.

## Source

One Health; 2020. 11. 40 ref.

## Publisher

Elsevier

## Location of Publisher

Amsterdam

## Country of Publication

Netherlands

## Abstract

The health and economic impacts of infectious disease pandemics are catastrophic as most recently manifested by coronavirus disease 2019 (COVID-19). The emerging infections that lead to substantive epidemics or pandemics are typically zoonoses that cross species boundaries at vulnerable points of animal-human interface. The sharing of space between wildlife and humans, and their domesticated animals, has dramatically increased in recent decades and is a key driver of pathogen spillover. Increasing animal-human interface has also occurred in concert with both increasing globalisation and failing health systems, resulting in a trifecta with dire implications for human and animal health. Nevertheless, to date we lack a geographical description of this trifecta that can be applied strategically to pandemic prevention. This investigation provides the first geographical quantification of the intersection of animal-human interfaces, poor human health system performance and global connectivity via the network of air travel. In so doing, this work provides a systematic, data-driven approach to classifying spillover hazard based on the distribution of animal-human interfaces while simultaneously identifying globally connected cities that are adjacent to these interfaces and which may facilitate global pathogen dissemination. We present this geography of high-impact spillover as a tool for developing targeted surveillance systems and improved health infrastructure in vulnerable areas that may present conduits for future pandemics.

#### Publication Type

Journal article.

<657>

#### Accession Number

20203586248

#### Author

Dai LingLing; Wang Xi; Jiang TianCi; Li PengFei; Wang Yu; Wu ShuJun; Jia LiuQun; Liu Meng; An Lin; Cheng Zhe

#### Title

Anxiety and depressive symptoms among COVID-19 patients in Jiangnan Fangcang Shelter Hospital in Wuhan, China.

#### Source

PLoS ONE; 2020. 15(8). 57 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

Fangcang shelter hospitals were established in China during the coronavirus disease 2019 (COVID-19) pandemic as a countermeasure to stop the spread of the disease. To our knowledge, no research has been conducted on mental health problems among patients in Fangcang shelter hospitals. This study aimed to determine the prevalence and major influencing factors of anxiety and depressive symptoms among COVID-19 patients admitted to Fangcang shelter hospitals. From February 23, 2020, to February 26, 2020, we obtained sociodemographic and clinical characteristics information of COVID-19 patients in Jiangnan Fangcang Shelter Hospital (Wuhan, China) and assessed their mental health status and sleep quality. Data were obtained with an online questionnaire. The questionnaire consisted of a set of items on demographic characteristics, a set of items on clinical characteristics, the Self-Rating Anxiety Scale, Self-Rating Depression Scale, and Pittsburgh Sleep Quality Index. Three hundred seven COVID-19 patients who were admitted to Jiangnan Fangcang Shelter Hospital participated in this study. The prevalence of anxiety and depressive symptoms were 18.6% and 13.4%, respectively. Poor sleep quality and having two current physical symptoms were independent risk factors for anxiety symptoms. Female sex, having a family member with confirmed COVID-19, and having two current physical symptoms were independent risk factors for depressive symptoms. Anxiety and depressive symptoms were found to be common among COVID-19 patients in Fangcang Shelter Hospital, with some patients being at high risk.

#### Publication Type

Journal article.

<658>

#### Accession Number

20203586234

#### Author

Hierro, L. A.; Cantarero, D.; Patino, D.; Rodriguez-Perez Arenaza, D. de

#### Title

Who can go back to work when the COVID-19 pandemic remits?

#### Source

PLoS ONE; 2020. 15(8). 33 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

This paper seeks to determine which workers affected by lockdown measures can return to work when a government decides to apply lockdown exit strategies. This system, which we call Sequential Selective

Multidimensional Decision (SSMD), involves deciding sequentially, by geographical areas, sectors of activity, age groups and immunity, which workers can return to work at a given time according to the epidemiological criteria of the country as well as that of a group of reference countries, used as a benchmark, that have suffered a lower level of lockdown de-escalation strategies. We apply SSMD to Spain, based on affiliation to the Social Security system prior to the COVID-19 pandemic, and conclude that 98.37% of the population could be affected. The proposed system makes it possible to accurately identify the target population for serological IgG antibody tests in the work field, as well as those affected by special income replacement measures due to lockdown being maintained over a longer period.

#### Publication Type

Journal article.

<659>

#### Accession Number

20203586197

#### Author

Nguemdjo, U.; Meno, F.; Dongfack, A.; Ventelou, B.

#### Title

Simulating the progression of the COVID-19 disease in Cameroon using sir models.

#### Source

PLoS ONE; 2020. 15(8). 22 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

This paper analyses the evolution of COVID-19 in Cameroon over the period March 6-April 2020 using SIR models. Specifically, we (1) evaluate the basic reproduction number of the virus, (2) determine the peak of the infection and the spread-out period of the disease, and (3) simulate the interventions of public health authorities. Data used in this study is obtained from the Cameroonian Public Health Ministry. The results suggest that over the identified period, the reproduction number of COVID-19 in Cameroon is about 1.5, and the peak of the infection should have occurred at the end of May 2020 with about 7.7% of the population infected. Furthermore, the implementation of efficient public health policies could help flatten the epidemic curve.

#### Publication Type

<660>

Accession Number

20203586168

Author

Karlsen, A. P. H.; Wiberg, S.; Laigaard, J.; Pedersen, C.; Rokamp, K. Z.; Mathiesen, O.

Title

A systematic review of trial registry entries for randomized clinical trials investigating COVID-19 medical prevention and treatment.

Source

PLoS ONE; 2020. 15(8). 28 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

**Aim:** To identify investigated interventions for COVID-19 prevention or treatment via trial registry entries on planned or ongoing randomised clinical trials. To assess these registry entries for recruitment status, planned trial size, blinding and reporting of mortality. **Methods:** We identified trial registry entries systematically via the WHO International Clinical Trials Registry Platform and 33 trial registries up to June 23, 2020. We included relevant trial registry entries for randomized clinical trials investigating medical preventive, adjunct or supportive therapies and therapeutics for treatment of COVID-19. Studies with non-random and single-arm design were excluded. Trial registry entries were screened by two authors independently and data were systematically extracted. **Results:** We included 1303 trial registry entries from 71 countries investigating 381 different single interventions. Blinding was planned in 47% of trials. Sample size was >200 participants in 40% of trials and a total of 611,364 participants were planned for inclusion. Mortality was listed as an outcome in 57% of trials. Recruitment was ongoing in 54% of trials and completed in 8%. Thirty-five percent were multicenter trials. The five most frequent investigational categories were immune modulating drugs (266 trials (20%)), unconventional medicine (167 trials (13%)), antimalarial drugs (118 trials (9%)), antiviral drugs (100 trials (8%)) and respiratory adjuncts (78 trials (6%)). The five most frequently tested uni-modal interventions were: chloroquine/hydroxychloroquine (113 trials with 199,841 participants); convalescent plasma (64 trials with 11,840 participants); stem cells (51 trials with 3,370 participants); tocilizumab (19 trials with 4,139 participants) and favipiravir (19 trials with 3,210 participants). **Conclusion:** An extraordinary number of randomized clinical trials investigating COVID-19 management have been initiated with a multitude of medical preventive, adjunctive and treatment

modalities. Blinding will be used in only 47% of trials, which may have influence on future reported treatment effects. Fifty-seven percent of all trials will assess mortality as an outcome facilitating future meta-analyses.

#### Publication Type

Journal article.

<661>

#### Accession Number

20203586086

#### Author

Pongpirul, K.; Kaewpoungngam, K.; Chotirosniramit, K.; Theprugsa, S.

#### Title

Commercial airline protocol during COVID-19 pandemic: an experience of Thai Airways International.

#### Source

PLoS ONE; 2020. 15(8). 9 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

**Introduction:** Coronavirus disease 2019 (COVID-19) pandemic has affected the aviation industry. Existing protocols have relied on scientifically questionable evidence and might not lead to the optimal balance between public health safety and airlines' financial viability. **Background:** To explore the implementation feasibility of Thai Airways International protocol from the perspectives of passengers and aircrews. **Design:** An online questionnaire survey of passengers and an in-depth interview with aircrews. **Setting:** Two randomly selected repatriation flights operated by Thai Airways International using Boeing 777 aircraft (TG476 from Sydney and TG492 from Auckland to Bangkok) **Participants:** 377 Thai passengers and 35 aircrews. **Results:** The mean age of passengers was 28.14 (95%CI 26.72 to 29.55) years old; 57.03% were female. TG492 passengers were mostly students and significantly younger than that of TG476 ( $p < 0.0001$ ) with comparable flying experience ( $p = 0.1192$ ). The average body temperature was 36.52 (95%CI 36.48 to 36.55) degrees Celsius. Passengers estimated average physical distances of 1.59 (95%CI 1.48 to 1.70), 1.41 (95%CI 1.29 to 1.53), and 1.26 (95%CI 1.12 to 1.41) meters at check-in, boarding, and in-flight, respectively. Passengers were checked for body temperature during the flight 1.97 (95%CI 1.77 to 2.18) times on average which is significantly more frequent in longer than shorter flight ( $p < 0.0001$ ). Passengers moved around or went to the toilet during the flight 2.00 (95%CI 1.63 to 2.37) and 2.08 (95%CI 1.73 to 2.43) times



which are significantly more frequent in longer than shorter flight ( $p = 0.0186$  and  $0.0049$ , respectively). The aircrews were satisfied with the protocol and provided several practical suggestions. Conclusion: The protocol was well received by the passengers and aircrews of the repatriation flights with some suggestions for improvement.

#### Publication Type

Journal article.

<662>

#### Accession Number

20203586070

#### Author

Huang Long; Lei WanSheng; Xu FuMing; Liu HaiRong; Yu Liang

#### Title

Emotional responses and coping strategies in nurses and nursing students during COVID-19 outbreak: a comparative study.

#### Source

PLoS ONE; 2020. 15(8). 27 ref.

#### Publisher

Public Library of Sciences (PLOS)

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

The coronavirus disease (COVID-19) outbreak in December has seen more than 76,000 cases in China, causing more than 3,000 medical staff infections. As the disease is highly contagious, can be fatal in severe cases, and there are no specific medicines, it poses a huge threat to the life and health of nurses, leading to a severe impact on their emotional responses and coping strategies. Therefore, this study will investigate nurses' emotional responses and coping styles, and conduct a comparative study with nursing college students. This study was conducted through the online survey 'questionnaire star' from February 1st to February 20th, 2020 in Anhui Province, using the snowball sampling method to invite subjects. The results found that women showed more severe anxiety and fear than men. Participants from cities exhibited these symptoms more than participants from rural areas, however rural participants experienced more sadness than urban participants. The nearer a COVID-19 zone is to the participants, the stronger the anxiety and anger. The COVID-19 outbreak has placed immense pressure on hospitals and those nurses at the frontline are more seriously affected. Hospitals should focus on providing psychological support to nurses and training in coping strategies.

Publication Type

Journal article.

<663>

Accession Number

20203586023

Author

Ding YaNi; Du XueYing; Li QinMei; Zhang Miao; Zhang QingJun; Tan XiaoDong; Liu Qing

Title

Risk perception of coronavirus disease 2019 (COVID-19) and its related factors among college students in China during quarantine.

Source

PLoS ONE; 2020. 15(8). 37 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

**Objective:** At the end of 2019, the outbreak of coronavirus disease 2019 (COVID-19) in Wuhan was a serious threat to public health. This study aimed to evaluate the risk perception of COVID-19 among college students in China during the quarantine, explore its related factors, and provide reference for future study. **Methods:** This study invited college students from various provinces of China to participate in the survey through the Internet, and a total of 1,461 college students were included. T-test and analysis of variance were used to explore the relationship between demographic characteristics, social pressure, knowledge and risk perception. Multiple linear regression was used to identify factors associated with risk perception. **Results:** This study shows that college students in China have high risk perception of COVID-19. Female college students ( $p < 0.01$ ), non-medical students ( $p < 0.01$ ), college students whose schools are located in Hubei ( $p = 0.01$ ) and college students with higher knowledge level ( $p < 0.01$ ) have higher risk perception. **Conclusion:** Due to the strong infectivity and occult nature of COVID-19, it is necessary to improve the risk perception of college students through health education in various ways, and attention should be paid to some college students with low risk perception.

Publication Type

Journal article.

<664>

Accession Number

20203586001

Author

Kim SeiWon; Jo SungJin; Lee HeaYon; Oh JungHwan; Lim JiHyang; Lee SangHaak; Choi JungHyun; Lee JeHoon

Title

Containment of a healthcare-associated COVID-19 outbreak in a university hospital in Seoul, Korea: a single-center experience.

Source

PLoS ONE; 2020. 15(8). 24 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

**Background:** Our hospital experienced the first healthcare-associated COVID-19 outbreak in Seoul at the time the first COVID-19 cases were confirmed in Korea. The first confirmed COVID-19 patient was a hospital personnel who was in charge of transferring patients inside our hospital. To contain the virus spread, we shutdown our hospital, and tested all inpatients, medical staff members, and employees. **Methods:** We retrospectively analyzed the results of SARS-CoV-2 RT-PCR testing according to the contact history, occupation, and presence of respiratory symptoms. Closed-circuit television (CCTV) was reviewed in the presence of an epidemiologist to identify individuals who came into contact with confirmed COVID-19 patients. **Results:** A total of 3,091 respiratory samples from 2,924 individuals were obtained. Among 2,924 individuals, two inpatients, and one caregiver tested positive (positivity rate, 0.1%). Although all confirmed cases were linked to a general ward designated for pulmonology patients, no medical staff members, medical support personnel, or employees working at the same ward were infected. Contact with confirmed COVID-19 cases was frequent among inpatients and medical support personnel. The most common contact area was the general ward for pulmonology patients and medical support areas, including clinical and imaging examination rooms. Finally, the total number of hospital-associated infections was 14, consisting of four diagnosed at our hospital and ten diagnosed outside the hospital. **Conclusions:** The robust control of the COVID-19 outbreak further minimized the transmission of SARS-CoV-2 in the hospital and local communities. However, there was also a debate over the appropriate period of hospital shutdown and testing of all hospital staff and patients. Future studies are required to refine and establish the in-hospital quarantine and de-isolation guidelines based on the epidemiological and clinical settings.

Publication Type

<665>

Accession Number

20203585977

Author

Al-Khalifa, K. S.; Rasha Alsheikh; Al-Swuailem, A. S.; Alkhalifa, M. S.; Al-Johani, M. H.; Al-Moumen, S. A.; Almomen, Z. I.

Title

Pandemic preparedness of dentists against coronavirus disease: a Saudi Arabian experience.

Source

PLoS ONE; 2020. 15(8). 51 ref.

Publisher

Public Library of Sciences (PLOS)

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: Dental offices are among the highest risk for transmission of the COVID-19, having the potential to transmit the virus via routine dental procedures. This cross-sectional study assessed the preparedness and perception of infection control measures against the COVID-19 pandemic by dentists in Saudi Arabia. Materials and methods: This online survey addressed the impact and perception of the COVID-19 pandemic on dental practice in Saudi Arabia. The questionnaire comprised 26 closed-ended questions. Descriptive statistics included frequency distributions with percentages. In addition, the significance between the different demographic variables and questions about dentists' perception of the COVID-19 pandemic was tested using the Chi-square test. Results: COVID-19 management in dental clinics varied in terms of adherence to the Ministry of Health (MOH) guidelines. Dental clinics' screening questionnaire for patients showed good adherence (67%), while the lowest agreement was detected with the question on the existence of an airborne infection in the isolation room (15%). Almost two-thirds of the respondents agreed that the dental reception area adopted the proper COVID-19 preventive measures. Greatest accord was observed in their answers on questions about dentists' perception of the COVID-19 pandemic, ranging from 64%-89%. In addition, there were statistically significant differences in questions about the perception of dentists towards the COVID-19 pandemic by different demographic variables such as age and years of work experience ( $p < 0.05$ ). Conclusion: The response of most dentists regarding the preparedness and perception of infection control measures against the COVID-19 pandemic was positive. Dental clinics need to adhere more to the MOH recommendations in preparedness of their facilities or by educating their dentists and staff.

Publication Type

Journal article.

<666>

Accession Number

20203582286

Title

Special Issue: Biosecurity: tools, behaviours and concepts. (Special Issue: Biosecurity: tools, behaviours and concepts.)

Source

Emerging Topics in Life Sciences; 2020. 4(5):449-549. 24 ref.

Publisher

Portland Press Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

COVID 19 has raised the profile of biosecurity. However, biosecurity is not only about protecting human life. This issue brings together mini-reviews examining recent developments and thinking around some of the tools, behaviours and concepts around biosecurity. They illustrate the multi-disciplinary nature of the subject, demonstrating the interface between research and policy. Biosecurity practices aim to prevent the spread of harmful organisms; recognising that 2020 is the International Year of Plant Health, several focus on plant biosecurity although invasive species and animal health concerns are also captured. The reviews show progress in developing early warning systems and that plant protection organisations are increasingly using tools that compare multiple pest threats to prioritise responses. The bespoke modelling of threats can inform risk management responses and synergies between meteorology and biosecurity provide opportunities for increased collaboration. There is scope to develop more generic models, increasing their accessibility to policy makers. Recent research can improve pest surveillance programs accounting for real-world constraints. Social science examining individual farmer behaviours has informed biosecurity policy; taking a broader socio-cultural approach to better understand farming networks has the potential to change behaviours in a new way. When encouraging public recreationists to adopt positive biosecurity behaviours communications must align with their values. Bringing together the human, animal, plant and environmental health sectors to address biosecurity risks in a common and systematic manner within the One Biosecurity concept can be achieved through multi-disciplinary working involving the life, physical and social sciences with the support of legislative bodies and the public.

Publication Type

Journal issue.

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<667>

Accession Number

20203575913

Author

Sperling, L.; Louwaars, N.; Ponti, O. de; Smale, M.; Baributsa, D.; Etten, J. van

Title

Viewpoint: COVID-19 and seed security response now and beyond.

Source

Food Policy; 2020. 97. 25 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 brings new challenges worldwide, including to smallholder farmers and their seed systems. In response, an escalating number of seed projects are being planned to deliver immediate aid or to alter current seed production programs. A Statement, prepared by diverse seed system experts, aims to steer both the immediate aid (next 1-2 seasons) and more developmental planning (next 1-3 years). The Statement includes 10 short-term and 4 medium-term recommendations, placing emphasis on all seed systems smallholders use: formal, informal, and integrated. It also looks beyond seed per se to the direct information and digital systems that shape remote assessments, data sharing and inclusive feedback. The Statement is prefaced by an introduction that helps contextualize the recommendations, reviews the history of humanitarian seed aid and summarizes the varied response forms that have unfolded over the last three decades.

Publication Type

Journal article.

<668>

Accession Number

20203561846

Author

Venter, Z. S.; Barton, D. N.; Gundersen, V.; Figari, H.; Nowell, M.

Title

Urban nature in a time of crisis: recreational use of green space increases during the COVID-19 outbreak in Oslo, Norway.

Source

Environmental Research Letters; 2020. 15(10). many ref.

Publisher

IOP Publishing Ltd

Location of Publisher

Bristol

Country of Publication

UK

Abstract

The global response to the COVID-19 pandemic has brought with it significant changes to human mobility patterns and working environments. We aimed to explore how social distancing measures affected recreational use of urban green space during the partial lockdown in Oslo, Norway. Mobile tracking data from thousands of recreationists were used to analyze high resolution spatio-temporal changes in activity. We estimated that outdoor recreational activity increased by 291% during lockdown relative to a 3 yr average for the same days. This increase was significantly greater than expected after adjusting for the prevailing weather and time of year and equates to approx. 86 000 extra activities per day over the municipality (population of 690 000). Both pedestrians (walking, running, hiking) and cyclists appeared to intensify activity on trails with higher greenviews and tree canopy cover, but with differences in response modulated by trail accessibility and social distancing preferences. The magnitude of increase was positively associated with trail remoteness, suggesting that green spaces facilitated social distancing and indirectly mitigated the spread of COVID-19. Finally, pedestrian activity increased in city parks, peri-urban forest, as well as protected areas, highlighting the importance of access to green open spaces that are interwoven within the built-up matrix. These findings shed new light on the value of urban nature as resilience infrastructure during a time of crisis. The current pandemic also reveals some important dilemmas we might face regarding green justice on the path towards urban planning for future sustainable cities.

Publication Type

Journal article.

<669>

Accession Number

20203559751

Author

Lee, D. Y. W.; Li, Q. Y.; Liu Jing; Efferth, T.

Title

Traditional Chinese herbal medicine at the forefront battle against COVID-19: clinical experience and scientific basis.

Source

Phytomedicine; 2021. 80. many ref.

Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

Background: Throughout the 5000-year history of China, more than 300 epidemics were recorded. Traditional Chinese herbal medicine (TCM) has been used effectively to combat each of these epidemics' infections, and saved many lives. To date, there are hundreds of herbal TCM formulae developed for the purpose of prevention and treatment during epidemic infections. When COVID-19 ravaged the Wuhan district in China in early January 2020, without a deep understanding about the nature of COVID-19, patients admitted to the TCM Hospital in Wuhan were immediately treated with TCM and reported later with >90% efficacy. Approach: We conducted conduct a systematic survey of various TCM herbal preparations used in Wuhan and to review their efficacy, according to the published clinical data; and, secondly, to find the most popular herbs used in these preparations and look into the opportunity of future research in the isolation and identification of bioactive natural products for fighting COVID-19. Results: Although bioactive natural products in these herbal preparations may have direct antiviral activities, TCM employed for fighting epidemic infections was primarily based on the TCM theory of restoring the balance of the human immune system, thereby defeating the viral infection indirectly. In addition, certain TCM teachings relevant to the meridian system deserve better attention. For instance, many TCM herbal preparations target the lung meridian, which connects the lung and large intestine. This interconnection between the lung, including the upper respiratory system, and the intestine, may explain why certain TCM formulae showed excellent relief of lung congestion and diarrhea, two characteristics of COVID-19 infection. Conclusion: There is good reason for us to learn from ancient wisdom and accumulated clinical experience, in combination with cutting edge science and technologies, to fight with the devastating COVID-19 pandemic now and emerging new coronaviruses in the future.

Publication Type

Journal article.



<670>

Accession Number

20203518393

Author

Seema Rani; Sandeep Grover; Aseem Mehra; Swapnajeet Sahoo

Title

Psychiatric implications of the use of hydroxychloroquine in COVID-19 patients.

Source

Indian Journal of Pharmacology; 2020. 52(3):229-231. 18 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

In terms of neuropsychiatric side effects, the first case of chloroquine-induced psychosis was reported in 1958. Available literature also suggests the use of chloroquine to be associated with the development of psychosis, personality change, depression, suicidal ideations-suicidal behavior, anxiety disorders, and delirium. The disorders of thought, memory, attention, and behavior have also been reported with the use of 4-aminoquinolines. Some of these side effects, such as delirium, are related to toxicity. However, most of these data are related to chloroquine, and little information is available for neuropsychiatric side effects of HCQ. The adverse effects of HCQ usually appear with high doses or in the presence of other flavoring elements. HCQ is more polar and less lipophilic than chloroquine. The diffusion of HCQ across the cell membranes is difficult as compared with chloroquine. However, despite this, the neuropsychiatric side effects of HCQ cannot be completely ruled out. The possible HCQ-induced neuropsychiatric side effects depend on its ability to cross the blood-brain barrier. In the brain, HCQ can have a tissue concentration 10-20 times higher than a plasma concentration. The neuropsychiatric side effects are considered to occur at all ages, during acute or chronic use, with and without a history of mental illness. It has been seen that symptoms resolve after stopping the drug but would not resolve quickly and would take weeks or months.

Publication Type

Journal article.

<671>

Accession Number

20203501321

Author

Lin Tong; Luo WenWei; Li ZiQing; Zhang LiLi; Zheng XingHan; Mai LiTing; Yang WanQi; Guan GuiMei; Su ZiRen; Liu PeiQing; Li ZhuoMing; Xie YouLiang

Title

Rhamnocitrin extracted from *Nervilia fordii* inhibited vascular endothelial activation via miR-185/STIM-1/SOCE/NFATC3.

Source

Phytomedicine; 2020. 79.

Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

**Background:** Vascular endothelial activation is pivotal for the pathological development of various infectious and inflammatory diseases. Therapeutic interventions to prevent endothelial activation are of great clinical significance to achieve anti-inflammatory strategy. Previous studies indicate that the total flavonoids from the endemic herbal medicine *Nervilia fordii* (Hance) Schltr exerts potent anti-inflammatory effect and protective effect against endotoxin lipopolysaccharide (LPS)-induced acute lung injury, and shows clinical benefit in severe acute respiratory syndromes (SARS). However, the exact effective component of *Nervilia fordii* and its potential mechanism remain unknown. **Purpose:** The aim of this study was to investigate the effect and mechanism of rhamnocitrin (RH), a flavonoid extracted from *Nervilia fordii*, on LPS-induced endothelial activation. **Methods** The in vitro endothelial cell activation model was induced by LPS in human umbilical vein endothelial cells (HUVECs). Cell viability was measured to determine the cytotoxicity of RH. RT-PCR, Western blot, fluorescent probe and immunofluorescence were conducted to evaluate the effect and mechanism of RH against endothelial activation. **Results:** RH was extracted and isolated from *Nervilia fordii*. RH at the concentration from  $10^{-7}$  M- $10^{-5}$  M inhibited the expressions of interleukin-6 (IL-6) and -8 (IL-8), monocyte chemotactic protein-1 (MCP-1), intercellular adhesion molecule-1 (ICAM-1), vascular cell-adhesion molecule-1 (VCAM-1), and plasminogen activator inhibitor-1 (PAI-1) in response to LPS challenge. Mechanistically, RH repressed calcium store-operated  $Ca^{2+}$  entry (SOCE) induced by LPS, which is due to downregulation of stromal interaction molecule-1 (STIM-1) following upregulating microRNA-185 (miR-185). Ultimately, RH abrogated LPS-induced activation of SOCE-mediated calcineurin/NFATc3 (nuclear factor of activated T cells, cytoplasmic 3) signaling pathway. **Conclusion:** The present study identifies RH as a potent inhibitor of endothelial activation. Since vascular endothelial activation is a pivotal cause of excessive cytokine production, leading to cytokine storm and severe pathology in infectious diseases such as SARS and the ongoing COVID-19 pneumonia disease, RH might suggest promising therapeutic potential in the management of cytokine storm in these diseases.

Publication Type

Journal article.

<672>

Accession Number

20203490574

Author

Mohammad Tariqur Rahman

Title

Potential benefits of combination of *Nigella sativa* and Zn supplements to treat COVID-19.

Source

Journal of Herbal Medicine; 2020. 23. many ref.

Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

An effective vaccine to prevent the SARS-CoV-2 causing COVID-19 is yet to be approved. Further there is no drug that is specific to treat COVID-19. A number of antiviral drugs such as Ribavirin, Remdesivir, Lopinavir/ritonavir, Azithromycin and Doxycycline have been recommended or are being used to treat COVID-19 patients. In addition to these drugs, rationale and evidence have been presented to use chloroquine to treat COVID-19, arguably with certain precautions and criticism. In line with the proposed use of chloroquine, *Nigella sativa* (black seed) could be considered as a natural substitute that contains a number of bioactive components such as thymoquinone, dithymoquinone, thymohydroquinone, and nigellimine. Further benefits to use *N. sativa* could be augmented by Zn supplement. Notably, Zn has been proven to improve innate and adaptive immunity in the course of any infection, be it by pathogenic virus or bacteria. The effectiveness of the Zn salt supplement could also be enhanced with *N. sativa* as its major bioactive component might work as ionophore to allow Zn<sup>2+</sup> to enter pneumocytes - the target cell for SARS-CoV-2. Given those benefits, this review paper describes how *N. sativa* in combination with Zn could be useful as a complement to COVID-19 treatment.

Publication Type

Journal article.

<673>

Accession Number

20203425291

Title

Eco-lesson from Covid-19: support sustainability.

Source

Global Oils & Fats: Business Magazine; 2020. 17(2):6-10.

Publisher

Malaysian Palm Oil Council (MPOC)

Location of Publisher

Petaling Jaya

Country of Publication

Malaysia

Abstract

This article considers the link between deforestation and new disease outbreaks such as COVID-19, and highlights Malaysia's managed forestry policies, which allow space for both wilderness and sustainable palm oil. The article also critiques the EU's Green New Deal, and argues that palm oil is best positioned to assist the transition to a green future in EU's transport network.

Publication Type

Journal article.

<674>

Accession Number

20203597809

Author

Fatani, T. H.

Title

Student satisfaction with videoconferencing teaching quality during the COVID-19 pandemic.

Source

BMC Medical Education; 2020. 20(396). 37 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** The coronavirus disease 2019 pandemic prompted the pediatric department at King Abdulaziz University to continue students' educational activities by offering courses online that utilized web video conferencing (WVC). Given the uncertainties of WVC educational quality and the challenge of shifting to an online environment, this study aimed to evaluate student satisfaction with the teaching quality of case-based discussion (CBD) sessions conducted through WVC. **Methods:** One hundred sixty-two undergraduate medical students in pediatrics completed the reduced Students' Evaluation of Educational Quality (SEEQ) survey with a five-point Likert scale over 5 weeks. The WVC CBD sessions were facilitated by 50 faculty members. **Results:** 82% of respondents were highly satisfied with the WVC CBD session's teaching quality. The majority agreed that the sessions were intellectually challenging, that the instructors were dynamic, and encouraged students to participate. No statistically significant correlation was found between student satisfaction and technical issues ( $r = 0.037$ ,  $p = 0.003$ ). **Conclusions:** WVC teaching had an overall positive outcome on student satisfaction, and teaching quality relied on teaching, cognitive, and social presence rather than technology. However, technology remains an important platform that supports teachers' educational activities. Thus, implementing a blended pediatric course to augment future course delivery is optimal.

Publication Type

Journal article.

<675>

Accession Number

20203597790

Author

Mendoza, M. F. L.; Acciani, M. D.; Levit, C. N.; Maria, C. S.; Brindley, M. A.

Title

Monitoring viral entry in real-time using a luciferase recombinant vesicular stomatitis virus producing SARS-CoV-2, EBOV, LASV, CHIKV, and VSV glycoproteins.

Source

Viruses; 2020. 12(12). 67 ref.

Publisher

MDPI AG

Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract

Viral entry is the first stage in the virus replication cycle and, for enveloped viruses, is mediated by virally encoded glycoproteins. Viral glycoproteins have different receptor affinities and triggering mechanisms. We employed vesicular stomatitis virus (VSV), a BSL-2 enveloped virus that can incorporate non-native glycoproteins, to examine the entry efficiencies of diverse viral glycoproteins. To compare the glycoprotein-mediated entry efficiencies of VSV glycoprotein (G), Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike (S), Ebola (EBOV) glycoprotein (GP), Lassa (LASV) GP, and Chikungunya (CHIKV) envelope (E) protein, we produced recombinant VSV (rVSV) viruses that produce the five glycoproteins. The rVSV virions encoded a nano luciferase (NLucP) reporter gene fused to a destabilization domain (PEST), which we used in combination with the live-cell substrate Endurazine™ to monitor viral entry kinetics in real time. Our data indicate that rVSV particles with glycoproteins that require more post-internalization priming typically demonstrate delayed entry in comparison to VSV G. In addition to determining the time required for each virus to complete entry, we also used our system to evaluate viral cell surface receptor preferences, monitor fusion, and elucidate endocytosis mechanisms. This system can be rapidly employed to examine diverse viral glycoproteins and their entry requirements.

## Publication Type

Journal article.

<676>

## Accession Number

20203597719

## Author

Kuno, G.

## Title

The absence of yellow fever in Asia: history, hypotheses, vector dispersal, possibility of YF in Asia, and other enigmas.

## Source

Viruses; 2020. 12(12). 241 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract

Since the recent epidemics of yellow fever in Angola and Brazil as well as the importation of cases to China in 2016, there has been an increased interest in the century-old enigma, absence of yellow fever in Asia. Although this topic has been repeatedly reviewed before, the history of human intervention has never been considered a critical factor. A two-stage literature search online for this review, however, yielded a rich history indispensable for the debate over this medical enigma. As we combat the pandemic of COVID-19 coronavirus worldwide today, we can learn invaluable lessons from the historical events in Asia. In this review, I explore the history first and then critically examine in depth major hypotheses proposed in light of accumulated data, global dispersal of the principal vector, patterns of YF transmission, persistence of urban transmission, and the possibility of YF in Asia. Through this process of re-examination of the current knowledge, the subjects for research that should be conducted are identified. This review also reveals the importance of holistic approach incorporating ecological and human factors for many unresolved subjects, such as the enigma of YF absence in Asia, vector competence, vector dispersal, spillback, viral persistence and transmission mechanisms.

## Publication Type

Journal article.

<677>

## Accession Number

20203597654

## Author

Ozcelik, S.; Kucuk, O. S.; Cakir, E.; Kazancioglu, R.

## Title

Medical education in epidemic and disaster situations.

## Source

Bezmialem Science; 2020. 8(4):438-443. 23 ref.

## Publisher

Galenos Publishing House

## Location of Publisher

Istanbul

## Country of Publication

Turkey

## Abstract

There is no standard practice for the sustainability of medical education in epidemics such as Covid-19 and disasters affecting society. Synchronous or asynchronous trainings have been carried out in some of universities and colleges that have distance education technical infrastructure, during the Covid-19

pandemic. If every student has access to information technologies and the skills of the instructors who will prepare and deliver the training increase their ability to use information technologies, there is no problem in the implementation and maintenance of theoretical lessons. During the Covid-19 pandemic, we had to go to distance education, which we had not yet implemented at Bezmialem Vakif University Faculty of Medicine. During this period, we applied asynchronous and synchronous education models (mixed model) for theoretical lessons. However, the fact that practical and internship applications were carried out by distance education - although videos about skills and practices were shot and uploaded to the system - it was not possible to replace the formal education. Distance education is inevitable for the continuity of education in epidemic and disaster situations. However, after the epidemic and disaster situations have passed, practical and internship practices should be carried out as much as possible in addition to distance education in medical education. In normal times, distance education can only be used to support formal education in medical education. As a result of all these evaluations and experiences we gained in the Covid 19 pandemic, we think that synchronous/synchronous distance education applications will improve over time and contribute to medical education.

#### Publication Type

Journal article.

<678>

#### Accession Number

20203597587

#### Author

Shimabukuro, P. M. S.; Duarte, M. L.; Imoto, A. M.; Atallah, A. N.; Franco, E. S. B.; Peccin, M. S.; Taminato, M.

#### Title

Environmental cleaning to prevent COVID-19 infection. A rapid systematic review.

#### Source

Sao Paulo Medical Journal; 2020. 138(6):505-514. 29 ref.

#### Publisher

Associacao Paulista de Medicina (APM)

#### Location of Publisher

Sao Paulo

#### Country of Publication

Brazil

#### Abstract

**BACKGROUND:** Faced with a pandemic, all healthcare actions need to reflect best practices, in order to avoid high transmissibility, complications and even hospitalizations. For hospital environments, the products recommended and authorized by regulatory institutions for environmental cleaning and



disinfection need to be highly effective. OBJECTIVE: To identify, systematically evaluate and summarize the best available scientific evidence on environmental cleaning to prevent COVID-19 infection. DESIGN AND SETTING: A systematic review of studies analyzing cleaning products that inactivate coronavirus, conducted within the evidence-based health program of a federal university in Sao Paulo (SP), Brazil. METHODS: A systematic search of the relevant literature was conducted in the PubMed, EMBASE, Cochrane Library, CINAHL and LILACS databases, for articles published up to May 27, 2020, relating to studies evaluating cleaning products that inactivate coronavirus in the environment. RESULTS: Seven studies were selected. These analyzed use of 70% alcohol, detergent, detergent containing iodine, household bleach, sodium hypochlorite, hydrogen peroxide, chlorine dioxide, glutaraldehyde, ultraviolet irradiation and plasma air purifier. The effectiveness of treating sewage with sodium hypochlorite and chlorine dioxide was also evaluated. CONCLUSION: Disinfection of environments, especially those in ordinary use, such as bathrooms, needs to be done constantly. Viral inactivation was achieved using chlorine-based disinfectants, alcohol, detergents, glutaraldehyde, iodine-containing detergents, hydrogen peroxide compounds and household bleaches. Alcohol showed efficient immediate activity. In sewage, sodium hypochlorite had better action than chlorine dioxide.

#### Publication Type

Journal article.

<679>

#### Accession Number

20203597586

#### Author

Milby, K. M.; Atallah, A. N.; Rocha-Filho, C. R.; Pinto, A. C. P. N.; Rocha, A. P. da; Reis, F. S. de A.; Carvas Junior, N.; Civile, V. T.; Santos, R. R. P.; Ferla, L. J.; Trevisani, G. F. M.; Ramalho, G. S.; Puga, M. E. dos S.; Trevisani, V. F. M.

#### Title

SARS-CoV-2 and arbovirus infection: a rapid systematic review.

#### Source

Sao Paulo Medical Journal; 2020. 138(6):498-504. 33 ref.

#### Publisher

Associacao Paulista de Medicina (APM)

#### Location of Publisher

Sao Paulo

#### Country of Publication

Brazil

#### Abstract

**BACKGROUND:** The numbers of cases of arboviral diseases have increased in tropical and subtropical regions while the coronavirus disease (COVID-19) pandemic overwhelms healthcare systems worldwide. The clinical manifestations of arboviral diseases, especially dengue fever, can be very similar to COVID-19, and misdiagnoses are still a reality. In the meantime, outcomes for patients and healthcare systems in situations of possible syndemic have not yet been clarified. **OBJECTIVE:** We set out to conduct a systematic review to understand and summarize the evidence relating to clinical manifestations, disease severity and prognoses among patients coinfecting with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and arboviruses. **METHODS:** We conducted a rapid systematic review with meta-analysis, on prospective and retrospective cohorts, case-control studies and case series of patients with confirmed diagnoses of SARS-CoV-2 and arboviral infection. We followed the Cochrane Handbook recommendations. We searched EMBASE, MEDLINE, Cochrane Library, LILACS, Scopus and Web of Science to identify published, ongoing and unpublished studies. We planned to extract data and assess the risk of bias and the certainty of evidence of the studies included, using the Quality in Prognosis Studies tool and the Grading of Recommendations Assessment. **RESULTS:** We were able to retrieve 2,407 citations using the search strategy, but none of the studies fulfilled the inclusion criteria. **CONCLUSION:** The clinical presentations, disease severity and prognoses of patients coinfecting with SARS-CoV-2 and arboviruses remain unclear. Further prospective studies are necessary in order to provide useful information for clinical decision-making processes.

Publication Type

Journal article.

<680>

Accession Number

20203597485

Author

Chen Ying

Title

COVID-19 pandemic imperils weather forecast.

Source

Geophysical Research Letters; 2020. 47(15). 20 ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Weather forecasts play essential parts in economic activity. Assimilation of meteorological observations from aircraft improves forecasts greatly. However, global lockdown during the COVID-19 pandemic (March to May 2020) has eliminated 50-75% aircraft observations and imperiled weather forecasting. Here, we verify global forecasts against reanalysis to quantify the impact of the pandemic. We find a large deterioration in forecasts of surface meteorology over regions with busy air flights, such as North America, southeast China, and Australia. Forecasts over remote regions are also substantially worse during March to May 2020 than 2017-2019, and the deterioration increases for longer-term forecasts. This could handicap early warning of extreme weather and cause additional economic damage on the top of that from the pandemic. The impact over Western Europe is buffered by the high density of conventional observations, suggesting that introduction of new observations in data-sparse regions would be needed to minimize the impact of global emergencies on weather forecasts.

#### Publication Type

Journal article.

<681>

#### Accession Number

20203597284

#### Author

Guzek, D.; Skolmowska, D.; Glabska, D.

#### Title

Appetitive traits in a population-based study of polish adolescents within the PLACE-19 study: validation of the Adult Eating Behavior Questionnaire.

#### Source

Nutrients; 2020. 12(12). many ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Appetitive traits of food approach or food avoidance are commonly measured using the Adult Eating Behavior Questionnaire (AEBQ). However, there is no Polish version of the AEBQ validated for adolescents, and to the best of our knowledge, no study completed with the Polish version of the AEBQ has been published thus far. The present study aimed to validate the AEBQ in a population-based sample of Polish secondary school students and to assess differences in appetitive traits between boys and girls within the Polish Adolescents' COVID-19 Experience (PLACE-19) Study. The PLACE-19 Study was conducted in a group

of 2448 adolescents recruited in May 2020 through the random quota sampling of secondary schools. The AEBQ was used to assess food approach subscales (Food Responsiveness, Emotional Over-Eating, and Enjoyment of Food) and food avoidance subscales (Satiety Responsiveness, Emotional Under-Eating, Food Fussiness, and Slowness in Eating). To validate the questionnaire, the standardized factor loadings within confirmatory factor analysis (CFA) with weighted least squares (WLS) were analyzed, and invariance was verified. The CFA presented good model fit, with  $\chi^2 = 4826.105$  (degrees of freedom (df) = 384), root mean square error of approximation (RMSEA) = 0.069 (90% confidence interval (CI): 0.067, 0.070), comparative fit index (CFI) = 0.90, and standardized root mean square residual (SRMR) = 0.08. The results revealed that, compared to the configural invariance model, the metric invariance model did not result in significantly decreased model fit, with DCFI = -0.002 and DRMSEA = -0.001, which were lower than the recommended cutoffs of 0.010 and 0.015, respectively. The scalar invariance model also did not result in significantly decreased fit of the model over the metric invariance model, with DCFI = -0.005 and DRMSEA = 0.000. Girls reported higher levels of Food Responsiveness ( $p < 0.0001$ ), Emotional Over-Eating ( $p < 0.0001$ ), Satiety Responsiveness ( $p < 0.0001$ ), Emotional Under-Eating ( $p < 0.0001$ ), and Slowness in Eating than boys ( $p < 0.0001$ ), and the total AEBQ scores of girls were also higher ( $p < 0.0001$ ). Positive inter-correlations were observed between all food approach subscales, as well as between Emotional Under-Eating and all food approach subscales for girls, boys, and the total sample; positive inter-correlations were also observed between the majority of food avoidance subscales. The present study confirmed the validity of the AEBQ in the studied population, and supported the associations between appetitive traits assessed using the AEBQ; it also indicated higher scores of both food approach and food avoidance subscales in girls than in boys in a population-based sample of Polish secondary school students.

#### Publication Type

Journal article.

<682>

#### Accession Number

20203597182

#### Author

Vassiliou, A. G.; Jahaj, E.; Pratikaki, M.; Orfanos, S. E.; Dimopoulou, I.; Kotanidou, A.

#### Title

Low 25-hydroxyvitamin D levels on admission to the intensive care unit may predispose COVID-19 pneumonia patients to a higher 28-day mortality risk: a pilot study on a Greek ICU cohort.

#### Source

Nutrients; 2020. 12(12). 22 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

## Abstract

We aimed to examine whether low intensive care unit (ICU) admission 25-hydroxyvitaminD (25(OH)D) levels are associated with worse outcomes of COVID-19 pneumonia. This was a prospective observational study of SARS-CoV2 positive critically ill patients treated in a multidisciplinary ICU. Thirty (30) Greek patients were included, in whom 25(OH)D was measured on ICU admission. Eighty (80%) percent of patients had vitamin D deficiency, and the remaining insufficiency. Based on 25(OH)D levels, patients were stratified in two groups: higher and lower than the median value of the cohort (15.2 ng/mL). The two groups did not differ in their demographic or clinical characteristics. All patients who died within 28 days belonged to the low vitamin D group. Survival analysis showed that the low vitamin D group had a higher 28-day survival absence probability (log-rank test,  $p = 0.01$ ). Critically ill COVID-19 patients who died in the ICU within 28 days appeared to have lower ICU admission 25(OH)D levels compared to survivors. When the cohort was divided at the median 25(OH)D value, the low vitamin D group had an increased risk of 28-day mortality. It seems plausible, therefore, that low 25(OH)D levels may predispose COVID-19 patients to an increased 28-day mortality risk.

## Publication Type

Journal article.

<683>

## Accession Number

20203597170

## Author

Holford, P.; Carr, A. C.; Jovic, T. H.; Ali, S. R.; Whitaker, I. S.; Marik, P. E.; Smith, A. D.

## Title

Vitamin C-an adjunctive therapy for respiratory infection, sepsis and COVID-19.

## Source

Nutrients; 2020. 12(12). many ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract

There are limited proven therapies for COVID-19. Vitamin C's antioxidant, anti-inflammatory and immunomodulating effects make it a potential therapeutic candidate, both for the prevention and

amelioration of COVID-19 infection, and as an adjunctive therapy in the critical care of COVID-19. This literature review focuses on vitamin C deficiency in respiratory infections, including COVID-19, and the mechanisms of action in infectious disease, including support of the stress response, its role in preventing and treating colds and pneumonia, and its role in treating sepsis and COVID-19. The evidence to date indicates that oral vitamin C (2-8 g/day) may reduce the incidence and duration of respiratory infections and intravenous vitamin C (6-24 g/day) has been shown to reduce mortality, intensive care unit (ICU) and hospital stays, and time on mechanical ventilation for severe respiratory infections. Further trials are urgently warranted. Given the favourable safety profile and low cost of vitamin C, and the frequency of vitamin C deficiency in respiratory infections, it may be worthwhile testing patients' vitamin C status and treating them accordingly with intravenous administration within ICUs and oral administration in hospitalized persons with COVID-19.

#### Publication Type

Journal article.

<684>

#### Accession Number

20203597125

#### Author

Visser, M.; Schaap, L. A.; Wijnhoven, H. A. H.

#### Title

Self-reported impact of the COVID-19 pandemic on nutrition and physical activity behaviour in Dutch older adults living independently.

#### Source

Nutrients; 2020. 12(12). 27 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The aim was to explore the self-reported impact of the COVID-19 pandemic on nutrition and physical activity behaviour in Dutch older adults and to identify subgroups most susceptible to this impact. Participants (N = 1119, aged 62-98 y, 52.8% female) of the Longitudinal Aging Study Amsterdam living independently completed a COVID-19 questionnaire. Questions on diagnosis, quarantine and hospitalization were asked, as well as impact of the pandemic on ten nutrition and physical activity behaviours. Associations of pre-COVID-19 assessed characteristics (age, sex, region, household

composition, self-rated health, BMI, physical activity, functional limitations) with reported impact were tested using logistic regression analyses. About half of the sample (48.3-54.3%) reported a decrease in physical activity and exercise due to the pandemic. An impact on nutritional behaviour predisposing to overnutrition (e.g., snacking more) was reported by 20.3-32.4%. In contrast, 6.9-15.1% reported an impact on behaviour predisposing to undernutrition (e.g., skipping warm meals). Those who had been in quarantine (n = 123) more often reported a negative impact. Subgroups with higher risk of impact could be identified. This study shows a negative impact of the COVID-19 pandemic on nutrition and physical activity behaviour of many older adults, which may increase their risk of malnutrition, frailty, sarcopenia and disability.

#### Publication Type

Journal article.

<685>

#### Accession Number

20203597096

#### Author

Allard, L.; Ouedraogo, E.; Molleville, J.; Bihan, H.; Giroux-Leprieur, B.; Sutton, A.; Baudry, C.; Josse, O.; Didier, M.; Deutsch, D.; Bouchaud, O.; Cosson, E.

#### Title

Malnutrition: percentage and association with prognosis in patients hospitalized for coronavirus disease 2019.

#### Source

Nutrients; 2020. 12(12). 45 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Previous studies have found a correlation between malnutrition and prognosis in respiratory infections. Our objectives were to determine (i) the percentage of malnutrition, and (ii) its prognosis in patients admitted for coronavirus disease 2019 (COVID-19). In this monocentric retrospective study, we consecutively included all adult patients presenting with acute COVID-19 between 9 April and 29 May 2020. Malnutrition was diagnosed on low body mass index (BMI) and weight loss 5% in the previous month and/or 10% in the previous six months. The Nutritional Risk Index (NRI) defined nutritional risk. Severe COVID-19 was defined as a need for nasal oxygen 6 L/min. We enrolled 108 patients (64 men, 62 +or- 16

years, BMI 28.8 +or- 6.2 kg/m<sup>2</sup>), including 34 (31.5%) with severe COVID-19. Malnutrition was found in 42 (38.9%) patients, and moderate or severe nutritional risk in 83 (84.7%) patients. Malnutrition was not associated with COVID-19 severity. Nutritional risk was associated with severe COVID-19 ( $p < 0.01$ ;  $p < 0.01$  after adjustment for C reactive protein), as were lower plasma proteins, albumin, prealbumin, and zinc levels ( $p < 0.01$ ). The main cause of malnutrition was inflammation. The high percentage of malnutrition and the association between nutritional risk and COVID-19 prognosis supports international guidelines advising regular screening and nutritional support when necessary.

#### Publication Type

Journal article.

<686>

#### Accession Number

20203597080

#### Author

Amatori, S.; Zeppa, S. D.; Preti, A.; Gervasi, M.; Gobbi, E.; Ferrini, F.; Rocchi, M. B. L.; Baldari, C.; Perroni, F.; Piccoli, G.; Stocchi, V.; Sestili, P.; Sisti, D.

#### Title

Dietary habits and psychological states during COVID-19 home isolation in Italian college students: the role of physical exercise.

#### Source

Nutrients; 2020. 12(12). many ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Social isolation has adverse effects on mental health, physical exercise, and dietary habits. This longitudinal observational study aimed to investigate the effects of mood states and exercise on nutritional choices, on 176 college students (92 males, 84 females; 23 +or- 4 years old) during the COVID-19 lockdown. During 21 days, nutrition and exercise were daily monitored, and the mood states assessed. A factor analysis was used to reduce the number of nutritional variables collected. The relationships between exercise, mood and nutrition were investigated using a multivariate general linear model and a mediation model. Seven factors were found, reflecting different nutritional choices. Exercise was positively associated with fruit, vegetables and fish consumption ( $p = 0.004$ ). Depression and quality of life were, directly and inversely, associated with cereals, legumes ( $p = 0.005$ ;  $p = 0.004$ ) and low-fat meat intake ( $p = 0.040$ ;  $p =$



0.004). Exercise mediated the effect of mood states on fruit, vegetables and fish consumption, respectively, accounting for 4.2% and 1.8% of the total variance. Poorer mood states possibly led to unhealthy dietary habits, which can themselves be linked to negative mood levels. Exercise led to healthier nutritional choices, and mediating the effects of mood states, it might represent a key measure in uncommon situations, such as home-confinement.

#### Publication Type

Journal article.

<687>

#### Accession Number

20203596967

#### Author

Bracci, N.; Han-Chi Pan; Lehman, C.; Kylee Kehn-Hall; Shih-Chao Lin

#### Title

Improved plaque assay for human Coronaviruses 229E and OC43.

#### Source

PeerJ; 2020. 8(10639). 32 ref.

#### Publisher

PeerJ

#### Location of Publisher

San Francisco

#### Country of Publication

USA

#### Abstract

In light of the COVID-19 pandemic, studies that work to understand SARS-CoV-2 are urgently needed. In turn, the less severe human coronaviruses such as HCoV-229E and OC43 are drawing newfound attention. These less severe coronaviruses can be used as a model to facilitate our understanding of the host immune response to coronavirus infection. SARS-CoV-2 must be handled under biosafety level 3 (BSL-3) conditions. Therefore, HCoV-229E and OC43, which can be handled at BSL-2 provide an alternative to SARS-CoV-2 for preclinical screening and designing of antivirals. However, to date, there is no published effective and efficient method to titrate HCoVs other than expensive indirect immunostaining. Here we present an improved approach using an agarose-based conventional plaque assay to titrate HCoV 229E and OC43 with mink lung epithelial cells, Mv1Lu. Our results indicate that titration of HCoV 229E and OC43 with Mv1Lu is consistent and reproducible. The titers produced are also comparable to those produced using human rhabdomyosarcoma (RD) cells. More importantly, Mv1Lu cells display a higher tolerance for cell-cell contact stress, decreased temperature sensitivity, and a faster growth rate. We believe that our improved low-cost plaque assay can serve as an easy tool for researchers conducting HCoV research.

Publication Type

Journal article.

<688>

Accession Number

20203596862

Author

Sun WeiNa; McCroskery, S.; Liu WenChun; Leist, S. R.; Liu YongHong; Albrecht, R. A.; Slamanig, S.; Oliva, J.; Amanat, F.; Schafer, A.; Dinnon, K. H., III; Innis, B. L.; Garcia-Sastre, A.; Krammer, F.; Baric, R. S.; Palese, P.

Title

A Newcastle disease virus (NDV) expressing a membrane-anchored spike as a cost-effective inactivated SARS-CoV-2 vaccine.

Source

Vaccines; 2020. 8(4). 25 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

A successful severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccine must not only be safe and protective, but must also meet the demand on a global scale at a low cost. Using the current influenza virus vaccine production capacity to manufacture an egg-based inactivated Newcastle disease virus (NDV)/SARS-CoV-2 vaccine would meet that challenge. Here, we report pre-clinical evaluations of an inactivated NDV chimera stably expressing the membrane-anchored form of the spike (NDV-S) as a potent coronavirus disease 2019 (COVID-19) vaccine in mice and hamsters. The inactivated NDV-S vaccine was immunogenic, inducing strong binding and/or neutralizing antibodies in both animal models. More importantly, the inactivated NDV-S vaccine protected animals from SARS-CoV-2 infections. In the presence of an adjuvant, antigen-sparing could be achieved, which would further reduce the cost while maintaining the protective efficacy of the vaccine.

Publication Type

Journal article.

<689>

Accession Number

20203596861

Author

Michelitsch, A.; Hoffmann, D.; Wernike, K.; Beer, M.

Title

Occurrence of antibodies against SARS-CoV-2 in the domestic cat population of Germany.

Source

Vaccines; 2020. 8(4). 29 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Domestic cats (*Felis catus*) are popular companion animals that live in close contact with their human owners. Therefore, the risk of a trans-species spreading event between domestic cats and humans is ever-present. Shortly after the emergence of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and its rapid spread around the world, the role of domestic cats in the transmission cycle was questioned. In the present study, the first large-scale survey of antibody occurrence in the domestic cat population in Germany was conducted, in order to assess the incidence of naturally occurring human to cat transmission of SARS-CoV-2. A total of 920 serum samples, which were collected from April to September of 2020, were screened by an indirect multispecies ELISA. Positive samples were verified using an indirect immunofluorescence test (iIFT) and additionally tested for neutralizing antibodies. Furthermore, serum samples were screened for antibodies against feline coronavirus (FCoV), in order to rule out cross-reactivity in the described test systems. Overall, 0.69% (6/920) of serum samples were found to be positive for antibodies against SARS-CoV-2 by ELISA and iIFT. Two of these reactive sera also displayed neutralizing antibodies. No cross-reactivity with FCoV-specific antibodies was observed. The finding of SARS-CoV-2 antibody-positive serum samples in the domestic cat population of Germany, during a period when the incidence of human infection in the country was still rather low, indicates that human-to-cat transmission of SARS-CoV-2 happens, but there is no indication of SARS-CoV-2 circulation in cats.

Publication Type

Journal article.

<690>

Accession Number

20203596855

Author

Jain, S.; Batra, H.; Yadav, P.; Chand, S.

Title

COVID-19 vaccines currently under preclinical and clinical studies, and associated antiviral immune response.

Source

Vaccines; 2020. 8(4). 91 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

With a death toll of over one million worldwide, the COVID-19 pandemic caused by SARS-CoV-2 has become the most devastating humanitarian catastrophe in recent decades. The fear of acquiring infection and spreading to vulnerable people has severely impacted society's socio-economic status. To put an end to this growing number of infections and deaths as well as to switch from restricted to everyday living, an effective vaccine is desperately needed. As a result, enormous efforts have been made globally to develop numerous vaccine candidates in a matter of months. Currently, over 30 vaccine candidates are under assessment in clinical trials, with several undergoing preclinical studies. Here, we reviewed the major vaccine candidates based on the specific vaccine platform utilized to develop them. We also discussed the immune responses generated by these candidates in humans and preclinical models to determine vaccine safety, immunogenicity, and efficacy. Finally, immune responses induced in recovered COVID-19 patients and their possible vaccine development implications were also briefly reviewed.

Publication Type

Journal article.

<691>

Accession Number

20203596831

Author

Kim Hyunsuh; Seiler, P.; Jones, J. C.; Ridout, G.; Camp, K. P.; Fabrizio, T. P.; Jeevan, T.; Miller, L. A.; Throm, R. E.; Ferrara, F.; Fredrickson, R. L.; Lowe, J. F.; Wang LeYi; Odemuyiwa, S. O.; Wan XiuFeng; Webby, R. J.

Title

Antibody responses to SARS-CoV-2 antigens in humans and animals.

Source

Vaccines; 2020. 8(4). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To optimize the public health response to coronavirus disease 2019 (COVID-19), we must first understand the antibody response to individual proteins on the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) and the antibody's cross reactivity to other coronaviruses. Using a panel of 37 convalescent COVID-19 human serum samples, we showed that the magnitude and specificity of responses varied across individuals, independent of their reactivity to seasonal human coronaviruses (HCoVs). These data suggest that COVID-19 vaccines will elicit primary humoral immune responses in naive individuals and variable responses in those previously exposed to SARS-CoV-2. Unlike the limited cross-coronavirus reactivities in humans, serum samples from 96 dogs and 10 cats showed SARS-CoV-2 protein-specific responses focused on non-S1 proteins. The correlation of this response with those to other coronaviruses suggests that the antibodies are cross-reactive and generated to endemic viruses within these hosts, which must be considered in seroepidemiologic studies. We conclude that substantial variation in antibody generation against coronavirus proteins will influence interpretations of serologic data in the clinical and veterinary settings.

Publication Type

Journal article.

<692>

Accession Number

20203596823

Author

Mohammed Alsuhaibani; Aqeel Alaqeel

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Title

Impact of the COVID-19 pandemic on routine childhood immunization in Saudi Arabia.

Source

Vaccines; 2020. 8(4). 26 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic is impacting national and international public health. Routine childhood immunization may be adversely affected by COVID-19 mitigation measures. We aimed to identify the prevalence of delayed immunization and explore the reasons and barriers for delayed immunization during the COVID-19 pandemic in the Qassim region, Saudi Arabia. We conducted a cross-sectional study using an online self-administered questionnaire for parents of children under two years of age during the period from 1 May to 30 June 2020. Most of the 749 participants (82.6%) were mothers, with 31 to 40 years being the most common age group (49.8%). Nearly three-quarters (73.2%) of the parents had appointments scheduled for their child's vaccination during the pandemic, and approximately 23.4% of the parents reported a delay of more than one month in the immunization of their child. The most common reason for the delay was the fear of being infected by COVID-19 (60.9%). Large household size and lack of insurance were risk factors for immunization delay. The COVID-19 pandemic has affected the timeliness of routine childhood immunization in Saudi Arabia. Childhood immunization should be prioritized, as well as the implementation of focused strategies to achieve significant and sustainable vaccination rates during pandemics.

Publication Type

Journal article.

<693>

Accession Number

20203596648

Author

Graham, H. R.; Bagayana, S. M.; Bakare, A. A.; Olayo, B. O.; Peterson, S. S.; Duke, T.; Falade, A. G.

Title

Improving hospital oxygen systems for COVID-19 in low-resource settings: lessons from the field.

Source

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Global Health: Science and Practice; 2020. 8(4):858-862. 19 ref.

Publisher

Johns Hopkins Center for Communication Programs

Location of Publisher

Baltimore

Country of Publication

USA

Abstract

Oxygen therapy is an essential medicine and core component of effective hospital systems. However, many hospitals in low- and middle-income countries lack reliable oxygen access - a deficiency highlighted and exacerbated by the coronavirus disease (COVID-19) pandemic. Oxygen access can be challenged by equipment that is low quality and poorly maintained, lack of clinical and technical training and protocols, and deficiencies in local infrastructure and policy environment. We share learnings from 2 decades of oxygen systems work with hospitals in Africa and the Asia-Pacific regions, highlighting practical actions that hospitals can take to immediately expand oxygen access. These include strategies to: (1) improve pulse oximetry and oxygen use, (2) support biomedical engineers to optimize existing oxygen supplies, and (3) expand on existing oxygen systems with robust equipment and smart design. We make all our resources freely available for use and local adaptation.

Publication Type

Journal article.

<694>

Accession Number

20203596636

Author

Donovan, G.; Ong SiewKim; Song, S.; Ndefru, N.; Leang, C.; Sek, S.; Perrone, L. A.

Title

Remote mentorship using video conferencing as an effective tool to strengthen laboratory quality management in clinical laboratories: lessons from Cambodia.

Source

Global Health: Science and Practice; 2020. 8(4):689-698. 22 ref.

Publisher

Johns Hopkins Center for Communication Programs

Location of Publisher

Baltimore

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## Country of Publication

USA

## Abstract

**Background:**Providing professional development opportunities to staff working in clinical laboratories undergoing quality improvement programs can be challenged by limited funding, particularly in resource-limited countries such as Cambodia. Using innovative approaches such as video conferencing can connect mentors with practitioners regardless of location. This study describes and evaluates the methods, outputs, and outcomes of a quality improvement program implemented in 12 public hospital laboratories in Cambodia between January 2018 and April 2019. The program used mixed intervention methods including both in-person and remote-access training and mentorship. **Methods:**Training outputs were quantified from the activity reports of program trainers and mentors. Program outcomes were measured by pre- and post-implementation audits of laboratory quality management system conformity to international standards. Variations in improved outcomes were assessed in relation to the time spent by laboratory personnel in video conference training and mentoring activity. An additional cross-sectional comparison described the difference in final audit scores between participating and nonparticipating laboratories. **Results:**Laboratories significantly improved their audit scores over the project period, showing significant improvement in all sections of the ISO 15189 standard. Pre- and post-audit score differences and laboratory personnel participation time in remote mentoring activities showed a strong monotonic relationship. Average input per laboratory was 6,027+or-2,454 minutes of participation in video conference activities with mentors. Audit scores of participating laboratories were significantly higher than those of laboratories with no quality improvement program. **Conclusion:**Laboratories improved significantly in ISO 15189 conformity following structured laboratory quality management systems training supported by remote and on-site mentoring. The correlation of laboratory participation in video conference activities highlights the utility of remote video conferencing technology to strengthen laboratories in resource-limited settings and to build communities of practice to address quality improvement issues in health care. These findings are particularly relevant in light of the COVID-19 pandemic.

## Publication Type

Journal article.

<695>

## Accession Number

20203596632

## Author

Claude, K. M.; Serge, M. S.; Alexis, K. K.; Hawkes, M. T.

## Title

Prevention of COVID-19 in internally displaced persons camps in war-torn North Kivu, Democratic Republic of the Congo: a mixed-methods study.

## Source

Global Health: Science and Practice; 2020. 8(4):638-653. 56 ref.



Publisher

Johns Hopkins Center for Communication Programs

Location of Publisher

Baltimore

Country of Publication

USA

Abstract

Background: The coronavirus disease (COVID-19) pandemic poses a grave threat to refugees and internally displaced persons (IDPs). We examined knowledge, attitudes, and practices with respect to COVID-19 prevention among IDPs in war-torn Eastern Democratic Republic of the Congo (DRC). Methods: Mixed-methods study with qualitative (focus group discussions, [FGDs]) and quantitative (52-item survey questionnaire) data collection and synthesis. Results: FGDs (N=23) and survey questionnaires (N=164 IDPs; N=143 comparison group) were conducted in May 2020. FGD participants provided narratives of violence that they had fled. IDPs were statistically more likely to have larger household size, experience more extreme poverty, have lower educational attainment, and have less access to information through media and internet versus the comparison group ( $P < .05$  for the comparison group). IDPs had a high level of awareness (99%) and fear (98%) of COVID-19, but lower specific knowledge (15% sufficient knowledge versus 30% among the comparison group,  $P < .0001$ ), a difference which remained significant in a multivariable model adjusting for confounding. IDPs faced major barriers to implementing COVID-19 prevention measures. Physical distancing was impossible for IDPs in crowded shelters, and 70% reported coming in close contact with someone other than a family member within the past 24 hours (versus 56% of the comparison group,  $P = .014$ ). Frequent movements in and out of the camp for subsistence left IDPs vulnerable to the introduction of COVID-19: 61% left the camp on a daily basis and 65% had received a visitor in the past month. Despite acceptance of hand hygiene for prevention, 92% lacked soap (versus 65% of the comparison group,  $P < .0001$ ). IDPs' desire for peace and to return to their native homes, where COVID-19 precautions could be feasibly implemented, overshadowed their perceived benefits of measures such as a COVID-19 vaccine. Conclusions: These findings provide empiric evidence supporting the vulnerability of IDPs to COVID-19 and call for action to protect neglected displaced populations.

Publication Type

Journal article.

<696>

Accession Number

20203596509

Author

Mejia-Vilet, J. M.; Cordova-Sanchez, B. M.; Fernandez-Camargo, D. A.; Mendez-Perez, R. A.; Morales-Buenrostro, L. E.; Hernandez-Gilsoul, H.

Title

A risk score to predict admission to the intensive care unit in patients with COVID-19: the ABC-GOALS score.

Source

Salud Publica de Mexico; 2021. 63(1):1-11. 38 ref.

Publisher

Instituto Nacional de Salud Publica

Location of Publisher

Cuernavaca

Country of Publication

Mexico

Abstract

**Objective.** To develop a score to predict the need for intensive care unit (ICU) admission in Covid-19. **Materials and methods.** We assessed patients admitted to a Covid-19 center in Mexico. Patients were segregated into a group that required ICU admission, and a group that never required ICU admission. By logistic regression, we derived predictive models including clinical, laboratory, and imaging findings. The ABC-GOALS was constructed and compared to other scores. **Results.** We included 329 and 240 patients in the development and validation cohorts, respectively. One-hundred-fifteen patients from each cohort required ICU admission. The clinical (ABC-GOALS<sub>c</sub>), clinical+laboratory (ABC-GOALS<sub>cl</sub>), clinical+laboratory+image (ABC-GOALS<sub>clx</sub>) models area under the curve were 0.79 (95%CI=0.74-0.83) and 0.77 (95%CI=0.71-0.83), 0.86 (95%CI=0.82-0.90) and 0.87 (95%CI=0.83-0.92), 0.88 (95%CI=0.84-0.92) and 0.86 (95%CI=0.81-0.90), in the development and validation co-horts, respectively. The ABC-GOALS<sub>cl</sub> and ABC-GOALS<sub>clx</sub> outperformed other Covid-19 and pneumonia predictive scores. **Conclusion.** ABC-GOALS is a tool to timely predict the need for admission to ICU in Covid-19.

Publication Type

Journal article.

<697>

Accession Number

20203595797

Author

Hodge, C.; Marra, F.; Marzolini, C.; Boyle, A.; Gibbons, S.; Siccardi, M.; Burger, D.; Back, D.; Khoo, S.

Title

Drug interactions: a review of the unseen danger of experimental COVID-19 therapies.

Source

Journal of Antimicrobial Chemotherapy; 2020. 75(12):3417-3424. 63 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

As global health services respond to the coronavirus pandemic, many prescribers are turning to experimental drugs. This review aims to assess the risk of drug-drug interactions in the severely ill COVID-19 patient. Experimental therapies were identified by searching ClinicalTrials.gov for 'COVID-19', '2019-nCoV', '2019 novel coronavirus' and 'SARS-CoV-2'. The last search was performed on 30 June 2020. Herbal medicines, blood-derived products and in vitro studies were excluded. We identified comorbidities by searching PubMed for the MeSH terms 'COVID-19', 'Comorbidity' and 'Epidemiological Factors'. Potential drug-drug interactions were evaluated according to known pharmacokinetics, overlapping toxicities and QT risk. Drug-drug interactions were graded GREEN and YELLOW: no clinically significant interaction; AMBER: caution; RED: serious risk. A total of 2378 records were retrieved from ClinicalTrials.gov, which yielded 249 drugs that met inclusion criteria. Thirteen primary compounds were screened against 512 comedications. A full database of these interactions is available at [www.covid19-druginteractions.org](http://www.covid19-druginteractions.org). Experimental therapies for COVID-19 present a risk of drug-drug interactions, with lopinavir/ritonavir (10% RED, 41% AMBER; mainly a perpetrator of pharmacokinetic interactions but also risk of QT prolongation particularly when given with concomitant drugs that can prolong QT), chloroquine and hydroxychloroquine (both 7% RED and 27% AMBER, victims of some interactions due to metabolic profile but also perpetrators of QT prolongation) posing the greatest risk. With management, these risks can be mitigated. We have published a drug-drug interaction resource to facilitate medication review for the critically ill patient.

Publication Type

Journal article.

<698>

Accession Number

20203595752

Author

Jin Hui; Qian XinYi

Title

How the Chinese government has done with public health from the perspective of the evaluation and comparison about public-health expenditure.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 epidemic has crashed on the social and economic stability of China and even the world, and raised the question: how has the Chinese government done with public health in recent years? The purpose of this paper is to clarify the definition and items of Chinese public-health expenditure, then to objectively evaluate the Chinese government's performance, so as to help the government to perform better in public health. To achieve this goal, we measure the Chinese public-health expenditure at national and provincial levels based on our definition, and then compare it with the expenditures of other countries. The results show that: (1) the level of public-health expenditure in China is relatively low and far lower than that in developed countries; (2) Chinese governments have not paid enough attention to the prevention and control of major public-health emergencies, which may be an important reason for the outbreak of COVID-19; (3) Chinese public-health expenditure shows a fluctuating growth trend, but the growth rate is so slow that it is lower than that of GDP and fiscal expenditure; (4) although the Chinese government inclines the public-health expenditure to the poor provinces in central and western regions, the imbalance and inequity of public-health resource allocation are still expanding among provinces; (5) there is a lot of waste of resources in the public-health system, which seriously reduces the efficiency of public-health expenditure in China. Therefore, the Chinese government should improve the quantity and quality of public-health expenditure in the above aspects.

Publication Type

Journal article.

<699>

Accession Number

20203595751

Author

Hutter, H. P.; Poteser, M.; Moshhammer, H.; Lemmerer, K.; Mayer, M.; Weitensfelder, L.; Wallner, P.; Kundi, M.

Title

Air pollution is associated with COVID-19 incidence and mortality in Vienna, Austria.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

We determined the impact of air pollution on COVID-19-related mortality and reported-case incidence, analyzing the correlation of infection case numbers and outcomes with previous-year air pollution data from the populations of 23 Viennese districts. Time at risk started in a district when the first COVID-19 case was diagnosed. High exposure levels were defined as living in a district with an average (year 2019) concentration of nitrogen dioxide (NO<sub>2</sub>) and/or particulate matter (PM<sub>10</sub>) higher than the upper quartile (30 and 20 micro g/m<sup>3</sup>, respectively) of all districts. The total population of the individual districts was followed until diagnosis of or death from COVID-19, or until 21 April 2020, whichever came first. Cox proportional hazard regression was performed after controlling for percentage of population aged 65 and more, percentage of foreigners and of persons with a university degree, unemployment rate, and population density. PM<sub>10</sub> and NO<sub>2</sub> were significantly and positively associated with the risk of a COVID-19 diagnosis (hazard ratio (HR) = 1.44 and 1.16, respectively). NO<sub>2</sub> was also significantly associated with death from COVID-19 (HR = 1.72). Even within a single city, higher levels of air pollution are associated with an adverse impact on COVID-19 risk.

Publication Type

Journal article.

<700>

Accession Number

20203595739

Author

Hong HyeHyun; Kim HyoJung

Title

Antecedents and consequences of information overload in the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 45 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The global outbreak of coronavirus disease (COVID-19) in 2020 has significantly affected the information environment as well as the daily life of individuals across the world, with information about COVID-19 dominating all media channels. The information provided at the time of a health crisis like COVID-19 is critical in helping people learn about the disease and the recommendations to prevent infection. However, studies have shown that when people are overwhelmed by too much information (referred to as 'information overload'), this leads to adverse effects. This study examined the antecedents and consequences of information overload in the context of COVID-19. A survey was conducted among 627 residents in Seoul, South Korea, one of the earliest affected countries in the global outbreak. The results showed that cognitive capacity and the frequency of online news use and interpersonal communication were significant predictors of information overload. Information overload influenced how information is processed; it was associated with the tendency toward greater heuristic processing and less systematic processing. In addition, people were more likely to enact prevention behaviors when the information was processed systematically, as opposed to heuristically. The results are discussed considering both the theoretical and practical implications.

Publication Type

Journal article.

<701>

Accession Number

20203595734

Author

McCall, H.; Beahm, J.; Landry, C.; Huang ZiYin; Carleton, R. N.; Hadjistavropoulos, H.

Title

How have public safety personnel seeking digital mental healthcare been affected by the COVID-19 pandemic? An exploratory mixed methods study.

Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 44 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

## Abstract

Public safety personnel (PSP) experience unique occupational stressors and suffer from high rates of mental health problems. The COVID-19 pandemic has impacted virtually all aspects of human life around the world and has introduced additional occupational stressors for PSP. The objective of this study was to explore how PSP, especially those seeking digital mental health services, have been affected by the pandemic. Our research unit, PSPNET, provides internet-delivered cognitive behavioral therapy to PSP in the Canadian province of Saskatchewan. When the pandemic spread to Saskatchewan, PSPNET began inquiring about the impact of the pandemic on prospective clients during the eligibility screening process. We used content analysis to analyze data from telephone screening interviews (n = 56) and descriptive statistics to analyze data from a questionnaire concerning the impacts of COVID-19 (n = 41). The results showed that most PSP reported facing several novel emotional challenges (e.g., social isolation, boredom, anger, and fear) and logistical challenges (e.g., related to childcare, finances, work, and access to mental healthcare). Most participants indicated they felt at least somewhat afraid of contracting COVID-19 but felt more afraid of their families contracting the virus than themselves. However, few participants reported severe challenges of any kind, and many (40%) indicated that they had not been significantly negatively impacted by the pandemic. Overall, the results suggest that PSP are not expressing significant concern at this time in meeting the novel challenges posed by COVID-19. Continued research will be required to monitor how diverse PSP populations and treatment outcomes are affected by the pandemic as the situation evolves.

## Publication Type

Journal article.

<702>

## Accession Number

20203595720

## Author

Gutierrez-Abeyon, E.; Tamayo, E.; Martin-Garcia, D.; Alvarez, F. J.; Herrera-Gomez, F.

## Title

Clinical profile, treatment and predictors during the first COVID-19 wave: a population-based registry analysis from Castile and Leon hospitals.

## Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 61 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

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## Abstract

The first wave of the COVID-19 pandemic collapsed the hospitals in Castile and Leon (Spain). An analysis of the clinical characteristics, drug therapies and principal outcome predictors in the COVID-19 hospitalized patients from 1 March to 31 May 2020 is presented through a population-based registry study. Hospital stay variables, ventilation mode data and clinical outcomes were observed. In Castile and Leon hospitals, 7307 COVID-19 patients were admitted, with 57.05% being male and a median of 76 years. The mortality rate was 24.43%, with a high incidence of severe acute respiratory syndrome (SARS) (14.03%) and acute kidney injury (AKI) (10.87%). The most used medicines were antibiotics (90.83%), antimalarials (42.63%), steroids (44.37%) and antivirals, such as lopinavir/ritonavir (42.63%). The use of tocilizumab (9.37%) and anti-SIRS (systemic inflammatory response syndrome) medicines (7.34%) were remarkable. Fundamentally, death occurred more likely over 65 years of age (OR: 9.05). In addition, the need for ventilation was associated with a higher probability of death (OR: 3.59), SARS (OR: 5.14) and AKI (OR: 2.31). The drug-use pattern had been modified throughout the COVID-19 first wave. Multiple factors, such as age, gender and the need for mechanical ventilation, were related to the worst evolution prognosis of the disease.

## Publication Type

Journal article.

<703>

## Accession Number

20203595689

## Author

Gobbi, E.; Maltagliati, S.; Sarrazin, P.; Fronso, S. di; Colangelo, A.; Cheval, B.; Escriva-Boulley, G.; Tessier, D.; Demirhan Giyasettin; Erturan Gokce; Yuksel Yilmaz; Papaioannou, A.; Bertollo, M.; Carraro, A.

## Title

Promoting physical activity during school closures imposed by the first wave of the COVID-19 pandemic: physical education teachers' behaviors in France, Italy and Turkey.

## Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 58 ref.

## Publisher

MDPI AG

## Location of Publisher

Basel

## Country of Publication

Switzerland

## Abstract



The COVID-19 pandemic has drastically reduced physical activity (PA) behaviors of many people. Physical education (PE) is considered one of the privileged instruments to promote youths' PA. We aimed to investigate the effects of lockdown on PE teachers' behaviors promoting their students' out-of-school PA and differences between three European countries. A sample of 1146 PE teachers (59.5% females) from France, Italy, and Turkey answered an online questionnaire about guiding students to engage in out-of-school PA, helping them to set PA goals, encouraging in self-monitoring PA, the pedagogical formats of these behaviors and feedback asked to students. RM-MANCOVAs were performed with a two-time (before and during the lockdown), three country (France, Italy, Turkey), two gender factorial design, using teaching years and perceived health as covariates. A significant multivariate main effect time x country x gender ( $p < 0.001$ ) was reported for the behaviors promoting students' PA, with French and Italian teachers increasing some behaviors, while Turkish teachers showing opposite trends. Significant multivariate main effects time x country were found for formats supporting the behaviors ( $p < 0.001$ ) and for asked feedback formats ( $p < 0.001$ ). The massive contextual change imposed by lockdown caused different reactions in teachers from the three countries. Findings are informative for PA promotion and PE teachers' education.

#### Publication Type

Journal article.

<704>

#### Accession Number

20203595662

#### Author

Blandenier, E.; Habibi, Z.; Kousi, T.; Sestito, P.; Flahault, A.; Rozanova, L.

#### Title

Initial COVID-19 outbreak: an epidemiological and socioeconomic case review of Iran.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 64 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The coronavirus disease 2019 (COVID-19) pandemic has affected millions of people worldwide. It brought about the implementation of various measures and restrictions at a global level. Iran has been one of the countries with the highest rates of COVID-19 cases. This study reviews the initial outbreak of COVID-19 in Iran and examines the mitigation strategies adopted by the country. Moreover, it reports the

socioeconomic challenges faced by the authorities during the efforts to contain the virus. A transdisciplinary literature review was carried out and a political measures timeline was constructed. A broad overview of the initial phase of the COVID-19 outbreak in Iran is presented, starting from the first confirmed case on 19 February 2020 until April 2020. The results of this epidemiological and socioeconomic case review of Iran suggests that the political measures undertaken by the Republic of Iran contributed to the decrease of the prevalence of COVID-19. However, due to the existing financial bottleneck, Iran has faced limited health system resources. Therefore, the response was not sufficient to restrict the spread and the efficient handling of the virus in the long-term.

#### Publication Type

Journal article.

<705>

#### Accession Number

20203595651

#### Author

Jeong EunSun; Hagose, M.; Jung HyunGul; Ki MoRan; Flahault, A.

#### Title

Understanding South Korea's response to the COVID-19 outbreak: a real-time analysis.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 57 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

This case study focuses on the epidemiological situation of the COVID-19 outbreak, its impacts and the measures South Korea undertook during the first wave of the COVID-19 pandemic. Since the first case was confirmed on 20 January 2020, South Korea has been actively experiencing the COVID-19 outbreak. In the early stage of the pandemic, South Korea was one of the most-affected countries because of a large outbreak related to meetings of a religious movement, namely the Shincheonji Church of Jesus, in a city called Daegu and North Gyeongsang province. However, South Korea was held as a model for many other countries as it appeared to slow the spread of the outbreak with distinctive approaches and interventions. First of all, with drastic and early intervention strategies it conducted massive tracing and testing in a combination of case isolation. These measures were underpinned by transparent risk communication, civil society mobilization, improvement of accessibility and affordability of the treatment and test, the

consistent public message on the potential benefit of wearing a mask, and innovation. Innovative measures include the mobile case-tracing application, mobile self-quarantine safety protection application, mobile self-diagnosis application, and drive-thru screening centres. Meanwhile, the epidemic has brought enormous impacts on society economically and socially. Given its relationship with China, where the outbreak originated, the economic impact in South Korea was predicted to be intense and it was already observed since February due to a decline in exports. The pandemic and measures undertaken by the government also have resulted in social conflicts and debates, human-right concerns, and political tension. Moreover, it was believed that the outbreak of COVID-19 and the governmental responses towards it has brought a huge impact on the general election in April. Despite of the large outbreak in late February, the Korean government has flattened the COVID-19 curve successfully and the downward trend in the number of new cases remained continuously as of 30 April. The most distinctive feature of South Korea's responses is that South Korea conducted proactive case finding, contacts tracing, and isolations of cases instead of taking traditional measures of the containment of the epidemic such as boarder closures and lockdowns.

#### Publication Type

Journal article.

<706>

#### Accession Number

20203595648

#### Author

Zhang Xue; Warner, M. E.

#### Title

COVID-19 policy differences across US States: shutdowns, reopening, and mask mandates.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 48 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

This work used event study to examine the impact of three policies (shutdowns, reopening, and mask mandates) on changes in the daily COVID-19 infection growth rate at the state level in the US (February through August 2020). The results show the importance of early intervention: shutdowns and mask mandates reduced the COVID-19 infection growth rate immediately after being imposed statewide. Over the longer term, mask mandates had a larger effect on flattening the curve than shutdowns. The increase in

the daily infection growth rate pushed state governments to shut down, but reopening led to significant increases in new cases 21 days afterward. The results suggest a dynamic social distancing approach: a shutdown for a short period followed by reopening, combined with universal mask wearing. We also found that the COVID-19 growth rate increased in states with higher percentages of essential workers (during reopening) and higher percentages of minorities (during the mask mandate period). Health insurance access for low-income workers (via Medicaid expansion) helped to reduce COVID-19 cases in the reopening model. The implications for public health show the importance of access to health insurance and mask mandates to protect low-income essential workers, but minority groups still face a higher risk of infection during the pandemic.

#### Publication Type

Journal article.

<707>

#### Accession Number

20203595638

#### Author

Woon SyCherng [Woon, S. C. L.]; Hatta Sidi; Nik Jaafar Nik Ruzyanei; Mohammad Farris, I. L. B. A.

#### Title

Mental health status of university healthcare workers during the COVID-19 pandemic: a post-movement lockdown assessment.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 41 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

This study investigated the prevalence and severity of depression, anxiety, and stress and determined the association between various factors, social support, and depression, anxiety, and stress among university healthcare workers in Malaysia after the government lifted the movement control order (MCO) put in place to curb the coronavirus disease 2019 (COVID-19) pandemic. This online, cross-sectional survey recruited 399 participants from two university hospitals, and they were administered a self-reported questionnaire on demographic, personal, and clinical characteristics, as well as COVID-19-related stressors and coping. In addition, they completed the Multidimensional Scale of Perceived Social Support (MSPSS) to measure perceived social support, as well as the 21-item Depression, Anxiety, and Stress Scale (DASS-21) to assess

depression, anxiety, and stress. We found that the prevalence rates of depression, anxiety, and stress were 21.8%, 31.6%, and 29.1%, respectively. Participants with moderate to extremely severe depression, anxiety, and stress made up 13.3%, 25.8%, and 8.1% of the sample, respectively. Being single or divorced, fear of frequent exposure to COVID-19 patients, agreeing that the area of living had a high prevalence of COVID-19 cases, uncertainty regarding the prevalence of COVID-19 cases in the area of living, and a history of pre-existing psychiatric illnesses were associated with higher odds of depression, anxiety, and stress. Conversely, having more than three children and greater perceived friend support were associated with lower odds of depression, anxiety, and stress. The prevalence of depression, anxiety, and stress remained elevated even after the MCO was lifted.

#### Publication Type

Journal article.

<708>

#### Accession Number

20203595631

#### Author

Alamri, H. S.; Abdullah Algarni; Shehata, S. F.; Ali Al-Bshabshe; Alshehri, N. N.; Alasiri, A. M.; Hussain, A. H.; Alalmay, A. Y.; Alshehri, E. A.; Yahya Alqarni; Saleh, N. F.

#### Title

Prevalence of depression, anxiety, and stress among the general population in Saudi Arabia during COVID-19 pandemic.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 41 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

Coronavirus disease 2019 (COVID-19) pandemic has had a significant impact on public mental health. Our objective was to assess prevalence of depression, anxiety, and stress among the general population in Saudi Arabia during this pandemic. A descriptive cross-sectional approach was used targeting all accessible populations in Saudi Arabia. Data were collected from participants using an electronic pre-structured questionnaire. Psychological impact was assessed using the Arabic version of Depression, Anxiety, and Stress Scale (DASS-21). A total of 1597 participants completed the survey. In total, 17.1% reported moderate to severe depressive symptoms; 10% reported moderate to severe anxiety symptoms; and 12%

reported moderate to severe stress levels. Depression, anxiety, and stress were significantly higher among females, younger respondents, and health care providers. Depression was higher among smokers, singles, and non-working respondents. Anxiety was higher among those reporting contacts with COVID-19 positive cases, previously quarantined and those with chronic health problems. Our findings reaffirm the importance of providing appropriate knowledge and specialized interventions to promote the mental well-being of the Saudi population, paying particular attention to high-risk groups.

#### Publication Type

Journal article.

<709>

#### Accession Number

20203595629

#### Author

Chen HuaRuo; Liu Fan; Pang LiMan; Liu Fei; Fang TingTing; Wen Ya; Chen Shi; Xie ZhiYao; Zhang XueHui; Zhao YiHong; Gu XueYing

#### Title

Are you tired of working amid the pandemic? The role of professional identity and job satisfaction against job burnout.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 70 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

With the outbreak of novel coronavirus in 2019, most universities changed from traditional offline teaching to online teaching, which brought about a large amount of problems, including teachers' physical and mental problems. Because of teaching on the computer screen for a long period of time, the teacher lacks communication and can act casually. With long-term accumulation, the problem of teachers' job burnout has become increasingly serious. The main purpose of this study was to examine the influence of professional identity on job burnout during the period of the novel coronavirus. At the same time, this study also discussed the moderating effect of job satisfaction on professional identity and job burnout, and its relationship between job satisfaction and job burnout. During the peak period of the COVID-19 epidemic, we conducted an online survey - 483 Chinese university teachers with online teaching experience completed the Teacher Professional Identity Scale, Job Satisfaction Scale, and Job Burnout Scale. The

results of this study found professional identity and job satisfaction of university teachers to be significantly negative predictors of job burnout, with job satisfaction playing a moderating role between professional identity and job burnout. This study also confirmed that professional identity and job satisfaction are important factors affecting job burnout of university teachers. Therefore, this study proposed that schools should adopt more effective strategies to improve university teachers' professional identity and job satisfaction in order to reduce the practical problems of job burnout, ensure the effectiveness of online teaching, and maintain the sustainable development during the epidemic.

#### Publication Type

Journal article.

<710>

#### Accession Number

20203595609

#### Author

Lourdes Aguiar-Oliveira, M. de; Campos, A.; Matos, A. R.; Rigotto, C.; Sotero-Martins, A.; Teixeira, P. F. P.; Siqueira, M. M.

#### Title

Wastewater-based epidemiology (WBE) and viral detection in polluted surface water: a valuable tool for COVID-19 surveillance-a brief review.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(24). 118 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

SARS-CoV-2 is the causative agent of the current COVID-19 pandemic. Disease clinical manifestations range from asymptomatic to severe multiple organ damage. SARS-CoV-2 uses ACE2 as a cellular receptor, which is abundantly expressed in the small intestine, allowing viral replication in the gastrointestinal tract. Viral RNA has been detected in the stool of COVID-19 patients and viable viruses had been isolated in some of these samples. Thus, a putative role of SARS-CoV-2 fecal-oral transmission has been argued. SARS-CoV-2 is shed in human excreta and further disposed in the sewerage or in the environment, in poor basic sanitation settings. Wastewater-based epidemiology (WBE) is a valuable population level approach for monitoring viral pathogens and has been successfully used in different contexts. This review summarizes the current global experience on SARS-CoV-2 WBE in distinct continents and viral detection in polluted

surface water. The advantages and concerns of this strategy for SARS-CoV-2 surveillance are discussed. Outcomes suggest that WBE is a valuable early warning alert and a helpful complementary surveillance tool to subsidize public health response, to tailor containment and mitigation measures and to determine target populations for testing. In poor sanitation settings, contaminated rivers could be alternatively used as a source for environmental surveillance.

#### Publication Type

Journal article.

<711>

#### Accession Number

20203595474

#### Author

Akiyama, Y.; Morioka, S.; Wakimoto, Y.; Kawashima, A.; Kanda, K.; Okuhama, A.; Suzuki, T.; Miyazato, Y.; Nomoto, H.; Ide, S.; Nakamoto, T.; Nakamura, K.; Ota, M.; Moriyama, Y.; Takaya, S.; Yamada, K.; Taguchi, M.; Sugito, E.; Izuka, S.; Ishiguro, K.; Kobayashi, T.; Miyake, W.; Kubota, S.; Ishikane, M.; Kinoshita, N.; Yamamoto, K.; Ujiie, M.; Kutsuna, S.; Hayakawa, K.; Saito, S.; Ohmagari, N.

#### Title

Non-COVID-19 patients with life-threatening diseases who visited a fever clinic: a single-center, observational study in Tokyo, Japan.

#### Source

Internal Medicine (Tokyo); 2020. 59(24):3131-3133. 7 ref.

#### Publisher

Japanese Society of Internal Medicine

#### Location of Publisher

Tokyo

#### Country of Publication

Japan

#### Abstract

**Objective:** In fever clinics screening coronavirus disease (COVID-19), there could be patients with lifethreatening diseases that physicians should not overlook. We exploratorily investigated the final diagnosis among non-COVID-19 hospitalized patients who visited the fever clinic. **Methods:** This was a retrospective, observational, and single-centered study conducted in the National Center for Global Health and Medicine (NCGM), Tokyo, Japan. We conducted a retrospective chart review of patients who visited the fever clinic in the NCGM from 11 March 2020 to 24 April 2020. Patients who met the following clinical criteria visited the fever clinic in the NCGM: (1) body temperature >37.5 degrees , (2) any symptoms consistent with COVID-19 or (3) referral from local healthcare facilities. In the fever clinic, all patients who met the above criteria had severe acute respiratory syndrome coronavirus 2 polymerase chain reaction test



with nasopharyngeal swab specimens. Patients with severe symptoms or an unstable condition were sent to an outpatient clinic for infectious diseases for further evaluation and treatment. Results: Among 1,470 patients who visited the fever clinic, 84 patients were hospitalized, and 45 of them were diagnosed as having COVID-19. Among the remaining 39 non-COVID-19 patients, there were nine patients with life-threatening diseases. The life-threatening diseases included acute heart failure, septic shock, pneumocystis pneumonia, peritonsillar abscess, and necrotizing fasciitis. Conclusion: Physicians should evaluate each patient carefully while considering other life-threatening conditions even in such a COVID-19 pandemic era.

#### Publication Type

Journal article.

<712>

#### Accession Number

20203595413

#### Author

Venegas, E. de la C. R.; Hernandez-Garcia, O. L.; Piedra, D. A. D.

#### Title

Safety of chloroquine and hydroxychloroquine for treating COVID-19 patients. [Spanish]

#### Source

Revista Cubana de Medicina; 2020. 59(3). 28 ref.

#### Publisher

Editorial Ciencias Medicas

#### Location of Publisher

Havana

#### Country of Publication

Cuba

#### Abstract

Introduction: Chloroquine and its analogue hydroxychloroquine have shown antiviral and antiinflammatory effects, so it could be an alternative treatment to the new SARS-CoV-2 coronavirus. Background: To describe the safety of chloroquine and hydroxychloroquine for treating COVID-19 according to current scientific evidence. Method: We used the search strategy for coronavirus OR COVID-19 OR SARS-CoV2 AND Chloroquine AND Hydroxychloroquine, and Pubmed, SciELO, Lilacs, Cochrane Library and Web of Science databases were used. Thirty two bibliographic references were recovered, selection followed the selection criteria. Conclusions: The efficacy of chloroquine and hydroxychloroquine has not been fully proven, since the results have not been conclusive and differences have been found between them, In addition to the fact that sufficiently representative samples have not been studied. The adverse reactions of these drugs, and the cardiovascular ones are the most dangerous, should not be ignored since they have occurred with certain frequency and in relation to the administered dose. Therefore, it is necessary to carry

out more randomized clinical trials, with greater control of biases and representative samples, to evaluate the efficacy and safety of these drugs.

Publication Type

Journal article.

<713>

Accession Number

20203595410

Author

Machiels, J. D.; Avest, M. ter; Oever, J. ten; Kramers, C.

Title

Chloroquine at COVID-19: hype or not? [Dutch]

Source

Nederlands Tijdschrift voor Geneeskunde; 2020. 164(51).

Publisher

Bohn Stafleu Van Loghum

Location of Publisher

Houten

Country of Publication

Netherlands

Publication Type

Journal article.

<714>

Accession Number

20203595104

Author

Speake, H.; Phillips, A.; Chong, T.; Sikazwe, C.; Levy, A.; Lang, J.; Scalley, B.; Speers, D. J.; Smith, D. W.; Effler, P.; McEvoy, S. P.

Title

Flight-associated transmission of severe acute respiratory syndrome coronavirus 2 corroborated by whole-genome sequencing.

Source

Emerging Infectious Diseases; 2020. 26(12):2872-2880. 25 ref.

Publisher

National Center for Infectious Diseases, Centers for Disease Control and Prevention

Location of Publisher

Atlanta

Country of Publication

USA

Abstract

To investigate potential transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) during a domestic flight within Australia, we performed epidemiologic analyses with whole-genome sequencing. Eleven passengers with PCR-confirmed SARS-CoV-2 infection and symptom onset within 48 hours of the flight were considered infectious during travel; 9 had recently disembarked from a cruise ship with a retrospectively identified SARS-CoV-2 outbreak. The virus strain of those on the cruise and the flight was linked (A2-RP) and had not been previously identified in Australia. For 11 passengers, none of whom had traveled on the cruise ship, PCR-confirmed SARS-CoV-2 illness developed between 48 hours and 14 days after the flight. Eight cases were considered flight associated with the distinct SARS-CoV-2 A2-RP strain; the remaining 3 cases (1 with A2-RP) were possibly flight associated. All 11 passengers had been in the same cabin with symptomatic persons who had culture-positive A2-RP virus strain. This investigation provides evidence of flight-associated SARS-CoV-2 transmission.

Publication Type

Journal article.

<715>

Accession Number

20203595015

Author

Wei Ping Khor; Olaoye, O.; D'Arcy, N.; Krockow, E. M.; Elshenawy, R. A.; Rutter, V.; Ashiru-Oredope, D.

Title

The need for ongoing antimicrobial stewardship during the COVID-19 pandemic and actionable recommendations.

Source

Antibiotics; 2020. 9(12). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus disease (COVID-19) pandemic, which has significant impact on global health care delivery, occurs amid the ongoing global health crisis of antimicrobial resistance. Early data demonstrated that bacterial and fungal co-infection with COVID-19 remain low and indiscriminate use of antimicrobials during the pandemic may worsen antimicrobial resistance. It is, therefore, essential to maintain the ongoing effort of antimicrobial stewardship activities in all sectors globally.

Publication Type

Journal article.

<716>

Accession Number

20203594940

Title

Effect of hydroxychloroquine in hospitalized patients with Covid-19.

Source

New England Journal of Medicine; 2020. 383(21):2030-2040. 40 ref.

Publisher

Massachusetts Medical Society

Location of Publisher

Waltham

Country of Publication

USA

Abstract

Background: Hydroxychloroquine and chloroquine have been proposed as treatments for coronavirus disease 2019 (Covid-19) on the basis of in vitro activity and data from uncontrolled studies and small,

randomized trials. Methods: In this randomized, controlled, open-label platform trial comparing a range of possible treatments with usual care in patients hospitalized with Covid-19, we randomly assigned 1561 patients to receive hydroxychloroquine and 3155 to receive usual care. The primary outcome was 28-day mortality. Results: The enrollment of patients in the hydroxychloroquine group was closed on June 5, 2020, after an interim analysis determined that there was a lack of efficacy. Death within 28 days occurred in 421 patients (27.0%) in the hydroxychloroquine group and in 790 (25.0%) in the usual-care group (rate ratio, 1.09; 95% confidence interval [CI], 0.97 to 1.23; P=0.15). Consistent results were seen in all prespecified subgroups of patients. The results suggest that patients in the hydroxychloroquine group were less likely to be discharged from the hospital alive within 28 days than those in the usual-care group (59.6% vs. 62.9%; rate ratio, 0.90; 95% CI, 0.83 to 0.98). Among the patients who were not undergoing mechanical ventilation at baseline, those in the hydroxychloroquine group had a higher frequency of invasive mechanical ventilation or death (30.7% vs. 26.9%; risk ratio, 1.14; 95% CI, 1.03 to 1.27). There was a small numerical excess of cardiac deaths (0.4 percentage points) but no difference in the incidence of new major cardiac arrhythmia among the patients who received hydroxychloroquine. Conclusions: Among patients hospitalized with Covid-19, those who received hydroxychloroquine did not have a lower incidence of death at 28 days than those who received usual care.

#### Publication Type

Journal article.

<717>

#### Accession Number

20203594901

#### Author

Chirizzi, D.; Conte, M.; Feltracco, M.; Dinoi, A.; Gregoris, E.; Barbaro, E.; Bella, G. la; Ciccarese, G.; Salandra, G. la; Gambaro, A.; Contini, D.

#### Title

SARS-CoV-2 concentrations and virus-laden aerosol size distributions in outdoor air in north and south of Italy.

#### Source

Environment International; 2021. 146. 37 ref.

#### Publisher

Pergamon Press

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The COVID-19 disease spread at different rates in the different countries and in different regions of the same country, as happened in Italy. Transmission by contact or at close range due to large respiratory droplets is widely accepted, however, the role of airborne transmission due to small respiratory droplets emitted by infected individuals (also asymptomatic) is controversial. It was suggested that outdoor airborne transmission could play a role in determining the differences observed in the spread rate. Concentrations of virus-laden aerosol are still poorly known and contrasting results are reported, especially for outdoor environments. Here we investigated outdoor concentrations and size distributions of virus-laden aerosol simultaneously collected during the pandemic, in May 2020, in northern (Veneto) and southern (Apulia) regions of Italy. The two regions exhibited significantly different prevalence of COVID-19. Genetic material of SARS-CoV-2 (RNA) was determined, using both real time RT-PCR and ddPCR, in air samples collected using PM10 samplers and cascade impactors able to separate 12 size ranges from nanoparticles (diameter  $D < 0.056$  micro m) up to coarse particles ( $D > 18$  micro m). Air samples tested negative for the presence of SARS-CoV-2 at both sites, viral particles concentrations were  $<0.8$  copies  $m^{-3}$  in PM10 and  $<0.4$  copies  $m^{-3}$  in each size range investigated. Outdoor air in residential and urban areas was generally not infectious and safe for the public in both northern and southern Italy, with the possible exclusion of very crowded sites. Therefore, it is likely that outdoor airborne transmission does not explain the difference in the spread of COVID-19 observed in the two Italian regions.

#### Publication Type

Journal article.

<718>

#### Accession Number

20203594798

#### Author

Barouki, R.; Kogevinas, M.; Audouze, K.; Belesova, K.; Bergman, A.; Birnbaum, L.; Boekhold, S.; Denys, S.; Deseille, C.; Drakvik, E.; Frumkin, H.; Garric, J.; Destoumieux-Garzon, D.; Haines, A.; Huss, A.; Jensen, G.; Karakitsios, S.; Klanova, J.; Koskela, I. M.; Laden, F.; Marano, F.; Matthies-Wiesler, E. F.; Morris, G.; Nowacki, J.; Paloniemi, R.; Pearce, N.; Peters, A.; Rekola, A.; Sarigiannis, D.; Sebkova, K.; Slama, R.; Staatsen, B.; Tonne, C.; Vermeulen, R.; Vineis, P.

#### Title

The COVID-19 pandemic and global environmental change: emerging research needs.

#### Source

Environment International; 2021. 146. 27 ref.

#### Publisher

Pergamon Press

#### Location of Publisher

Oxford

#### Country of Publication

UK

## Abstract

The outbreak of COVID-19 raised numerous questions on the interactions between the occurrence of new infections, the environment, climate and health. The European Union requested the H2020 HERA project which aims at setting priorities in research on environment, climate and health, to identify relevant research needs regarding Covid-19. The emergence and spread of SARS-CoV-2 appears to be related to urbanization, habitat destruction, live animal trade, intensive livestock farming and global travel. The contribution of climate and air pollution requires additional studies. Importantly, the severity of COVID-19 depends on the interactions between the viral infection, ageing and chronic diseases such as metabolic, respiratory and cardiovascular diseases and obesity which are themselves influenced by environmental stressors. The mechanisms of these interactions deserve additional scrutiny. Both the pandemic and the social response to the disease have elicited an array of behavioural and societal changes that may remain long after the pandemic and that may have long term health effects including on mental health. Recovery plans are currently being discussed or implemented and the environmental and health impacts of those plans are not clearly foreseen. Clearly, COVID-19 will have a long-lasting impact on the environmental health field and will open new research perspectives and policy needs.

## Publication Type

Journal article.

<719>

## Accession Number

20203594469

## Author

Camara, I.; Toure, A.; Camara, A.; Marcis, F. le; Bangoura, S. T.; Kpamou, C.; Sow, M. S.; Keita, A. K.

## Title

Preparing for the COVID-19 pandemic response in a country emerging from an Ebola Epidemic: assessment of health workers' knowledge, attitudes and practices on coronavirus (COVID-19) in Guinea.

## Source

Journal of Public Health and Epidemiology; 2020. 12(4):318-328. 14 ref.

## Publisher

Academic Journals

## Location of Publisher

Lagos

## Country of Publication

Nigeria

## Abstract

On January 30, 2020, the World Health Organization designated the outbreak as a Public Health Emergency of International Scope (USPPI). The purpose of this study was to assess the knowledge, attitudes and practices of medical personnel on the prevention of Covid-2019. A cross-sectional study among front-line health workers in the health facilities in the city of Conakry was carried out. The knowledge and attitude score were performed and categorized in 2: Good if at the average score and bad if < 50%. Logistic regression models were conducted to identify factors associated with knowledge and attitude. Among 548 health workers surveyed, 70.6% had a good knowledge of Covid-19. Among the health personnel interviewed, 57.7% had a good attitude towards a suspected case of Covid-19. Independent factors associated with poor knowledge of Covid-19 prevention were sex, health facility, and staff grade. As for poor attitude, the associated factors were knowledge of Ebola cases reported in the facility and the rank of the health staff. The health personnel have good knowledge of the virus but the attitudes are not related to knowledge. This study could serve as a basis for reorienting interventions involving front-line staff.

#### Publication Type

Journal article.

<720>

#### Accession Number

20203594420

#### Author

Chowdhury, M. A.; Shuvho, M. B. A.; Shahid, M. A.; Haque, A. K. M. M.; Kashem, M. A.; Lam SuShiung; Ong HwaiChyuan; Uddin, M. A.; Mofijur, M.

#### Title

Prospect of biobased antiviral face mask to limit the coronavirus outbreak.

#### Source

Environmental Research; 2021. 192. 20 ref.

#### Publisher

Elsevier Inc

#### Location of Publisher

Orlando

#### Country of Publication

USA

#### Abstract

The rapid spread of COVID-19 has led to nationwide lockdowns in many countries. The COVID-19 pandemic has played serious havoc on economic activities throughout the world. Researchers are immensely curious about how to give the best protection to people before a vaccine becomes available. The coronavirus spreads principally through saliva droplets. Thus, it would be a great opportunity if the virus spread could be controlled at an early stage. The face mask can limit virus spread from both inside and



outside the mask. This is the first study that has endeavoured to explore the design and fabrication of an antiviral face mask using licorice root extract, which has antimicrobial properties due to glycyrrhetic acid (GA) and glycyrrhizin (GL). An electrospinning process was utilized to fabricate nanofibrous membrane and virus deactivation mechanisms discussed. The nanofiber mask material was characterized by SEM and airflow rate testing. SEM results indicated that the nanofibers from electrospinning are about 15-30 nm in diameter with random porosity and orientation which have the potential to capture and kill the virus. Theoretical estimation signifies that an 85 L/min rate of airflow through the face mask is possible which ensures good breathability over an extensive range of pressure drops and pore sizes. Finally, it can be concluded that licorice root membrane may be used to produce a biobased face mask to control COVID-19 spread.

#### Publication Type

Journal article.

<721>

#### Accession Number

20203594401

#### Author

Venter, Z. S.; Anan, K.; Chowdhury, S.; Lelieveld, J.

#### Title

Air pollution declines during COVID-19 lockdowns mitigate the global health burden.

#### Source

Environmental Research; 2021. 192. 26 ref.

#### Publisher

Elsevier Inc

#### Location of Publisher

Orlando

#### Country of Publication

USA

#### Abstract

The lockdown response to COVID-19 has resulted in an unprecedented reduction in global economic activity and associated air pollutant levels, especially from a decline in land transportation. We utilized a network of >10,000 air quality stations distributed over 34 countries during lockdown dates up until 15 May 2020 to obtain lockdown related anomalies for nitrogen dioxide, ozone and particulate matter smaller than 2.5 µm in diameter (PM<sub>2.5</sub>). Pollutant anomalies were related to short-term health outcomes using empirical exposure-response functions. We estimate that there were a net total of 49,900 (11,000 to 90,000; 95% confidence interval) excess deaths and 89,000 (64,700 to 107,000) pediatric asthma emergency room visits avoided during lockdowns. In China and India alone, the PM<sub>2.5</sub>-related avoided

excess mortality was 19,600 (15,300 to 24,000) and 30,500 (5700 to 68,000), respectively. While the state of COVID-19 imposed lockdown is not sustainable, these findings illustrate the potential health benefits gained by reducing "business as usual" air pollutant emissions from economic activities primarily through finding alternative transportation solutions.

#### Publication Type

Journal article.

<722>

#### Accession Number

20203594399

#### Author

Dettori, M.; Deiana, G.; Balletto, G.; Borruso, G.; Murgante, B.; Arghittu, A.; Azara, A.; Castiglia, P.

#### Title

Air pollutants and risk of death due to COVID-19 in Italy.

#### Source

Environmental Research; 2021. 192. 38 ref.

#### Publisher

Elsevier Inc

#### Location of Publisher

Orlando

#### Country of Publication

USA

#### Abstract

The present work aims to study the role of air pollutants in relation to the number of deaths per each Italian province affected by COVID-19. To do that, specific mortality from COVID-19 has been standardized for each Italian province and per age group (10 groups) ranging from 0 to 9 years to >90 years, based on the 2019 national population figures. The link between air pollutants and COVID-19 mortality among Italian provinces was studied implementing a linear regression model, whereas the wide set of variables were examined by means of LISA (Local Indicators of Spatial Autocorrelation), relating the spatial component of COVID-19 related data with a mix of environmental variables as explanatory variables. As results, in some provinces, namely the Western Po Valley provinces, the SMR (Standardized Mortality Ratio) is much higher than expected, and the presence of PM10 was independently associated with the case status. Furthermore, the results for LISA on SMR and PM10 demonstrate clusters of high-high values in the wide Metropolitan area of Milan and the Po Valley area respectively, with a certain level of overlap of the two distributions in the area strictly considered Milan. In conclusion, this research appears to find elements to confirm the existence of a link between pollution and the risk of death due to the disease, in particular, considering land take and air pollution, this latter referred to particulate (PM10). For this reason, we can reiterate the need

to act in favour of policies aimed at reducing pollutants in the atmosphere, by means of speeding up the already existing plans and policies, targeting all sources of atmospheric pollution: industries, home heating and traffic.

#### Publication Type

Journal article.

<723>

#### Accession Number

20203594359

#### Author

Rahman, M. M.; Bodrud-Doza, M.; Mashura Shammi; Islam, A. R. M. T.; Khan, A. S. M.

#### Title

COVID-19 pandemic, dengue epidemic, and climate change vulnerability in Bangladesh: scenario assessment for strategic management and policy implications.

#### Source

Environmental Research; 2021. 192. 46 ref.

#### Publisher

Elsevier Inc

#### Location of Publisher

Orlando

#### Country of Publication

USA

#### Abstract

Bangladesh is one of the most vulnerable countries to climate change impacts also struck by the COVID-19 pandemic. The lockdown measures were ineffective with no sign of flattening the curve. Therefore, the high risk of transmission is evident with an increasing number of affected people. Under this circumstance, a multiple hazards scenario can be developed in this country due to climatic hazards such as cyclones, floods, landslides, heat waves, and the outbreak of infectious diseases such as dengue, cholera, and diarrhoea. The country experiences simultaneously the global pandemic, exceptionally prolonged flood along with the recovery stage from the damages due to the cyclone (Amphan). Therefore, these multiple factors have been putting pressure on losing millions of homes, livelihoods, and agricultural crops. This study aimed to assess the potential impact of a simultaneous strike of climatic hazards and infectious disease outbreaks and their possible strategic management in Bangladesh under different scenarios. A mixed methodological approach was followed in this study including a questionnaire survey, in-depth discussion with experts, and extensive literature review to assess the multi-hazard scenario in a resource-limited setting with high population density. A set of statistical techniques were used to analyze the responses (n = 1590) from different social groups (healthcare professionals, academicians, students,

Government and NGO officials, and businessman) under three scenarios. The results revealed the high possibility of aggravating the impact of COVID-19 pandemic if there is a climatic hazard such as flood, cyclone have appeared. The majority of the respondents agreed that the situation will become more devastating if there is another outbreak of diseases such as dengue, cholera, and diarrhoea. The poor and fragile healthcare system of this country cannot bear such unprecedented pressure. The lack of risk assessment and communication, lack of sectoral coordination might restrict the contingency plan of the government. Therefore, considering the unprecedented worst cases a stringent strategic plan for emergency response, short term and long-term management should have to be formulated. Resilience building through proactive planning and implementation of integrated, inclusive and sustainable strategies will be effective to ensure the health and socio-economic security for multi-hazard threats in the country.

#### Publication Type

Journal article.

<724>

#### Accession Number

20203594310

#### Author

Cai ShaoZhe; Sun Wei; Li Ming; Dong LingLi

#### Title

A complex COVID-19 case with rheumatoid arthritis treated with tocilizumab.

#### Source

Clinical Rheumatology; 2020. 39(9):2797-2802. 24 ref.

#### Publisher

Springer-Verlag

#### Location of Publisher

Godalming

#### Country of Publication

UK

#### Abstract

Recurrences of COVID-19 were observed in a patient with long-term usage of hydroxychloroquine, leflunomide, and glucocorticoids due to her 30-year history of rheumatoid arthritis (RA). Tocilizumab was applied and intended to target both COVID-19 and RA. However, disease of this patient aggravated after usage of tocilizumab. After the discussion of a multiple disciplinary team (MDT) including rheumatologists, antimicrobial treatments were applied to target the potential opportunistic infections (*Pneumocystis jirovecii* and *Aspergillus fumigatus*), which were authenticated several days later via high throughput sequencing. As an important cytokine in immune responses, IL-6 can be a double-edged sword: interference in the IL-6-IL-6 receptor signaling may save patients from cytokine release storm (CRS), but can

also weaken the anti-infectious immunity, particularly in rheumatic patients, who may have received a long-term treatment with immunosuppressive/modulatory agents. Thus, we suggest careful considerations before and close monitoring in the administration of tocilizumab in rheumatic patients with COVID-19. Besides tocilizumab, several disease-modifying antirheumatic drugs (DMARDs) can also be applied in the treatment of COVID-19. Therefore, we also reviewed and discussed the application of these DMARDs in COVID-19 condition.

#### Publication Type

Journal article.

<725>

#### Accession Number

20203594307

#### Author

Padmanabha Shenoy; Sakir Ahmed; Aby Paul; Skaria, T. G.; Joel Joby; Bazil Alias

#### Title

Switching to teleconsultation for rheumatology in the wake of the COVID-19 pandemic: feasibility and patient response in India.

#### Source

Clinical Rheumatology; 2020. 39(9):2757-2762. 16 ref.

#### Publisher

Springer-Verlag

#### Location of Publisher

Godalming

#### Country of Publication

UK

#### Abstract

The emergent COVID-19 pandemic dictates an urgent switch to teleconsultation. India has high patient to rheumatologist ratio, and patients have limited concepts about telemedicine. Thus, we attempted to find the feasibility and acceptance of patients in switching to teleconsultation. The CARE rheumatology clinic at Kerala, India, caters to average 170 (range: 140-240) patients per day. Patients with prefixed appointments had two-level screening for eligibility for teleconsultation. Those eligible were given the option for teleconsultation on the widely available WhatsApp app. Of those who completed teleconsultations, 100 were chosen at random to provide feedback. In the first 7 days, out of 1469 appointments, 975 were found eligible for teleconsultation. Of these, 723 (74%) opted for it. The average footfall in the clinic was reduced to 67 (range 29-117). The proportion of patients accepting teleconsultations increased with time. Amongst the 100 respondents, median satisfaction was 9 (IQR 8-10) and recommendation for continuing was 9.5 (IQR 8-10) on a 0-10 scale. Multivariate analysis showed the recommendation score was dependent on

beliefs about social distancing, perceptions about clinical examination, and the satisfaction score of the first teleconsultation. Age, sex, availability of personal video conferencing app or of vehicles did not independently influence this score. Without teleconsultation facilities, three-fourths of the respondents would have stopped drugs or self-medicated. The switch was feasible and accepted by patients. It enabled quick reduction in the number of persons travelling to the centre. Not making the switch could have deprived approximately three-quarters of these patients of proper medical care.

**Publication Type**

Journal article.

<726>

**Accession Number**

20203594161

**Author**

Bhaskar, M. E.; Santhanam Arun

**Title**

SARS-CoV-2 infection among community health workers in India before and after use of face shields.

**Source**

JAMA, Journal of the American Medical Association; 2020. 324(13):1348-1349. 4 ref.

**Publisher**

American Medical Association

**Location of Publisher**

Chicago

**Country of Publication**

USA

**Publication Type**

Journal article.

<727>

**Accession Number**

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20203594160

Author

Chambers, C.; Krogstad, P.; Bertrand, K.; Contreras, D.; Tobin, N. H.; Bode, L.; Aldrovandi, G.

Title

Evaluation for SARS-CoV-2 in breast milk from 18 infected women.

Source

JAMA, Journal of the American Medical Association; 2020. 324(13):1347-1348. 6 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

Country of Publication

USA

Publication Type

Journal article.

<728>

Accession Number

20203593979

Author

Tao ZhengAng; Zhang Lei; Friedemann, T.; Yang GuangShan; Li JinHu; Wen YaoCai; Wang JingHui; Shen AiZong

Title

Systematic analyses on the potential immune and anti-inflammatory mechanisms of Shufeng Jiedu capsule against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-caused pneumonia.

Source

Journal of Functional Foods; 2020. 75. 49 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

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UK

## Abstract

The outbreak of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)-caused pneumonia (Coronavirus disease -19, COVID-19), has resulted in a global health emergency. However, there is no vaccine or effective antiviral treatment against the newly emerged coronavirus and identifying the available therapeutics as soon as possible is critical for the response to the spread of SARS-CoV-2. Shufeng Jiedu Capsule (SFJDC), a well-known prescription of Traditional Chinese Medicine (TCM) in China, has been widely used in treating upper respiratory tract infections and acute lung injury, owing to its immunomodulatory and anti-inflammatory effects. Despite the definite evidence of effective use of SFJDC in the diagnosis and treatment of pneumonia caused by SARS-CoV-2, the underlying action mechanism remains unknown. Currently, a systematic study integrated with absorption, distribution, metabolism and excretion (ADME) evaluation, target prediction, network construction and functional bioinformatics analyses is proposed to illustrate the potential immune and anti-inflammatory mechanisms of SFJDC against SARS-CoV-2. Additionally, to further validate the reliability of the interactions and binding affinities between drugs and targets, docking, Molecular dynamics Simulations (MD) simulations and Molecular Mechanics/Poisson-Boltzmann Surface Area approach (MM-PBSA) calculations were carried out. The results demonstrate that SFJDC regulates the immunomodulatory and anti-inflammatory related targets on multiple pathways through its active ingredients, showing the potential anti-novel coronavirus effect. Overall, the work can provide a better understanding of the therapeutic mechanism of SFJDC for treating SARS-CoV-2 pneumonia from multi-scale perspectives, and may also offer a valuable clue for developing novel pharmaceutical strategies to control the current coronavirus.

## Publication Type

Journal article.

<729>

## Accession Number

20203593949

## Author

Firebaugh, C. M.; Beeson, T.; Wojtyna, A.; Johnson, J.; Saldana, A.; Bravo, L.; Everson, T.

## Title

A community case study on geographic, environmental, and social health disparities in COVID-19 disease: Yakima, Washington.

## Source

Open Journal of Preventive Medicine; 2020. 10(11):288-297. 25 ref.

## Publisher

Scientific Research Publishing

## Location of Publisher

Irvine

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Country of Publication

USA

Abstract

Yakima County, Washington, a rural county with an urban core suffered disproportionately under the conditions presented by the COVID-19 pandemic and summer wildfires of 2020. With an infection rate of over 700 per 100,000 population at the height of the pandemic, the county concurrently experienced 14 consecutive days of an air quality index in the unhealthy to hazardous range in August 2020. This paper examines the contributing socioeconomic, geographic, and environmental vulnerabilities that make Yakima County particularly susceptible to the continuum of expected COVID-19 disease and related outcomes and suggests comprehensive areas of investigation to mitigate its impact on special populations, including Hispanic-Latino communities, agricultural, food production, and other essential workers.

Publication Type

Journal article.

<730>

Accession Number

20203593833

Author

Brugarolas, M.; Martinez-Carrasco, L.; Rabadan, A.; Bernabeu, R.

Title

Innovation strategies of the Spanish agri-food sector in response to the black swan COVID-19 pandemic.

Source

Foods; 2020. 9(12). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Health, financial, and social crises cause variations in the buying behaviour of food consumers as well as in the value they assign to food attributes and the place of purchase, leading to consumers with profiles that are more susceptible to these changes than others. Thus, it was observed that 61.4% of consumers modified their buying behaviour at the onset of the COVID-19 pandemic, with those who modified it the most being the people who stockpiled the most food and went panic buying more often. This has made it

possible to establish the profile of different significant consumer segments, and as a response, food production/distribution companies can implement different innovative strategies aimed at decreasing the impact of stockpiling and, therefore, the shortage of food. The possible strategies that companies can put into effect are creating a stock of non-perishable foods, increasing production capabilities in a sustainable way and, especially in light of the results obtained, boost the online sale and distribution of foods, with the goal of decreasing the amount of people in shops (which decreases the spreading of the pandemic and favours health) and preventing consumers from observing possible circumstantial shortages that would only encourage stockpiling and panic buying, even among consumers who have not changed their buying behaviour.

#### Publication Type

Journal article.

<731>

#### Accession Number

20203593606

#### Author

Yushin, N.; Chaligava, O.; Zinicovscaia, I.; Vergel, K.; Grozdov, D.

#### Title

Mosses as bioindicators of heavy metal air pollution in the lockdown period adopted to cope with the COVID-19 pandemic.

#### Source

Atmosphere; 2020. 11(11). 33 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

The coronavirus disease, COVID-19, has had a great negative impact on human health and economies all over the world. To prevent the spread of infection in many countries, including the Russian Federation, public life was restricted. To assess the impact of the taken actions on air quality in the Moscow region, in June 2020, mosses *Pleurozium shreberi* were collected at 19 sites considered as polluted in the territory of the region based on the results of the previous moss surveys. The content of Cd, Cr, Cu, Fe, Ni, and Pb in the moss samples was determined using atomic absorption spectrometry. The obtained values were compared with the data from the moss survey performed in June 2019 at the same sampling sites. Compared to 2019 data, the Cd content in moss samples decreased by 2-46%, while the iron content

increased by 3-127%. The content of Cu, Ni, and Pb in mosses decreased at most sampling sites, except for the eastern part of the Moscow region, where a considerable number of engineering and metal processing plants operate. The stay-at-home order issued in the Moscow region resulted in a reduction of vehicle emissions affecting air quality, while the negative impact of the industrial sector remained at the level of 2019 or even increased.

#### Publication Type

Journal article.

<732>

#### Accession Number

20203593604

#### Author

Fu, F.; Purvis-Roberts, K. L.; Williams, B.

#### Title

Impact of the COVID-19 pandemic lockdown on air pollution in 20 major cities around the world.

#### Source

Atmosphere; 2020. 11(11). 51 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

In order to fight against the spread of COVID-19, the most hard-hit countries in the spring of 2020 implemented different lockdown strategies. To assess the impact of the COVID-19 pandemic lockdown on air quality worldwide, Air Quality Index (AQI) data was used to estimate the change in air quality in 20 major cities on six continents. Our results show significant declines of AQI in NO<sub>2</sub>, SO<sub>2</sub>, CO, PM<sub>2.5</sub> and PM<sub>10</sub> in most cities, mainly due to the reduction of transportation, industry and commercial activities during lockdown. This work shows the reduction of primary pollutants, especially NO<sub>2</sub>, is mainly due to lockdown policies. However, preexisting local environmental policy regulations also contributed to declining NO<sub>2</sub>, SO<sub>2</sub> and PM<sub>2.5</sub> emissions, especially in Asian countries. In addition, higher rainfall during the lockdown period could cause decline of PM<sub>2.5</sub>, especially in Johannesburg. By contrast, the changes of AQI in ground-level O<sub>3</sub> were not significant in most of cities, as meteorological variability and ratio of VOC/NO<sub>x</sub> are key factors in ground-level O<sub>3</sub> formation.

#### Publication Type

<733>

Accession Number

20203593596

Author

Grivas, G.; Athanasopoulou, E.; Kakouri, A.; Bailey, J.; Liakakou, E.; Stavroulas, I.; Kalkavouras, P.; Bougiatioti, A.; Kaskaoutis, D. G.; Ramonet, M.; Mihalopoulos, N.; Gerasopoulos, E.

Title

Integrating in situ measurements and city scale modelling to assess the COVID-19 lockdown effects on emissions and air quality in Athens, Greece.

Source

Atmosphere; 2020. 11(11). 94 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The lockdown measures implemented worldwide to slow the spread of the COVID-19 pandemic have allowed for a unique real-world experiment, regarding the impacts of drastic emission cutbacks on urban air quality. In this study we assess the effects of a 7-week (23 March-10 May 2020) lockdown in the Greater Area of Athens, coupling in situ observations with estimations from a meteorology-atmospheric chemistry model. Measurements in central Athens during the lockdown were compared with levels during the pre- and post-lockdown 3-week periods and with respective levels in the four previous years. We examined regulatory pollutants as well as CO<sub>2</sub>, black carbon (BC) and source-specific BC components. Models were run for pre-lockdown and lockdown periods, under baseline and reduced-emissions scenarios. The in-situ results indicate mean concentration reductions of 30-35% for traffic-related pollutants in Athens (NO<sub>2</sub>, CO, BC from fossil fuel combustion), compared to the pre-lockdown period. A large reduction (53%) was observed also for the urban CO<sub>2</sub> enhancement while the reduction for PM<sub>2.5</sub> was subtler (18%). Significant reductions were also observed when comparing the 2020 lockdown period with past years. However, levels rebounded immediately following the lift of the general lockdown. The decrease in measured NO<sub>2</sub> concentrations was reproduced by the implementation of the city scale model, under a realistic reduced-emissions scenario for the lockdown period, anchored at a 46% decline of road transport activity. The model permitted the assessment of air quality improvements on a spatial scale, indicating that NO<sub>2</sub> mean concentration reductions in areas of the Athens basin reached up to 50%. The findings suggest a potential

for local traffic management strategies to reduce ambient exposure and to minimize exceedances of air quality standards for primary pollutants.

Publication Type

Journal article.

<734>

Accession Number

20203593474

Author

Edwards, M. J.; Becker, K. A.; Gripp, B.; Hoffmann, M.; Keitsch, S.; Wilker, B.; Soddemann, M.; Gulbins, A.; Carpinteiro, E.; Patel, S. H.; Wilson, G. C.; Pohlmann, S.; Walter, S.; Fassbender, K.; Ahmad, S. A.; Carpinteiro, A.; Gulbins, E.

Title

Sphingosine prevents binding of SARS-CoV-2 spike to its cellular receptor ACE2.

Source

Journal of Biological Chemistry; 2020. 295(45). 30 ref.

Publisher

American Society for Biochemistry and Molecular Biology Inc

Location of Publisher

Bethesda

Country of Publication

USA

Abstract

Sphingosine has been shown to prevent and eliminate bacterial infections of the respiratory tract, but it is unknown whether sphingosine can be also employed to prevent viral infections. To test this hypothesis, we analyzed whether sphingosine regulates the infection of cultured and freshly isolated ex vivo human epithelial cells with pseudoviral particles expressing SARS-CoV-2 spike (pp-VSV-SARS-CoV-2 spike) that served as a bona fide system mimicking SARS-CoV-2 infection. We demonstrate that exogenously applied sphingosine suspended in 0.9% NaCl prevents cellular infection with pp-SARS-CoV-2 spike. Pretreatment of cultured Vero epithelial cells or freshly isolated human nasal epithelial cells with low concentrations of sphingosine prevented adhesion of and infection with pp-VSV-SARS-CoV-2 spike. Mechanistically, we demonstrate that sphingosine binds to ACE2, the cellular receptor of SARS-CoV-2, and prevents the interaction of the receptor-binding domain of the viral spike protein with ACE2. These data indicate that sphingosine prevents at least some viral infections by interfering with the interaction of the virus with its receptor. Our data also suggest that further preclinical and finally clinical examination of sphingosine is warranted for potential use as a prophylactic or early treatment for coronavirus disease-19.

Publication Type

Journal article.

<735>

Accession Number

20203592736

Author

Khamis, F.; Al-Naabi, H.; Al-Lawati, A.; Ambusaidi, Z.; Al-Sharji, M.; Al-Barwani, U.; Pandak, N.; Al-Balushi, Z.; Al-Bahrani, M.; Al-Salami, I.; Al-Zakwani, I.

Title

Randomized controlled open label trial on the use of favipiravir combined with inhaled interferon beta-1b in hospitalized patients with moderate to severe COVID-19 pneumonia.

Source

International Journal of Infectious Diseases; 2021. 102:538-543. 38 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Objective:** To evaluate the therapeutic effectiveness of favipiravir combined with inhaled interferon beta-1b in adult patients hospitalized with moderate to severe COVID-19 pneumonia. **Methods:** A randomized, open-label controlled trial of oral favipiravir in adults hospitalized with moderate to severe COVID-19 pneumonia from June 22nd 2020 to August 13th 2020 was conducted. Patients were randomly assigned to receive either a combination of favipiravir with interferon beta-1b by inhalation aerosol or hydroxychloroquine (HCQ). The outcome endpoints included improvement in inflammatory markers, lower length of hospital stay (LOS), discharges and lower overall 14-day mortality. **Results:** A total of 89 patients underwent randomization with 49% (n=44) assigned to favipiravir and 51% (n=45) assigned HCQ. The overall mean age was 55 +or- 14 years and 58% (n=52) were males. There were no significant differences in the inflammatory biomarkers at hospital discharge between the two groups; C-reactive protein (p=0.413), ferritin (p=0.968), lactate dehydrogenase (p=0.259) and interleukin 6 (p=0.410). There were also no significant differences between the two groups with regards to the overall LOS (7 vs 7 days; p=0.948), transfers to the ICU (18.2% vs 17.8%; p=0.960), discharges (65.9% vs 68.9%; p=0.764) and overall mortality (11.4% vs 13.3%; p=0.778). **Conclusions:** No differences in clinical outcomes were found between favipiravir plus inhaled interferon beta-1b and hydroxychloroquine in adults hospitalized with moderate to severe COVID-19 pneumonia.

Publication Type

Journal article.

<736>

Accession Number

20203592730

Author

Shashank Joshi; Jalil Parkar; Abdul Ansari; Agam Vora; Deepak Talwar; Mangesh Tiwaskar; Saiprasad Patil; Hanmant Barkate

Title

Role of favipiravir in the treatment of COVID-19.

Source

International Journal of Infectious Diseases; 2021. 102:501-508. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The coronavirus disease-2019 (COVID-19) outbreak all over the world has led the researchers to strive to develop drugs or vaccines to prevent or halt the progression of this ailment. To hasten the treatment process, repurposed drugs are being evaluated. Favipiravir is one such oral drug that was approved for new and reemerging pandemic influenza in Japan in 2014 and has shown potent in vitro activity against severe acute respiratory syndrome coronavirus-2. It has a wide therapeutic safety margin indicated by a wide CC50/EC50 ratio for a high dose. From the clinical studies in COVID-19, it has shown rapid viral clearance as compared to lopinavir/ritonavir (LPV/RTV) and superior recovery rate than umifenovir. Overall, favipiravir has shown promising results in clinical studies in China, Russia, and Japan, and more trials are underway in multiple countries, including USA, UK, and India. Recently, treatment guidelines from many countries and some states from India have included favipiravir in the treatment protocol. This review provides insights into the evidence-based evolving role of favipiravir in the management of COVID-19 infection with emphasis on benefits of initiating an early antiviral therapy with special focus on favipiravir, its pharmacodynamic, pharmacokinetic, in vitro, clinical data, and inclusion in the treatment protocols of COVID-19.

Publication Type

Journal article.

<737>

Accession Number

20203592726

Author

Hernandez Lopez, J.; Santos Romo, A.; Coronado Molina, D.; Alvarez Hernandez, G.; Gutierrez Cureno, A. B.; Aviles Acosta, M.; Aviles Gaxiola, C. A.; Serrato Felix, M. J.; Gollas Galvan, T.

Title

Detection of SARS-CoV-2 in the air of two hospitals in Hermosillo, Sonora, Mexico, utilizing a low-cost environmental monitoring system.

Source

International Journal of Infectious Diseases; 2021. 102:478-482. 28 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Objective:** The best way of preventing the dispersion of an infectious disease is decreasing the transmissibility of the pathogen. To achieve such a goal, it is important to have epidemiological surveillance to retrieve data about its routes of transmission and dispersion. This study investigated the possibility of SARS-CoV-2 detection using filtration through 0.22 m pores. **Methods:** A filtration system with vacuum pump was used for sampling, and molecular analysis was performed by RT-PCR for detecting the COVID-19 virus. **Results:** It was found that SARS-CoV-2 could be detected in particulate matter trapped on 0.22 m filters 3 h after air sampling, and the only contaminated areas were those near patient zones. **Conclusions:** The results confirm the possibility of finding this virus in floating particulate matter in contaminated zones, with a simple and economic sampling method based on filtration technology through 0.22 m pores and detection with molecular techniques (RT-PCR). The higher risk zones were those near patients with COVID-19.

Publication Type

Journal article.



<738>

Accession Number

20203592689

Author

Godin, A.; Xia YiQing; Buckeridge, D. L.; Mishra, S.; Douwes-Schultz, D.; Shen YanNan; Lavigne, M.; Drolet, M.; Schmidt, A. M.; Brisson, M.; Maheu-Giroux, M.

Title

The role of case importation in explaining differences in early SARS-CoV-2 transmission dynamics in Canada - a mathematical modeling study of surveillance data.

Source

International Journal of Infectious Diseases; 2021. 102:254-259. 16 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Objective:** The North American coronavirus disease-2019 (COVID-19) epidemic exhibited distinct early trajectories. In Canada, Quebec had the highest COVID-19 burden and its earlier March school break, taking place two weeks before those in other provinces, could have shaped early transmission dynamics. **Methods:** We combined a semi-mechanistic model of SARS-CoV-2 transmission with detailed surveillance data from Quebec and Ontario (initially accounting for 85% of Canadian cases) to explore the impact of case importation and timing of control measures on cumulative hospitalizations. **Results:** A total of 1544 and 1150 cases among returning travelers were laboratory-confirmed in Quebec and Ontario, respectively (symptoms onset 03-25-2020). Hospitalizations could have been reduced by 55% (95% CrI: 51%-59%) if no cases had been imported after Quebec's March break. However, if Quebec had experienced Ontario's number of introductions, hospitalizations would have only been reduced by 12% (95% CrI: 8%-16%). Early public health measures mitigated the epidemic spread as a one-week delay could have resulted in twice as many hospitalizations (95% CrI: 1.7-2.1). **Conclusion:** Beyond introductions, factors such as public health preparedness, responses and capacity could play a role in explaining interprovincial differences. In a context where regions are considering lifting travel restrictions, coordinated strategies and proactive measures are to be considered.

Publication Type

Journal article.

<739>

Accession Number

20203592680

Author

Xiao DongQiong; Li XiHong; Su XiaoJuan; Mu DeZhi; Qu Yi

Title

Could SARS-CoV-2-induced lung injury be attenuated by vitamin D?

Source

International Journal of Infectious Diseases; 2021. 102:196-202. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

A novel coronavirus (severe acute respiratory syndrome coronavirus 2, SARS-CoV-2) has been confirmed as having the capacity to transmit from humans to humans, causing acute respiratory distress syndrome (ARDS) and acute lung injury. Angiotensin converting enzyme-2 (ACE2) is known to be expressed on type II pneumocytes. As a counter-regulatory arm of the renin-angiotensin system (RAS), ACE2 plays critical roles in the pathogenesis of ARDS and acute lung injury. The affinity of the spike protein receptor binding domain (RBD) of SARS-CoV-2 for human ACE2 (hACE2) largely determines the degree of clinical symptoms after infection by SARS-CoV-2. Previous studies have shown that regulating the ACE2/RAS system is effective in the treatment of severe acute respiratory syndrome coronavirus (SARS-CoV)-induced ARDS and acute lung injury. Since ACE2 is the host cell receptor for both SARS-CoV-2 and SARS-CoV, regulating the ACE2/RAS system may alleviate ARDS and acute lung injury caused by SARS-CoV-2 as well as SARS-CoV. Vitamin D was found to affect ACE2, the target of SARS-CoV-2; therefore, we propose that vitamin D might alleviate ARDS and acute lung injury induced by SARS-CoV-2 by modulating ACE2.

Publication Type

Journal article.

<740>

Accession Number

20203592672

Author

Masyeni, S.; Santoso, M. S.; Widyaningsih, P. D.; Asmara, D. G. W.; Nainu, F.; Harapan, H.; Sasmono, R. T.

Title

Serological cross-reaction and coinfection of dengue and COVID-19 in Asia: experience from Indonesia.

Source

International Journal of Infectious Diseases; 2021. 102:152-154.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Similar symptoms and laboratory findings between dengue and coronavirus disease 2019 (COVID-19) pose a diagnostic challenge in some dengue-endemic countries in Asia. In this study, we reported three cases of suspected COVID-19-dengue coinfection in hospitals of Bali, Indonesia. Serological data demonstrated that patients with positive results for dengue virus (DENV) NS1 antigen and anti-dengue IgM were also reactive to COVID-19 rapid antibody tests, suggesting dengue-COVID-19 coinfection. However, two patients were later confirmed negative for SARS-COV-2 by qRT-PCR, implying a plausible cross-reactivity of anti-dengue and anti-COVID-19 antibodies in the serological test. Coinfection of dengue and COVID-19 was evident in one patient, following confirmation of SARS-COV-2 by qRT-PCR and DENV infection using the NS1 antigen serology test. This case was the first case of dengue and COVID-19 coinfection in Indonesia and revealed possible cross-reactivity between SARS-COV-2 and DENV antibodies based on rapid serological tests. Our study indicates a public health concern regarding COVID-19 and dengue detection in Indonesia as well as in other dengue-endemic countries, and it is important for these nations to manage both pathogens concurrently.

Publication Type

Journal article.

<741>

Accession Number

20203592668

Author

Zhou Feng; You Chong; Zhang XiaoYu; Qian KaiHuan; Hou Yan; Gao YanHui; Zhou XiaoHua

Title

Epidemiological characteristics and factors associated with critical time intervals of COVID-19 in eighteen provinces, China: a retrospective study.

Source

International Journal of Infectious Diseases; 2021. 102:123-131. 38 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: As COVID-19 ravages continuously around the world, more information on the epidemiological characteristics and factors associated with time interval between critical events is needed to contain the pandemic and to assess the effectiveness of interventions. Methods: Individual information on confirmed cases from January 21 to March 2 was collected from provincial or municipal health commissions. We identified the difference between imported and local cases in the epidemiological characteristics. Two models were established to estimate the factors associated with time interval from symptom onset to hospitalization (TOH) and length of hospital stay (LOS) respectively. Results: Among 7,042 cases, 3392 (48.17%) were local cases and 3304 (46.92%) were imported cases. Since the first intervention was adopted in Hubei on January 23, the daily reported imported cases reached a peak on January 28 and gradually decreased since then. Imported cases were on average younger (41 vs. 48), and had more male (58.66% vs. 47.53%) compared to local cases. Furthermore, imported cases had more contacts with other confirmed cases (2.80 +or- 2.33 vs. 2.17 +or- 2.10), which were mainly within family members (2.26 +or- 2.18 vs. 1.57 +or- 2.06). The TOH and LOS were 2.67 +or- 3.69 and 18.96 +or- 7.63 days respectively, and a longer TOH was observed in elderly living in the provincial capital cities that were higher migration intensity with Hubei. Conclusions: Measures to restrict traffic can effectively reduce imported spread. However, household transmission is still not controlled, particularly for the infection of imported cases to elderly women. It is still essential to surveil and educate patients about the early admission or isolation.

Publication Type

Journal article.

<742>

Accession Number

20203592667

Author

Lawal, Y.

Title

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Africa's low COVID-19 mortality rate: a paradox?

Source

International Journal of Infectious Diseases; 2021. 102:118-122. 17 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: COVID-19 continues to spread worldwide, with high numbers of fatalities reported first in China, followed by even higher numbers in Italy, Spain, the UK, the USA, and other advanced countries. Most African countries, even with their less advanced healthcare systems, continue to experience lower COVID-19 mortality rates. This was the case as the pandemic reached its first peak, plateaued, and declined. It is currently rising again in some countries, though not as rapidly as before. This study aimed to determine the predictors of COVID-19 mortality rate. This may help explain why Africa's COVID-19 mortality rate is, ironically, lower than that of more advanced countries with better health systems. This will also assist various governments in balancing their COVID-19 restrictive and socioeconomic measures.

Methodology: This was an analytical review, which used pre-COVID-19 era population data and current COVID-19 mortality figures to determine predictors of COVID-19 mortality rates. Pearson's correlation was used to test the association between some population variables and COVID-19 mortality rates. Next, stepwise multiple regression analysis was used to determine significant predictors of COVID-19 mortality rates. Results: Significant positive predictors of COVID-19 mortality rate included pre-COVID-19 era '65-yr+ mortality %' (R<sup>2</sup>=0.574, B=2.86, p < 0.001), population mean age (R<sup>2</sup>=0.570, B=4.77, p=0.001), and life expectancy (R<sup>2</sup>=0.524, B=1.67, p=0.008). Pre-COVID-19 era CVD death rate was a negative predictor of COVID-19 mortality rate (R<sup>2</sup>=0.524, B=-0.584, p=0.012). Conclusion: Africa's lower COVID-19 mortality rate is due to the lower population mean age, lower life expectancy, lower pre-COVID-19 era '65yr+ mortality rate', and smaller pool of people surviving and living with cardiovascular diseases.

Publication Type

Journal article.

<743>

Accession Number

20203592665

Author

Abdulrhman Mohana; Tarek Sulaiman; Nagla Mahmoud; Mustafa Hassanein; Amel Alfaifi; Eissa Alenazi; Nashwa Radwan; Nasser AlKhalifah; Ehab Elkady; Abdullah Almohaizeie; Fouad AboGazalah; Khaled Alabdulkareem; Fahad AlGHofaili; Hani Jokdar; Fahad Alrabiah

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Title

Hydroxychloroquine safety outcome within approved therapeutic protocol for COVID-19 outpatients in Saudi Arabia.

Source

International Journal of Infectious Diseases; 2021. 102:110-114. 15 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Global healthcare is challenged following the COVID-19 pandemic, since late 2019. Multiple approaches have been performed to relieve the pressure and support existing healthcare. The Saudi Arabian Ministry of Health (MOH) launched an initiative to support the National Healthcare System. Since the 5th of June 2020, 238 outpatient fever clinics were established nationwide. This study aimed to assess the safety outcome and reported adverse events from hydroxychloroquine use among suspected COVID-19 patients. Method: A cross-sectional study included 2,733 patients subjected to MOH treatment protocol (hydroxychloroquine) and followed-up within 3-7 days after initiation. Data was collected through an electronic link and cross-checked with the national database (Health Electronic Surveillance Network, HESN) and reports from the MOH Morbidity and Mortality (M&M) Committee. Results: 240 patients (8.8%) discontinued treatment because of side effects (4.1%) and for non-clinical reasons in the remaining (4.7%). Adverse effects were reported among (6.7%) of all studied participants, including mainly cardiovascular (2.5%, 0.15% with QTc prolongation), and gastrointestinal (2.4%). No Intensive Care Unit admission or death were reported among these patients. Conclusion: Our results show that hydroxychloroquine for COVID-19 patients in mild to moderate cases in an outpatient setting, within the protocol recommendation and inclusion/exclusion criteria, is safe, highly tolerable, and with minimum side effects.

Publication Type

Journal article.

<744>

Accession Number

20203592652

Author

Al-Maskari, Z.; Al-Blushi, A.; Khamis, F.; Al-Tai, A.; Al-Salmi, I.; Al-Harhi, H.; Al-Saadi, M.; Al-Mughairy, A.; Gutierrez, R.; Al-Blushi, Z.

Title

Characteristics of healthcare workers infected with COVID-19: a cross-sectional observational study.

Source

International Journal of Infectious Diseases; 2021. 102:32-36. 12 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Introduction:** Coronavirus disease 2019 (COVID-19) is a new emerging infectious disease, first identified in China in December 2019, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This study describes the characteristics of healthcare workers (HCWs) who tested positive for COVID-19 in a tertiary care hospital in Oman. **Methods:** This was a cross-sectional descriptive analysis of HCWs with COVID-19. **Results:** During the study period, 204 HCWs tested positive for COVID-19 by rRT-PCR test, with a test positivity rate of 21.2%; the percentage of infected hospital staff was 4.3%. Their mean age was 36 years. Overall, 2.2% of the male staff were infected, while 9.3% of the female staff were infected. Among the clinicians, 4.7% were infected; among the nurses, 4.1% were infected. Regarding acquisition, 61.3% of infections (n=125) were community-acquired and 25.5% (n=52) were hospital-acquired; no source was identified in 13.2% of cases (n=27). There was a significant difference between hospital-acquired and community-acquired COVID-19 according to the different HCW categories ( $p < 0.001$ ), sex ( $p=0.041$ ), and being at risk of COVID-19 exposure in the hospital ( $p < 0.001$ ). There were no significant differences in relation to nationality ( $p=0.498$ ), age ( $p=0.119$ ), or the presence of co-morbidities ( $p=0.326$ ). Seventy-eight percent (n=160) had no chronic diseases and 44% presented with fever and an acute respiratory infection (n=90); all made an uneventful full recovery. The peak of infection acquisition was after the Eid Al Fitr festival. **Conclusions:** HCWs are at an increased risk of COVID-19 in the workplace. The strengthening of infection control measures to prevent exposures from infected patients and colleagues and to reduce the spread of COVID-19 is a necessity.

Publication Type

Journal article.

<745>

Accession Number

20203592618

Author

Hussein, M. I. H.; Al-Bashir, A. A. D.; El-Awad, O. A. M. A.; Homeida, A.

Title

Malaria and COVID-19: unmasking their ties.

Source

Malaria Journal; 2020. 19(457). 68 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

The incidence and mortality of COVID-19, according to the World Health Organization reports, shows a noticeable difference between North America, Western Europe, and South Asia on one hand and most African countries on the other hand, especially the malaria-endemic countries. Although this observation could be attributed to limited testing capacity, mitigation tools adopted and cultural habits, many theories have been postulated to explain this difference in prevalence and mortality. Because death tends to occur more in elders, both the role of demography, and how the age structure of a population may contribute to the difference in mortality rate between countries were discussed. The variable distribution of the ACE1/D and the ACE2 (C1173T substitution) polymorphisms has been postulated to explain this variable prevalence. Up-to-date data regarding the role of hydroxychloroquine (HCQ) and chloroquine (CQ) in COVID-19 have been summarized. The article also sheds lights on how the similarity of malaria and COVID-19 symptoms can lead to misdiagnosis of one disease for the other or overlooking the possibility of co-infection. As the COVID-19 pandemic threatens the delivery of malaria services, such as the distribution of insecticide-treated nets (ITNs), indoor residual spraying, as well as malaria chemoprevention there is an urgent need for rapid and effective responses to avoid malaria outbreaks.

Publication Type

Journal article.

<746>

Accession Number

20203592486

Author

Wang Chang; Zhou LiZhi; Chen Juan; Yang Yong; Huang TianLong; Fu Min; Li Ya; George, D. M.; Chen XiangYu

Title

The differences of clinical characteristics and outcomes between imported and local patients of COVID-19 in Hunan: a two-center retrospective study.



Source

Respiratory Research; 2020. 21(313). 19 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

**Background:** The clinical characteristics and outcomes of the 2019 novel coronavirus (COVID-19) pneumonia are different in Hubei compared to other regions in China. But there are few comparative studies on the differences between imported and local patients which may provide information of the different courses of the virus after transmission. **Methods:** We investigated 169 cases of COVID-19 pneumonia in two centers in Hunan Province, and divided them into two groups according to epidemiological history, "imported patients" refers to patient with a clear history of travel in Wuhan within 14 days before onset, and "local patients" refers to local resident without a recent history of travel in Wuhan, aiming to analyze the difference in clinical characteristics and outcomes between the two groups. All the epidemiological, clinical, imaging, and laboratory data were analyzed and contrasted. **Results:** The incidence of fever on admission in imported patients was significantly higher than local patients. There was a significantly higher proportion of abnormal pulmonary signs, hypokalemia, hyponatremia, prolonged PT, elevated D-dimer and elevated blood glucose in imported patients. Compared with local patients, the proportion using antibiotics, glucocorticoids and gamma globulin were significantly higher in imported patients. The moderate type was more common in local patients, and the severe type were more frequent in imported patients. In addition, the median duration of viral clearance was longer in imported patients. **Conclusions:** In summary, we found that imported cases were more likely to develop into severe cases, compared with local patients and required more powerful treatments.

Publication Type

Journal article.

<747>

Accession Number

20203592430

Author

Wang Jiao; Zhang XiaoLi; Omarini, A. B.; Li BingLin

Title

Virtual screening for functional foods against the main protease of SARS-CoV-2.

Source

Journal of Food Biochemistry; 2020. 44(11).

Publisher

Wiley

Location of Publisher

Boston

Country of Publication

USA

Abstract

The special attention was paid on the interaction between functional foods and the main protease of severe acute respiratory syndrome coronavirus (SARS-CoV-2). Here, 10,870 ligands were employed and screened by the molecular docking, which involved 12 kinds of functional foods (carbohydrates, fatty acids, phospholipids, vitamin, beta-sitosterol, flavonoids, nordihydroguaiaretic acid, curcumin, nootkatone, beta-pinene, tincturoid, betulinic acid, and their isomers/analogs/derivatives). Then, 60 ligands were obtained with the good docking affinity. Most of them belong to quercetrin and its isomers/analogs/derivatives, which also showed the highest affinity for the main protease of SARS-CoV-2. The dynamic simulation indicated that quercetrin-protease and quercetrin-analog-protease showed the excellent stability. Compared with reported docking results, quercetrin should be the best inhibitor for the main protease of SARS-CoV-2. Considering the green and white tea are rich in quercetrin and its isomers/analogs/derivatives, tea and relative beverages may become a good option to regulate our metabolism and help us to overcome this special time.

Publication Type

Journal article.

<748>

Accession Number

20203592347

Author

Mohammadi, S. M.; Ashtari, S.; Fetrat, M. K.

Title

The psychological impact of COVID-19 pandemic on mental health of Iranian population.

Source

International Journal of Travel Medicine and Global Health; 2021. 9(1):19-24. 32 ref.

Publisher

International Travel Medicine Center of Iran

Location of Publisher

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Tehran

Country of Publication

Iran

Abstract

**Introduction:** As the coronavirus disease 2019 (COVID-19) pandemic rapidly sweeps across the world, it is inducing a considerable degree of psychological problems, which can affect everyone in the community. This study aimed to compare the severity of the psychological distress in the general population and patients during the COVID-19 epidemic in an Iranian population. **Methods:** In this cross-sectional study, the mental health status of 221 COVID-19 infected patients and 241 participants from general population were investigated by the self-report questionnaire of Depression, Anxiety, and Stress Scale (DASS). The DASS-21 questionnaire and sociodemographic data sheet were filled out by the participants. All statistical analyses were performed using SPSS software version 21. **Results:** The results indicated higher scores of DASS in patients than the population simultaneously (Wilks Lambda = 0.934,  $F(3, 440) = 10.44$ ,  $P < 0.001$ ) and individually (Mean difference [MD] = 2.55, 95% CI = 1.48 to 3.62 for depression, MD = 1.48, 95% CI = 0.39 to 2.57 for anxiety, and MD = 1.41, 95% CI = 0.32 to 2.49 for depression score). **Conclusion:** The present study revealed a high prevalence of mental health problems among patients with COVID-19 and gaps in providing them with mental health services. We call for systematic screening of mental health status for all patients and developing specific psychological interventions for this vulnerable population. Psychosocial assessment and monitoring should be developed in the community to support aspects of COVID-19.

Publication Type

Journal article.

<749>

Accession Number

20203592346

Author

Quigley, A. L.; Phi Yen Nguyen; Stone, H.; Lim, S.; MacIntyre, C. R.

Title

Cruise ship travel and the spread of COVID-19 - Australia as a case study.

Source

International Journal of Travel Medicine and Global Health; 2021. 9(1):10-18. 51 ref.

Publisher

International Travel Medicine Center of Iran

Location of Publisher

Tehran

Country of Publication

Iran

## Abstract

**Introduction:** Cruise ship linked COVID-19 outbreaks have been identified as a potential source of community transmission of COVID-19 in Australia and worldwide. The risk factors and potential mitigation around COVID-19 infections on cruise ships and communities is a research gap. **Methods:** A correlation and regression analyses for risk factors for COVID-19 attack rates on cruise ships worldwide with reported COVID-19 from January 1, 2020 to May 11, 2020 were performed, with a more detailed analysis done for Australia. Geospatial emerging hot spot analysis during key time periods was used to assess temporal trends in spatial clustering of COVID-19 cases related to two cruise ship events in NSW, Australia. **Results:** For 36 cruise ships with global COVID-19 cases, available cabins had a moderate inverse correlation with the attack rate (-0.4154; 95% CI [-0.0002, -0.00003],  $P < 0.0118$ ). The number of cabins, the number of decks with cabins, and passenger-to-space ratio were significantly associated with attack rate, however, the duration at sea was not. By May 2020, cruise ship passengers made up 14.9% of COVID-19 cases in Australia and 27% of the COVID-19 related deaths. Emerging hot spots of community transmission in Sydney occurred during 1-2 incubation periods of two cruise ship events. **Conclusion:** Mitigation of risk on cruise ships should focus on spatial design and reducing crowding, including rapid surveillance and on-board testing. To mitigate this risk during the era of COVID-19, all passengers disembarking an infected ship should be quarantined for at least the 14-day window period and tested for COVID-19, regardless of symptoms. Vaccination should be a pre-requisite for travel of any kind once available.

## Publication Type

Journal article.

<750>

## Accession Number

20203592345

## Author

Chakraborty, A.; Guha, S.

## Title

COVID-19: concern and education for global health for a have-to traveler.

## Source

International Journal of Travel Medicine and Global Health; 2021. 9(1):4-9. 29 ref.

## Publisher

International Travel Medicine Center of Iran

## Location of Publisher

Tehran

## Country of Publication

Iran

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## Abstract

COVID-19, a severe respiratory disease mediated by SARS-CoV-2 virus, is an extremely infectious. This virus was a recent outbreak from Wuhan City of China in late December 2019, but no remedy has been found yet. The coronavirus can spread mainly from person to person when they come in close contact with each other. Respiratory droplets from an infected person's infect any nearby people. Furthermore, asymptomatic person can also infect others. Data and information were searched from Web Science, Google Scholar, and PubMed databases, and the articles published before June 2020, using relevant keywords. WHO, CDC and other Govt. Agencies have published a protective measure for better prevention of the COVID-19 disease until vaccines or any other antivirals become available. "Stay at home", "Uses of Mask", and "Wash hands frequently for 20 sec" are some of the general strategy for precaution. However, it is not possible for the 'must travellers' and/or "front-line workers" to "stay at home". The concerns of the must-travellers and front-line workers to avoid any unwanted consequences that may arise from their travelling issues were discussed in this review.

## Publication Type

Journal article.

<751>

## Accession Number

20203592344

## Author

Felkai, P. P.

## Title

How to travel after the COVID-19 pandemic?

## Source

International Journal of Travel Medicine and Global Health; 2021. 9(1):1-3. 15 ref.

## Publisher

International Travel Medicine Center of Iran

## Location of Publisher

Tehran

## Country of Publication

Iran

## Abstract

As countries worldwide are beginning to end their lockdowns due to the coronavirus disease 2019 (COVID-19) pandemic, travel and tourism are again becoming possible. However, pre-pandemic travel practices are not likely to resume for some time, at least until a COVID-19 vaccine becomes available. The current time is a crucial one that requires us to reconsider our strategies to protect health and prevent travel-related

diseases. This article therefore addresses various considerations for the resumption of tourist activities and the near future of travel, such as pre-travel medical counseling, personal hygiene, luggage handling, food safety, and measures to ensure safety on airplanes and in hotels. These considerations may aid in delineating a way forward for the travel industry and for travelers alike. Author believes that this article is especially timely and of interest not only for travel medicine specialists but all participants in the field of travel business.

#### Publication Type

Journal article.

<752>

#### Accession Number

20203592309

#### Author

Borman, A. M.; Palmer, M. D.; Fraser, M.; Patterson, Z.; Mann, C.; Oliver, D.; Linton, C. J.; Gough, M.; Brown, P.; Dziejczyk, A.; Hedley, M.; McLachlan, S.; King, J.; Johnson, E. M.

#### Title

COVID-19-associated invasive aspergillosis: data from the UK national mycology reference laboratory.

#### Source

Journal of Clinical Microbiology; 2021. 59(1).

#### Publisher

American Society for Microbiology (ASM)

#### Location of Publisher

Washington, D.C.

#### Country of Publication

USA

#### Abstract

COVID-19-associated pulmonary aspergillosis (CAPA) was recently reported as a potential infective complication affecting critically ill patients with acute respiratory distress syndrome following severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, with incidence rates varying from 8 to 33% depending on the study. However, definitive diagnosis of CAPA is challenging. Standardized diagnostic algorithms and definitions are lacking, clinicians are reticent to perform aerosol-generating bronchoalveolar lavages for galactomannan testing and microscopic and cultural examination, and questions surround the diagnostic sensitivity of different serum biomarkers. Between 11 March and 14 July 2020, the UK National Mycology Reference Laboratory received 1,267 serum and respiratory samples from 719 critically ill UK patients with COVID-19 and suspected pulmonary aspergillosis. The laboratory also received 46 isolates of *Aspergillus fumigatus* from COVID-19 patients (including three that exhibited environmental triazole resistance). Diagnostic tests performed included 1,000 (1-3)-beta-D-glucan and 516 galactomannan tests on

serum samples. The results of this extensive testing are presented here. For a subset of 61 patients, respiratory specimens (bronchoalveolar lavage specimens, tracheal aspirates, and sputum samples) in addition to serum samples were submitted and subjected to galactomannan testing, Aspergillus-specific PCR, and microscopy and culture. The incidence of probable/proven and possible CAPA in this subset of patients was approximately 5% and 15%, respectively. Overall, our results highlight the challenges in biomarker-driven diagnosis of CAPA, especially when only limited clinical samples are available for testing, and the importance of a multimodal diagnostic approach involving regular and repeat testing of both serum and respiratory samples.

#### Publication Type

Journal article.

<753>

#### Accession Number

20203592282

#### Author

Wang GuangFei; Ye QiaoFeng; Huang YiDie; Lu JinMiao; Zhu YiQing; Zhu Lin; Li XiaoXia; Zhang JunQi; Li ZiWei; Lan, J.; Li ZhiPing

#### Title

Potential adverse drug reactions of chloroquine in the treatment of COVID-19.

#### Source

Iranian Red Crescent Medical Journal; 2020. 22(11). 44 ref.

#### Publisher

The Iranian Hospital, Dubai

#### Location of Publisher

Dubai

#### Country of Publication

United Arab Emirates

#### Abstract

**Context:** Since December 2019, the coronavirus disease 2019 (COVID-19) has broken out in Wuhan, Hubei Province, China. Due to the highly pathogenic and infectious characteristics, COVID-19 spread across China and later globally and became a severe pandemic. To date, there have been no efficacious specialized drugs to treat COVID-19. The China-issued Diagnosis and Treatment of Pneumonia Caused by Novel Coronavirus (Trial version 6) added the chloroquine phosphate to the antiviral treatment protocol for infected adults. **Evidence Acquisition:** In this review, government documents and authoritative guidelines on COVID-19 were collected from the official website of organizations related to health and medicine. Research articles related to chloroquine and its application for COVID-19 treatment were searched and acquired from the PubMed platform. Facts and data related to the use of chloroquine were summarized in several parts.

Results: Recently, there has been an increase in research on the use of chloroquine for the treatment of COVID-19. This drug is utilized as an antimalarial and antiviral medication. There are some concerns and cautions on the clinical application of chloroquine, about which clinicians should be informed during this global pandemic. The present review summarized data on the mechanism of action, drug-drug interaction (DDI), and adverse drug reaction (ADR) of chloroquine and pharmaceutical care for special patients in order to provide a reference for the rational use of this drug in COVID-19 patients. Conclusion: Currently, there is mixed evidence on the efficacy of chloroquine in the treatment of COVID-19. Potential DDIs and ADRs, as well as pharmaceutical care, for special patients should be considered in fighting against the pandemic.

Publication Type

Journal article.

<754>

Accession Number

20203591966

Author

Pardo, E.; Constantin, J. M.; Bonnet, F.; Verdonk, F.

Title

Nutritional support for critically ill patients with COVID-19: new strategy for a new disease?

Source

Anaesthesia Critical Care & Pain Medicine; 2020. 39(6):738-739. 5 ref.

Publisher

Elsevier Masson SAS

Location of Publisher

Issy-les-Moulineaux

Country of Publication

France

Publication Type

Correspondence.



<755>

Accession Number

20203591722

Author

Lu GaoFei; Zhang Xi; Zheng WeiNan; Sun JiaLei; Hua Lan; Xu Lan; Chu XinJie; Ding Sheng; Xiong Wen

Title

Development of a simple in vitro assay to identify and evaluate nucleotide analogs against SARS-CoV-2 RNA-dependent RNA polymerase.

Source

Antimicrobial Agents and Chemotherapy; 2021. 65(1).

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

Nucleotide analogs targeting viral RNA polymerase have been proved to be an effective strategy for antiviral treatment and are promising antiviral drugs to combat the current severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic. In this study, we developed a robust in vitro nonradioactive primer extension assay to quantitatively evaluate the efficiency of incorporation of nucleotide analogs by SARS-CoV-2 RNA-dependent RNA polymerase (RdRp). Our results show that many nucleotide analogs can be incorporated into RNA by SARS-CoV-2 RdRp and that the incorporation of some of them leads to chain termination. The discrimination values of nucleotide analogs over those of natural nucleotides were measured to evaluate the incorporation efficiency of nucleotide analog by SARS-CoV-2 RdRp. In agreement with the data published in the literature, we found that the incorporation efficiency of remdesivir-TP is higher than that of ATP and incorporation of remdesivir-TP caused delayed chain termination, which can be overcome by higher concentrations of the next nucleotide to be incorporated. Our data also showed that the delayed chain termination pattern caused by remdesivir-TP incorporation is different for different template sequences. Multiple incorporations of remdesivir-TP caused chain termination under our assay conditions. Incorporation of sofosbuvir-TP is very low, suggesting that sofosbuvir may not be very effective in treating SARS-CoV-2 infection. As a comparison, 2'-C-methyl-GTP can be incorporated into RNA efficiently, and the derivative of 2'-C-methyl-GTP may have therapeutic application in treating SARS-CoV-2 infection. This report provides a simple screening method that should be useful for evaluating nucleotide-based drugs targeting SARS-CoV-2 RdRp and for studying the mechanism of action of selected nucleotide analogs.

Publication Type

Journal article.

<756>

Accession Number

20203591115

Author

Samajdar, S. S.; Tripathi, S. K.; Jyotirmoy Paul; Bibhuti Saha

Title

Ivermectin in COVID 19 - promises and prospects.

Source

Journal of the Indian Medical Association; 2020. 118(10):86-89. 25 ref.

Publisher

Indian Medical Association (IMA)

Location of Publisher

Kolkata

Country of Publication

India

Abstract

Age old anthelmintic drug Ivermectin Is showing some promises In the management of COVID 19 patients. In vitro study suggests anti SARS CoV2 viral role of ivermectin but there is some controversy regarding dose selection. Ivermectin has immunomodulatory role which may be responsible for its beneficial effects. Though it Is not included In Interim COVID 19 management guideline by GOI, but several states like West Bengal, Bihar, UP, Assam have Included it in state COVID 19 management guideline. It Is Important to be vigilant and more focused to prospectively observe the outcome In COVID 19 patients.

Publication Type

Journal article.

<757>

Accession Number

20203590480

Author

Sacco, M. D.; Ma ChunLong; Lagarias, P.; Gao Ang; Townsend, J. A.; Meng XiangZhi; Dube, P.; Zhang XiuJun; Hu YanMei; Kitamura, N.; Hurst, B.; Tarbet, B.; Marty, M. T.; Kolocouris, A.; Xiang Yan; Chen Yu; Wang Jun

Title

Structure and inhibition of the SARS-CoV-2 main protease reveal strategy for developing dual inhibitors against Mpro and cathepsin L.

Source

Science Advances; 2020. 6(50). 59 ref.

Publisher

American Association for the Advancement of Science

Location of Publisher

Washington

Country of Publication

USA

Abstract

The main protease (Mpro) of SARS-CoV-2 is a key antiviral drug target. While most Mpro inhibitors have a P-lactam glutamine surrogate at the P1 position, we recently found that several Mpro inhibitors have hydrophobic moieties at the P1 site, including calpain inhibitors II and XII, which are also active against human cathepsin L, a host protease that is important for viral entry. In this study, we solved x-ray crystal structures of Mpro in complex with calpain inhibitors II and XII and three analogs of GC-376. The structure of Mpro with calpain inhibitor II confirmed that the S1 pocket can accommodate a hydrophobic methionine side chain, challenging the idea that a hydrophilic residue is necessary at this position. The structure of calpain inhibitor XII revealed an unexpected, inverted binding pose. Together, the biochemical, computational, structural, and cellular data presented herein provide new directions for the development of dual inhibitors as SARS-CoV-2 antivirals.

Publication Type

Journal article.

<758>

Accession Number

20203590419

Author

Nuzrath Jahan; Polani Rubeshkumar; Mathan Karuppiyah; Sambath, I.; Muthappan Sendhilkumar; Kumaravel Ilangovan; Roopavathi Ongesh; Manikandanesan Sakthivel; Raju Mohankumar; Kumar, M. S.; Parasuraman Ganeshkumar; Manickam Ponnaiah; Prabhdeep Kaur

Title

Entry and initial spread of COVID-19 in India: epidemiological analysis of media surveillance data, India, 2020.

Source

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Clinical Epidemiology and Global Health; 2021. 9:347-354. 23 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: India reported first laboratory-confirmed case of coronavirus disease 2019 (COVID-19) on 30 January from Kerala. Media surveillance is useful to capture unstructured information about outbreaks. We established media surveillance and described the characteristics of the COVID-19 cases, clusters, deaths by time, place, and person during January-March 2020 in India. Methods: The media surveillance team of ICMR-National Institute of Epidemiology abstracted data from public domains of India's Central and State health ministries, online news and social media platforms for the period of January 31 to March 26, 2020. We collected data on person (socio-demographics, circumstances of travel/contact, clinical and laboratory), time (date/period of reported exposures; laboratory confirmation and death) and place (location). We drew epidemic curve, described frequencies of cases by age and gender. We described available details for identified clusters. Results: As of March 26, 2020, India reported 694 (Foreigners = 45, 6%) confirmed COVID-19 cases (Attack rate = 0.5 per million population) and 17 deaths (Fatality = 2.5%) from 21 States and 6 Union Territories. The cases were higher among 20-59 years of age (60 of 85) and male gender (65 of 107). Median age at death was 68 years (Range: 38-85 years). We identified 13 clusters with a total of 63 cases and four deaths among the first 200 cases. Conclusion: Surveillance of media sources was useful in characterizing the epidemic in the early phase. Hence, media surveillance should be integrated in the routine surveillance systems to map the events specially in context of new disease outbreaks.

Publication Type

Journal article.

<759>

Accession Number

20203590409

Author

Asirvatham, E. S.; Sarman, C. J.; Saravanamurthy, S. P.; Periasamy Mahalingam; Swarna Maduraipandian; Jeyaseelan Lakshmanan

Title

Who is dying from COVID-19 and when? An analysis of fatalities in Tamil Nadu, India.

Source

Clinical Epidemiology and Global Health; 2021. 9:275-279. 30 ref.

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Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: As the number of COVID-19 cases continues to rise, public health efforts must focus on preventing avoidable fatalities. Understanding the demographic and clinical characteristics of deceased COVID-19 patients; and estimation of time-interval between symptom onset, hospital admission and death could inform public health interventions focusing on preventing mortality due to COVID-19. Methods: We obtained COVID-19 death summaries from the official dashboard of the Government of Tamil Nadu, between 10th May and July 10, 2020. Of the 1783 deaths, we included 1761 cases for analysis. Results: The mean age of the deceased was 62.5 years (SD: 13.7). The crude death rate was 2.44 per 100,000 population; the age-specific death rate was 22.72 among above 75 years and 0.02 among less than 14 years, and it was higher among men (3.5 vs 1.4 per 100,000 population). Around 85% reported having any one or more comorbidities; Diabetes (62%), hypertension (49.2%) and CAD (17.5%) were the commonly reported comorbidities. The median time interval between symptom onset and hospital admission was 4 days (IQR: 2, 7); admission and death was 4 days (IQR: 2, 7) with a significant difference between the type of admitting hospital. One-fourth of (24.2%) deaths occurred within a day of hospital admission. Conclusion: Elderly, male, people living in densely populated areas and people with underlying comorbidities die disproportionately due to COVID-19. While shorter time-interval between symptom onset and admission is essential, the relatively short time interval between admission and death is a concern and the possible reasons must be evaluated and addressed to reduce avoidable mortality.

Publication Type

Journal article.

<760>

Accession Number

20203590399

Author

Apurba Sarkar; Pradip Chouhan

Title

COVID-19: district level vulnerability assessment in India.

Source

Clinical Epidemiology and Global Health; 2021. 9:204-215. 51 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

**Objectives:** COVID-19 Pandemic has brought a threatening challenge to the world and as well as for Indian society and economy. In India, it has become a public health disaster and its' intensity increasing continuously. For the disaster risk reduction, and capacity building against the COVID-19 pandemic understanding of the relationship between socio-environmental conditions with the pandemic is very necessary. The objective of the present work is to construct a socio-environmental vulnerability index of the potential risk of community spread of COVID-19 using socio-economic and environmental variables. **Methodology:** In this, cross-sectional study principal component analyses have been used to drive SoEVI. 4 uncorrelated sub-index has been extracted from 16 sub-indicators which reflects 59% of the variance. **Aggregation of 4 Sub-Index** has been done to obtain the final vulnerability Index. **Results:** Results show that there is spatial variability in vulnerability based on environmental and socio-economic conditions. Districts of north and central India found more vulnerable than south India. Statistical significance has been tested using regression analysis, positive relation has been found between vulnerability index and confirmed and active cases. **Conclusion:** The vulnerability index has highlighted environmentally and socioeconomically backward districts. These areas will suffer more critical problems against COVID-19 pandemic for their socio-environmental problem.

Publication Type

Journal article.

<761>

Accession Number

20203590381

Author

Gunjawate, D. R.; Rohit Ravi; Krishna Yerraguntla; Bellur Rajashekhar; Ashwani Verma

Title

Impact of coronavirus disease 2019 on professional practices of audiologists and speech-language pathologists in India: a knowledge, attitude and practices survey.

Source

Clinical Epidemiology and Global Health; 2021. 9:110-115. 16 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Coronavirus disease 2019 (COVID-19) has spread throughout the world and become a global pandemic. This has hampered and led to drastic changes in the functioning of healthcare services, forcing the professionals to adapt and work efficiently. The present study aimed to explore the impact of COVID-19 on the professional practices of audiologists and speech-language pathologists in India using a cross-sectional knowledge, attitude and practices survey. Material and methods: The study was conducted in two phases; phase one involved development and validation of the questionnaire, while phase II involved data collection. A cross-sectional self-reported internet-based study using convenience sampling was carried out. Results: Two hundred and eleven audiologists and speech-language pathologists responded to the survey. Overall, the professionals exhibited good knowledge levels regarding the COVID-19 outbreak. However, there were differences in their attitudes towards service delivery in the midst of the pandemic. Further, poor practices towards infection control measures especially in terms of hand washing was noted. Conclusion: The findings of the present study are useful in highlighting the need to create better awareness among these professionals about appropriate and standard infection control measures. There is a need to have in place standard operating protocols for hand wash and infection control as well as inclusion in curriculum.

Publication Type

Journal article.

<762>

Accession Number

20203590380

Author

Gohel, K. H.; Patel, P. B.; Shah, P. M.; Patel, J. R.; Niraj Pandit; Asavari Raut

Title

Knowledge and perceptions about COVID-19 among the medical and allied health science students in India: an online cross-sectional survey.

Source

Clinical Epidemiology and Global Health; 2021. 9:104-109. 24 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: An infection (COVID-19) without any specific cure makes the people more vulnerable to get affected due to insufficient knowledge and unhealthy practices. In this scenario, healthcare students can act as reliable information providers. This study aimed to assess the knowledge and perception about COVID-19 among medical and allied health science students. Methods: A web-based cross sectional survey was conducted during February and March 2020. A 24-item survey was developed and randomly distributed among the study population. Descriptive statistics was applied to represent participant characteristics and Chi-square test was used to evaluate the level of association among variables with a significance level of  $p < 0.01$ . Results: Total, 97.95% (715/730) participants completed the survey. High proportion of students were from pharmacy (45.73%) followed by medical (22.52%), physiotherapy, nursing and dental background. Majority of participants were having adequate knowledge while about 18% had partial knowledge about the symptoms of severe COVID-19 cases. Students have shown a positive perception of COVID-19 prevention and control while few invalid responses related to the use of herbal medicines or garlic were noted. About 50% had rightly stated that, the antibiotics and vaccine are not effective in COVID-19 infection at present. Conclusion: As the COVID-19 cases are rapidly increasing worldwide, it is essential to improve the knowledge and beliefs among general public to prevent its spread. Health care students with their education background and basic understanding about COVID-19 can play a significant role by making community people aware about the seriousness of this pandemic situation.

Publication Type

Journal article.

<763>

Accession Number

20203590378

Author

Frediansyah, A.; Ruchi Tiwari; Khan Sharun; Kuldeep Dhama; Harapan, H.

Title

Antivirals for COVID-19: a critical review.

Source

Clinical Epidemiology and Global Health; 2021. 9:90-98. 159 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)



Country of Publication

Netherlands

Abstract

No specific drugs have been approved for coronavirus disease 2019 (COVID-19) to date as the development of antivirals usually requires time. Therefore, assessment and use of currently available antiviral drugs is critical for a timely response to the current pandemic. Here, we have reviewed anti-SARS-CoV-2 potencies of available antiviral drug groups such as fusion inhibitors, protease inhibitors, neuraminidase inhibitors, and M2 ion-channel protein blockers. Although clinical trials to assess the efficacy of these antivirals are ongoing, this review highlights important information including docking and modeling analyses, in vitro studies, as well as results from clinical uses of these antivirals against COVID-19 pandemic.

Publication Type

Journal article.

<764>

Accession Number

20203590369

Author

Nilima Nilima; Siddharth Kaushik; Bhaskar Tiwary; Pandey, P. K.

Title

Psycho-social factors associated with the nationwide lockdown in India during COVID-19 pandemic.

Source

Clinical Epidemiology and Global Health; 2021. 9:47-52. 27 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objective: To investigate the psycho-social factors associated with COVID-19 and the nationwide lockdown in India. Study design: An online survey was conducted from April 11 through April 16, 2020 in 28 states and 8 union territories (UT) of India. The potential participants were recruited using snowball sampling procedure. Methods: A cross-sectional online survey was conducted among the people of all states in India. A spatial analysis was performed and Moran's I statistic was applied to investigate the overall clustering of

locations. Fisher's exact test was used to investigate associations. GeoDa and R console were used to analyze the data. A total of 1316 responses were received. Results: Those worried for their family's health were likely to follow the lockdown measures ( $p < 0.001$ ). Significant association was observed ( $p < 0.001$ ) between following the lockdown measures and being satisfied with the government strategy to combat the COVID-19 pandemic. A significant relation was observed between the gender ( $p = 0.001$ ), job profile ( $p < 0.001$ ) and physical activity ( $p < 0.001$ ) were observed to be associated with the psycho-social impact. Conclusion: Government and public health officials should consider the sentiments of the community while planning strategies relating to the pandemic. The findings of this study will assist the policymakers in emphasizing the psychological well-being of individuals, along with physical health.

#### Publication Type

Journal article.

<765>

#### Accession Number

20203590301

#### Author

Raman Kumar; Himani Rathi; Afrozul Haq; Wimalawansa, S. J.; Alpana Sharma

#### Title

Putative roles of vitamin D in modulating immune response and immunopathology associated with COVID-19.

#### Source

Virus Research; 2021. 292. many ref.

#### Publisher

Elsevier B.V.

#### Location of Publisher

Amsterdam

#### Country of Publication

Netherlands

#### Abstract

The first incidence of COVID-19 was reported in the Wuhan city of Hubei province in China in late December 2019. Because of failure in timely closing of borders of the affected region, COVID-19 spread across like a wildfire through air travel initiating a pandemic. It is a serious lower respiratory track viral infection caused by highly contagious, severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Coronavirus including COVID-19 causing SARS-CoV-2 causes zoonotic diseases and thought to be originated from bats. Since its first incidence, the virus has spread all across the world, causing serious human casualties, economic losses, and disrupting global supply chains. As with SARS-CoV, COVID-19 causing SARS-CoV-2 follows a similar path of airborne infection, but is less lethal and more infectious than SARS and

MERS. This review focusses on the pathogenesis of SARS-CoV-2, especially on the dysfunctional immune responses following a cytokine storm in severely affected persons. The mode of entry of SARS-CoV-2 is via the angiotensin converting enzyme 2 (ACE-2) receptors present on the epithelial lining of lungs, gastrointestinal tract, and mucus membranes. Older persons with weaker immune system and associated co-morbidities are more vulnerable to have dysfunctional immune responses, as most of them concomitantly have severe hypovitaminosis D. Consequently, causing severe damage to key organs of the body including lungs and the cardiovascular system. Since, vast majority of persons enters to the intensive care units and died, had severe vitamin D deficiency, thus, this area must be investigated seriously. In addition, this article assesses the role of vitamin D in reducing the risk of COVID-19. Vitamin D is a key regulator of the renin-angiotensin system that is exploited by SARS-CoV-2 for entry into the host cells. Further, vitamin D modulates multiple mechanisms of the immune system to contain the virus that includes dampening the entry and replication of SARS-CoV-2, reduces concentration of pro-inflammatory cytokines and increases levels of anti-inflammatory cytokines, enhances the production of natural antimicrobial peptide and activates defensive cells such as macrophages that could destroy SARS-CoV-2. Thus, this article provides the urgency of needed evidences through large population based randomized controlled trials and ecological studies to evaluate the potential role of vitamin D in COVID-19.

#### Publication Type

Journal article.

<766>

#### Accession Number

20203590177

#### Author

Kuntal Das

#### Title

Application of Indian medicinal herbs for skin problems following safety measures against COVID-19.  
(Special Issue: COVID-19.)

#### Source

Iranian Society of Dermatology; 2020. 23(Suppl. 1(COVID-19)):S24-S37. 82 ref.

#### Publisher

Iranian Society of Dermatology

#### Location of Publisher

Tehran

#### Country of Publication

Iran

#### Abstract

The daily work plan of the human has changed dramatically due to the spread of the coronavirus disease 2019 (COVID-19) pandemic. The viral infection was first detected in Wuhan, China, and was first transmitted via the bat as a zoonotic disease that was confirmed in December 2019. On 30th January 2020, this viral outbreak was declared a public health emergency or epidemic. Subsequently, on 11th February 2020, the World Health Organization (WHO) declared it a pandemic. The potentially lethal virus has become a threat to the global population. The WHO provides special precautions and instructions to people all around the world, among which the importance of wearing a face mask, gloves, and a head protector are discussed. Many healthcare workers (especially doctors and nurses) and common people suffer from skin infections with the use of a continuous face mask, gloves, or other protective items. In order to alleviate skin dermatitis, it is important to use well-known natural herbals in the search for new drug sources. It is advisable to use useful herbal extracts in sole or in combination as cosmetic products for the treatment of skin diseases. India is a focal point of medicinal plants. Many Indian herbal plants are essentially used as cosmetics to cure skin infections. Natural herbs are safe, non-toxic, and cost-efficient for treating skin dermatitis during the COVID-19 situation.

#### Publication Type

Journal article.

<767>

#### Accession Number

20203590173

#### Author

Prabhu, S. S.; Pai, S. B.; Kayarkatte, M. N.

#### Title

Phototherapy in dermatology: care, concerns and best practice amidst COVID-19 pandemic. (Special Issue: COVID-19.)

#### Source

Iranian Society of Dermatology; 2020. 23(Suppl. 1(COVID-19)):S2-S8. 17 ref.

#### Publisher

Iranian Society of Dermatology

#### Location of Publisher

Tehran

#### Country of Publication

Iran

#### Abstract

Phototherapy is an essential and useful therapeutic procedure wherein the properties of ultraviolet light are used to cure certain dermatological conditions like psoriasis, vitiligo, and atopic dermatitis. This is usually an office-based procedure dependent on the accurate use of sophisticated phototherapy units.

Since the advent of the COVID-19 pandemic, phototherapy practices were shut down as they were considered as non-essential services. Here, we attempt to analyze how COVID-19 has affected phototherapy and seek to formulate a working guideline for safe phototherapy operations in these taxing circumstances. We used search engines like PubMed, Google Scholar, and Embase to retrieve articles and guidelines regarding phototherapy in dermatology, using the pertinent search terms. There was a paucity of data with only a couple of research letters and guidelines by the British Association of Dermatology and the American Academy of Dermatology, as well as general guidelines issued by the Indian Association of Dermatologists, Venereologists and Leprologists. After a careful study of various modalities of phototherapy and viral inactivation, we collated a set of guiding instructions toward the appropriate utilization of phototherapy amidst the COVID-19 pandemic. Phototherapy is a viable option for selected patients even amidst the COVID-19 pandemic. However, local and national guidelines have to be followed while selecting the patient and operating the phototherapy machine with adequate protective measures for both the patient and the healthcare worker. Home phototherapy units and PUVASOL are good options for those patients who are unable to attend the phototherapy center due to various reasons.

#### Publication Type

Journal article.

<768>

#### Accession Number

20203590158

#### Author

Francis, R.; Bideau, M. le; Jardot, P.; Grimaldier, C.; Raoult, D.; Khalil, J. Y. B.; Scola, B. la

#### Title

High-speed large-scale automated isolation of SARS-CoV-2 from clinical samples using miniaturized co-culture coupled to high-content screening.

#### Source

Clinical Microbiology and Infection; 2021. 27(1):128.e1-128.e7. 20 ref.

#### Publisher

Elsevier

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

**Objectives:** A novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is responsible for the current coronavirus disease 2019 global pandemic. Only a few laboratories routinely isolate the virus, which is because the current co-culture strategy is highly time-consuming and requires a

biosafety level 3 laboratory. This work aimed to develop a new high-throughput isolation strategy using novel technologies for rapid and automated isolation of SARS-CoV-2. Methods: We used an automated microscope based on high-content screening (HCS), and we applied specific image analysis algorithms targeting cytopathic effects of SARS-CoV-2 on Vero E6 cells. A randomized panel of 104 samples, including 72 that tested positive by RT-PCR and 32 that tested negative, were processed with our HCS strategy and were compared with the classical isolation procedure. Results: The isolation rate was 43% (31/72) with both strategies on RT-PCR-positive samples and was correlated with the initial RNA viral load in the samples, in which we obtained a positivity threshold of 27 Ct. Co-culture delays were shorter with the HCS strategy, where 80% (25/31) of the positive samples were recovered by the third day of co-culture, compared with only 26% (8/30) with the classic strategy. Moreover, only the HCS strategy allowed us to recover all the positive samples (31 with HCS versus 27 with classic strategy) after 1 week of co-culture. Conclusions: This system allows the rapid and automated screening of clinical samples with minimal operator workload, which reduces the risk of contamination and paves the way for future applications in clinical microbiology, such as large-scale drug susceptibility testing.

#### Publication Type

Journal article.

<769>

#### Accession Number

20203590133

#### Author

Fiolet, T.; Guihur, A.; Rebeaud, M. E.; Mulot, M.; Peiffer-Smadja, N.; Mahamat-Saleh, Y.

#### Title

Effect of hydroxychloroquine with or without azithromycin on the mortality of coronavirus disease 2019 (COVID-19) patients: a systematic review and meta-analysis.

#### Source

Clinical Microbiology and Infection; 2021. 27(1):19-27. 84 ref.

#### Publisher

Elsevier

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Background: Hydroxychloroquine or chloroquine with or without azithromycin have been widely promoted to treat coronavirus disease 2019 (COVID-19) following early in vitro antiviral effects against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Background: The aim of this systematic

review and meta-analysis was to assess whether chloroquine or hydroxychloroquine with or without azithromycin decreased COVID-19 mortality compared with the standard of care. Data sources: PubMed, Web of Science, Embase Cochrane Library, Google Scholar and MedRxiv were searched up to 25 July 2020. Study eligibility criteria: We included published and unpublished studies comparing the mortality rate between patients treated with chloroquine or hydroxychloroquine with or without azithromycin and patients managed with standard of care. Participants: Patients 18 years old with confirmed COVID-19. Interventions: Chloroquine or hydroxychloroquine with or without azithromycin. Methods: Effect sizes were pooled using a random-effects model. Multiple subgroup analyses were conducted to assess drug safety. Results: The initial search yielded 839 articles, of which 29 met our inclusion criteria. All studies except one were conducted on hospitalized patients and evaluated the effects of hydroxychloroquine with or without azithromycin. Among the 29 articles, three were randomized controlled trials, one was a non-randomized trial and 25 were observational studies, including 11 with a critical risk of bias and 14 with a serious or moderate risk of bias. After excluding studies with critical risk of bias, the meta-analysis included 11 932 participants for the hydroxychloroquine group, 8081 for the hydroxychloroquine with azithromycin group and 12 930 for the control group. Hydroxychloroquine was not significantly associated with mortality: pooled relative risk (RR) 0.83 (95% CI 0.65-1.06, n=17 studies) for all studies and RR=1.09 (95% CI 0.97-1.24, n=3 studies) for randomized controlled trials. Hydroxychloroquine with azithromycin was associated with an increased mortality (RR=1.27; 95% CI 1.04-1.54, n=7 studies). We found similar results with a Bayesian meta-analysis. Conclusion: Hydroxychloroquine alone was not associated with reduced mortality in hospitalized COVID-19 patients but the combination of hydroxychloroquine and azithromycin significantly increased mortality.

#### Publication Type

Journal article.

<770>

#### Accession Number

20203590098

#### Author

Dambha-Miller, H.; Albasri, A.; Hodgson, S.; Wilcox, C. R.; Khan, S.; Islam, N.; Little, P.; Griffin, S. J.

#### Title

Currently prescribed drugs in the UK that could upregulate or downregulate ACE2 in COVID-19 disease: a systematic review.

#### Source

BMJ Open; 2020. 10(9). 128 ref.

#### Publisher

BMJ Publishing Group

#### Location of Publisher

London

#### Country of Publication

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## Abstract

**Objective:** To review evidence on routinely prescribed drugs in the UK that could upregulate or downregulate ACE2 and potentially affect COVID-19 disease. **Design:** Systematic review. **Data source:** MEDLINE, EMBASE, CINAHL, the Cochrane Library and Web of Science. **Study selection:** Any design with animal or human models examining a currently prescribed UK drug compared with a control, placebo or sham group, and reporting an effect on ACE2 level, activity or gene expression. **Data extraction and synthesis:** MEDLINE, EMBASE, CINAHL, the Cochrane Library, Web of Science and OpenGrey from inception to 1 April 2020. **Methodological quality** was assessed using the SYStematic Review Centre for Laboratory animal Experimentation (SYRCLE) risk-of-bias tool for animal studies and Cochrane risk-of-bias tool for human studies. **Results:** We screened 3360 titles and included 112 studies with 21 different drug classes identified as influencing ACE2 activity. Ten studies were in humans and one hundred and two were in animal models. None examined ACE2 in human lungs. The most frequently examined drugs were angiotensin receptor blockers (ARBs) (n=55) and ACE inhibitors (ACE-I) (n=22). More studies reported upregulation than downregulation with ACE-I (n=22), ARBs (n=55), insulin (n=8), thiazolidinedione (n=7) aldosterone agonists (n=3), statins (n=5), oestrogens (n=5) calcium channel blockers (n=3) glucagon-like peptide 1 (GLP-1) agonists (n=2) and Non-steroidal anti-inflammatory drugs (NSAIDs) (n=2). **Conclusions:** There is an abundance of the academic literature and media reports on the potential of drugs that could attenuate or exacerbate COVID-19 disease. This is leading to trials of repurposed drugs and uncertainty among patients and clinicians concerning continuation or cessation of prescribed medications. Our review indicates that the impact of currently prescribed drugs on ACE2 has been poorly studied in vivo, particularly in human lungs where the SARS-CoV-2 virus appears to enact its pathogenic effects. We found no convincing evidence to justify starting or stopping currently prescribed drugs to influence outcomes of COVID-19 disease.

## Publication Type

Journal article.

<771>

## Accession Number

20203590060

## Author

Zhang Hui; Zhao Yi; Zou Ping; Liu Yang; Lin ShuangHong; Ye ZhiHong; Tang LeiWen; Shao Jing; Chen DanDan

## Title

The relationship between autonomy, optimism, work engagement and organisational citizenship behaviour among nurses fighting COVID-19 in Wuhan: a serial multiple mediation.

## Source

BMJ Open; 2020. 10(9). 42 ref.

## Publisher



BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** High levels of organisational citizenship behaviour can enable nurses to cooperate with coworkers effectively to provide a high quality of nursing care during the outbreak of COVID-19. However, the association between autonomy, optimism, work engagement and organisational citizenship behaviour remains largely unexplored. This study aimed to test if the effect of autonomy on organisational citizenship behaviour through the mediating effects of optimism and work engagement. **Study design:** This was a cross-sectional study. **Setting:** The study was conducted in the Wuhan Jinyintan Hospital in China. **Participants** In total, 242 nurses who came from multiple areas of China to work at the Wuhan Jinyintan hospital during the COVID-19 epidemic participated in this study. **Methods:** A serial mediation model (model 6) of the PROCESS macro in SPSS was adopted to test the hypotheses, and a 95% CI for the indirect effects was constructed by using Bootstrapping. **Results:** The autonomy-organisational citizenship behaviour relationship was mediated by optimism and work engagement, respectively. In addition, optimism and work engagement mediated this relationship serially. **Conclusion:** The findings of this study may have implications for improving organisational citizenship behaviour. The effects of optimism and work engagement suggest a potential mechanism of action for the autonomy-organisational citizenship behaviour linkage. A multifaceted intervention targeting organisational citizenship behaviour through optimism and work engagement may help improve the quality of nursing care among nurses supporting patients with COVID-19.

Publication Type

Journal article.

<772>

Accession Number

20203590054

Author

Sengeh, P.; Jalloh, M. B.; Webber, N.; Ngobeh, I.; Samba, T.; Thomas, H.; Nordenstedt, H.; Winters, M.

Title

Community knowledge, perceptions and practices around COVID-19 in Sierra Leone: a nationwide, cross-sectional survey.

Source

BMJ Open; 2020. 10(9). 35 ref.

Publisher

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BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** To assess the public's knowledge, attitudes and practices about the novel coronavirus in Sierra Leone to inform an evidence-based communication strategy around COVID-19. **Design:** Nationwide, cross-sectional Knowledge, Attitudes and Practices survey. **Setting:** 56 randomly selected communities in all 14 districts in Sierra Leone. **Participants:** 1253 adults aged 18 years and older of which 52% were men. **Main outcome measures:** We calculated proportions of core indicators (awareness, knowledge, risk perception, practices). A composite variable for knowledge (based on seven variables) was created, and categorised into low (0-2 correct), medium (3-4) and high (5-7). Predictors of knowledge were analysed with multilevel ordinal regression models. Associations between information sources, knowledge and two practices (washing hands with soap and avoiding crowds) were analysed using multilevel logistic regression models. **Results:** We found that 75% of the respondents felt at moderate or great risk of contracting coronavirus. A majority (70%) of women did not know you can survive COVID-19, compared with 61% of men. 60% of men and 54% of women had already taken action to avoid infection with the coronavirus, mostly washing hands with soap and water (87%). Radio (73%) was the most used source for COVID-19 information, followed by social media (39%). Having a medium or high level of knowledge was associated with higher odds of washing hands with soap (medium knowledge: adjusted OR (AOR) 2.1, 95% CI 1.0 to 4.4; high knowledge: AOR 4.6, 95% CI 2.1 to 10.2) and avoiding crowds (medium knowledge: AOR 2.0, 95% CI 1.1 to 3.6; high knowledge: AOR 2.3, 95% CI 1.2 to 4.3). **Conclusions:** This study shows that in the context of COVID-19 in Sierra Leone, there is a strong association between knowledge and practices. Because the knowledge gap differs between genders, regions, educational levels and age, it is important that messages are specifically targeted to these core audiences.

Publication Type

Journal article.

<773>

Accession Number

20203590033

Author

Setti, L.; Passarini, F.; Gennaro, G. de; Barbieri, P.; Licen, S.; Perrone, M. G.; Piazzalunga, A.; Borelli, M.; Palmisani, J.; Gilio, A. di; Rizzo, E.; Colao, A.; Piscitelli, P.; Miani, A.

Title

Potential role of particulate matter in the spreading of COVID-19 in northern Italy: first observational study based on initial epidemic diffusion.

Source

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[www.rcvsknowledge.org](http://www.rcvsknowledge.org)

BMJ Open; 2020. 10(9). 55 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

**Objectives:** A number of studies have shown that the airborne transmission route could spread some viruses over a distance of 2 meters from an infected person. An epidemic model based only on respiratory droplets and close contact could not fully explain the regional differences in the spread of COVID-19 in Italy. On March 16th 2020, we presented a position paper proposing a research hypothesis concerning the association between higher mortality rates due to COVID-19 observed in Northern Italy and average concentrations of PM10 exceeding a daily limit of 50 micro g/m<sup>3</sup>. **Methods:** To monitor the spreading of COVID-19 in Italy from February 24th to March 13th (the date of the Italian lockdown), official daily data for PM10 levels were collected from all Italian provinces between February 9th and February 29th, taking into account the maximum lag period (14 days) between the infection and diagnosis. In addition to the number of exceedances of the daily limit value of PM10, we also considered population data and daily travelling information for each province. **Results:** Exceedance of the daily limit value of PM10 appears to be a significant predictor of infection in univariate analyses ( $p < 0.001$ ). Less polluted provinces had a median of 0.03 infections over 1000 residents, while the most polluted provinces showed a median of 0.26 cases. Thirty-nine out of 41 Northern Italian provinces resulted in the category with the highest PM10 levels, while 62 out of 66 Southern provinces presented low PM10 concentrations ( $p < 0.001$ ). In Milan, the average growth rate before the lockdown was significantly higher than in Rome (0.34 vs 0.27 per day, with a doubling time of 2.0 days vs 2.6, respectively), thus suggesting a basic reproductive number  $R_0 > 6.0$ , comparable with the highest values estimated for China. **Conclusion:** A significant association has been found between the geographical distribution of daily PM10 exceedances and the initial spreading of COVID-19 in the 110 Italian provinces.

Publication Type

Journal article.

<774>

Accession Number

20203589998

Author

Garcia-Manzanedo, S.; Lopez de la Oliva Calvo, L.; Ruiz Alvarez, L.

Title

Guillain-Barre syndrome after covid-19 infection. [Spanish]

Source

Medicina Clinica (Barcelona); 2020. 155(8):366-366. 5 ref.

Publisher

Elsevier Espana, S. L.

Location of Publisher

Barcelona

Country of Publication

Spain

Publication Type

Correspondence.

<775>

Accession Number

20203589925

Author

Hassan, Y.; Ogg, S.; Ge, H.

Title

Novel binding mechanisms of fusion broad range anti-infective protein ricin a chain mutant-pokeweed antiviral protein 1 (rtam-pap1) against SARS-CoV-2 key proteins in silico.

Source

Toxins; 2020. 12(9). 25 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The deadly pandemic named COVID-19, caused by a new coronavirus (SARS-CoV-2), emerged in 2019 and is still spreading globally at a dangerous pace. As of today, there are no proven vaccines, therapies, or even strategies to fight off this virus. Here, we describe the in silico docking results of a novel broad range anti-infective fusion protein RTAM-PAP1 against the various key proteins of SARS-CoV-2 using the latest protein-ligand docking software. RTAM-PAP1 was compared against the SARS-CoV-2 B38 antibody, ricin A chain, a

pokeweed antiviral protein from leaves, and the lectin griffithsin using the special CoDockPP COVID-19 version. These experiments revealed novel binding mechanisms of RTAM-PAP1 with a high affinity to numerous SARS-CoV-2 key proteins. RTAM-PAP1 was further characterized in a preliminary toxicity study in mice and was found to be a potential therapeutic candidate. These findings might lead to the discovery of novel SARS-CoV-2 targets and therapeutic protein structures with outstanding functions.

#### Publication Type

Journal article.

<776>

#### Accession Number

20203589820

#### Author

Ugalde, I. A. A.; Diaz, R. G.; Lezca, W. M.

#### Title

The basic SIR model and antiepidemic policies in public health against COVID-19 in Cuba. (Suplemento especial.) [Spanish]

#### Source

Revista Cubana de Salud Publica; 2020. 46(Suppl. 1). 14 ref.

#### Publisher

Editorial Ciencias Medicas

#### Location of Publisher

Havana

#### Country of Publication

Cuba

#### Abstract

The basic SIR (Susceptible-Infected-Recovered) model of Kermack-McKendrick is a compartmental model in which the population under study is divided into epidemiological classes, in between which a flow is described. A robust health system that provides reliable data to the model and combined with coherent public health policies contributes to controlling the impacts of epidemic contingencies. Hence, the objective of this study is to apply the SIR model, without delving into the mathematical apparatus that accompanies it, to know the impact of COVID-19 in Cuba, with an emphasis on Havana, as the center of the epidemic in the country in the period from March 11 to July 16, 2020. To do this, the model is shown with variable coefficients over time, together with its usefulness as a dynamic model to make projections in epidemic situations. It is applied to specific local regions and its potentialities to analyze outbreaks are manifested by the onset of local events that are far from the foreseen predictions. This work is part of the efforts that, in all orders, the Cuban Ministry of Public Health has developed to confront the COVID-19 pandemic.

Publication Type

Journal article.

<777>

Accession Number

20203589819

Author

Vidal, M. N. V.; Ledo, M. J. V.; Matar, R. P.

Title

Use of mobile health in Cuba to fight COVID-19. (Suplemento especial.) [Spanish]

Source

Revista Cubana de Salud Publica; 2020. 46(Suppl. 1). 12 ref.

Publisher

Editorial Ciencias Medicas

Location of Publisher

Havana

Country of Publication

Cuba

Abstract

From March, 2020 when the first cases of COVID-19 appeared in Cuba, it was implemented an intersectoral work strategy that was conceived some months earlier and directed by the Ministry of Public Health, the Civil Defense System and the Government to contain the risk of contagion and spreading of the new coronavirus in the national territory; as well as to minimize the negative effects of a pandemic in the country. This strategy includes the strengthening of epidemiologic surveillance, the organization of medical care in healthcare facilities, the training of all the public health's personnel for diagnosing and care of COVID- 19 patients, and the protection of the personnel working with positive cases. For its compliance, there are implemented measures that entail, among other solutions, social distancing which implies when possible remote study and work. It is then when the information and communication technologies become essential for the implementation of these procedures which are linked to actions directly related with electronic health, in general, and particularly with mobile health. Thus, it is the aim of this article to show the experiences related to mobile health in the confrontation to COVID-19 in Cuba, because its use has turned into an ally to face the current sanitary contingency caused by this disease, while it helps in communication, education and health promotion's processes with a positive impact while bringing to people's daily life, in a truthful and appropriate way, all the information needed to protect their health.

Publication Type

Journal article.

<778>

Accession Number

20203589817

Author

Abreu, E. de los A. G. de los; Serrate, P. C. F.

Title

Response from the public health to the pandemic by SARS-CoV-2 coronavirus. (Suplemento especial.)  
[Spanish]

Source

Revista Cubana de Salud Publica; 2020. 46(Suppl. 1). 46 ref.

Publisher

Editorial Ciencias Medicas

Location of Publisher

Havana

Country of Publication

Cuba

Abstract

Pandemics and epidemics put in danger humans survival and reduce the ability of producing resources to secure it; therefore, they need appropriate responses from the public health field. Thus, the aim of this article is to show some of the general considerations on the public health responses to the pandemic caused by SARS-CoV-2 coronavirus. From the study of documentary sources, it was known that international agencies agree in respecting health as a human right and the inclusive's public health decision makings should be in the frontline against the pandemic. Nevertheless, in some contexts, essential elements has been avoided which has provoked the increase of ill people and deads. The Americas' region is the current epicentre of the pandemic and it shows major difficulties for its control; however, Cuba strengthen its epidemiologic surveillance and control's system from the first level of the primary health care with intersectoral actions, participation of the populations, governmental leadership and the introduction of results from the national scientific-technologic development, and in addition, collaboration in a solidary way with different countries of the continent.

Publication Type

Journal article.

<779>

Accession Number

20203589510

Author

Samrat Singh; Sara Nourozi; Laxman Acharya; Sridhar Thapa

Title

Estimating the potential effects of COVID-19 pandemic on food commodity prices and nutrition security in Nepal.

Source

Journal of Nutritional Science; 2020. 9(e51). 29 ref.

Publisher

Cambridge University Press

Location of Publisher

Cambridge

Country of Publication

UK

Abstract

The objective of the paper is to analyse changes in food commodity prices and estimate the potential effects of food price change on nutrition security in Nepal in the context of COVID-19 contagion control measures. It presents a comparative intra-country observational study design looking at events before and during the pandemic (after implementation of contagion control measures). The study design includes three districts, enabling comparison between diverse agro-ecological zones and geographical contexts. The methodology consists of primary data collection, modelling and quantitative analysis. The analysis is based on actual school meal food baskets which represent culturally and nutritionally optimised food baskets, developed by the local community and notional typical household food baskets. End May/early June 2020 is the 'Post-COVID-19' reference point, the same time period in 2019 i.e. June 2019 is the 'Pre-COVID-19' reference point. The study finds a substantial increase in food commodity prices across food groups and districts with marked inter-district variation. For school meal basket, all micronutrients show large average declines ranging from 9.5% for zinc to 11% for vitamin-A. For household food baskets on average, vitamin-A reduced 37% followed by iron at 19%, reduction in zinc is low due to the high zinc content in whole grain cereals. COVID-19 control measures are likely to have contributed to substantial price inflation over the reference period with potentially damaging effects on nutrition security in Nepal with serious implications for vulnerable populations.

Publication Type

Journal article.



<780>

Accession Number

20203589279

Author

Khor Waiho; Hanafiah Fazhan; Sairatul Dahlianis Ishak; Nor Azman Kasan; Liew HonJung; Mohd Husin Norainy; Ikhwanuddin, M.

Title

Potential impacts of COVID-19 on the aquaculture sector of Malaysia and its coping strategies.

Source

Aquaculture Reports; 2020. 18. many ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The year 2020 was being ushered in by a global pandemic. Within months, COroNaVirus Disease (COVID-19) has spread to almost every country. With its long incubation period and highly contagious characteristics, most countries have initiated lockdown and social distancing is the new norm in most societies. Malaysia implemented the Movement Control Order (MCO) on 18 March 2020 when the cumulative COVID-19 cases were still below 800. Since then, MCO was extended several times and the latest phase of Recovery MCO (RMCO) will last until 31 August 2020. As seafood represents an important protein source, the aquaculture sector supports the livelihood of coastal communities in Malaysia, particularly those involved in micro- and small-scale fish farming activities. The emergence and spread of this pandemic severely disrupt market demand and supply chains of seafood industries. Therefore, this case report looks into the potential impacts of COVID-19 on the aquaculture sector of Malaysia. Then, the coping strategies implemented by Malaysia are highlighted and their potential effectiveness is discussed. Also, some useful recommendations are suggested to ensure the continuity and growth of the aquaculture sector. We believe that insights in this report are applicable to other sectors and countries with similar economic characteristics.

Publication Type

Journal article.

<781>

Accession Number

20203589062

Author

Raj Kumar; Sangh Mittra; Ramakant Yadav; Ramakant Rawat; Bajpai, P. K.; Sharma, I. K.; Dharmendra Kumar; Arushi Kumar

Title

Effect of a novel ayurvedic preparation, Raj Nirvan Bati (rnb), on symptomatic patients of covid-19.

Source

Annals of Horticulture; 2020. 13(1):66-75.

Publisher

Hi-Tech Horticultural Society

Location of Publisher

Meerut

Country of Publication

India

Abstract

Background: Pneumonia of unknown etiology originated in China during the last few days of the year 2019 has created huge pressure on the current health system of the world. The situation of COVID-19 is worsening day by day and we cannot wait for a vaccine or herd immunity to develop. Aim and Objectives: Many Ayurvedic treatments have been proven to fight against many viruses and also play a role in boosting the immunity of the human body. So, there is a need for a pilot study of the indigenous drug system to assess various other aspects of further larger studies. Methodology: A pilot study on novel ayurvedic drug, Raj Nirvan Bati (RNB), was conducted on a sample of 20 patients which was given in a fix dosage (125 milligrams per dosage) twice daily with 5 ml of natural honey. Results: After 5 days of RNB therapy 80.0% cases RT-PCR for nasopharyngeal and throat swab became negative. Out of these 16 cases, one patient RT-PCR became positive on Day 10. RNB therapy was given continuously in this case beyond 10 Day (total for 12 days) and RT-PCR become negative on the 12th day. Conclusion: Drug RNB showed reduced viral shedding duration, that can become a tool for prevention and management for COVID-19 infection. In most of the cases, symptoms of fever, cough and fatigue subsided on fifth day of treatment. Further randomized controlled trials should be planned to test the hypothesis regarding effectiveness of this novel formulation.

Publication Type

Journal article.

<782>

Accession Number

20203588757

Author

Martin, R. J.; Robertson, A. P.; Choudhary, S.

Title

Ivermectin: an anthelmintic, an insecticide, and much more.

Source

Trends in Parasitology; 2021. 37(1):48-64. 107 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Here we tell the story of ivermectin, describing its anthelmintic and insecticidal actions and recent studies that have sought to reposition ivermectin for the treatment of other diseases that are not caused by helminth and insect parasites. The standard theory of its anthelmintic and insecticidal mode of action is that it is a selective positive allosteric modulator of glutamate-gated chloride channels found in nematodes and insects. At higher concentrations, ivermectin also acts as an allosteric modulator of ion channels found in host central nervous systems. In addition, in tissue culture, at concentrations higher than anthelmintic concentrations, ivermectin shows antiviral, antimalarial, antimetabolic, and anticancer effects. Caution is required before extrapolating from these preliminary repositioning experiments to clinical use, particularly for Covid-19 treatment, because of the high concentrations of ivermectin used in tissue-culture experiments.

Publication Type

Journal article.

<783>

Accession Number

20203588753

Author

Siles-Lucas, M.; Gonzalez-Miguel, J.; Geller, R.; Sanjuan, R.; Perez-Arevalo, J.; Martinez-Moreno, A.

Title

Potential influence of helminth molecules on COVID-19 pathology.

Source

Trends in Parasitology; 2021. 37(1):11-14. 13 ref.

**Publisher**

Elsevier Ltd

**Location of Publisher**

Oxford

**Country of Publication**

UK

**Abstract**

In recent months, the parasitology research community has been tasked with investigation of the influence of parasite coinfection on coronavirus disease 2019 (COVID-19) outcomes. Herein, we share our approach to analyze the effect of the trematode *Fasciola hepatica* as a modulator of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and of COVID-19 pathology.

**Publication Type**

Journal article.

<784>

**Accession Number**

20203588752

**Author**

Sanjeev Krishna; Augustin, Y.; Wang JiGang; Xu ChengChao; Staines, H. M.; Platteeuw, H.; Kamarulzaman, A.; Sall, A.; Kremsner, P.

**Title**

Repurposing antimalarials to tackle the COVID-19 pandemic.

**Source**

Trends in Parasitology; 2021. 37(1):8-11. 15 ref.

**Publisher**

Elsevier Ltd

**Location of Publisher**

Oxford

**Country of Publication**

UK

**Abstract**

Artemisinin-based combination therapies (ACTs) have demonstrated in vitro inhibition of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Artemisinins have also shown anti-inflammatory effects, including inhibition of interleukin-6 (IL-6) that plays a key role in the development of severe coronavirus disease 2019 (COVID-19). There is now sufficient evidence for the effectiveness of ACTs, and in particular artesunate/pyronaridine, to support clinical studies for COVID-19 infections.

Publication Type

Journal article.

<785>

Accession Number

20203588751

Author

Jabbar, A.; Gauci, C. G.; Anstead, C. A.

Title

Parasitology education before and after the COVID-19 pandemic.

Source

Trends in Parasitology; 2021. 37(1):3-6. 14 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The COVID-19 pandemic has disrupted parasitology curricula worldwide, which is expected to lead to the reshaping of parasitology education. Here, we share our experiences of remote teaching and learning of veterinary parasitology and discuss opportunities offered by remote teaching during COVID-19 lockdowns, enabling the development of interactive online parasitology courses.

Publication Type

Journal article.

<786>

Accession Number

20203588732

Author

Prado-Galbarro, F. J.; Sanchez-Piedra, C.; Gamino-Arroyo, A. E.; Cruz-Cruz, C.

Title

Determinants of survival after severe acute respiratory syndrome coronavirus 2 infection in Mexican outpatients and hospitalised patients.

Source

Public Health; 2020. 189:66-72. 35 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Objectives:** This study aimed to evaluate the association of chronic diseases and indigenous ethnicity on the poor prognosis of outpatients with coronavirus disease 2019 (COVID-19) and hospitalised patients in Mexico. **Study design:** The study design is an observational study of consecutive COVID-19 cases that were treated in Mexican healthcare units and hospitals between February 27 and April 27, 2020. **Methods** Epidemiological, clinical and sociodemographic data were analysed from outpatients and hospitalised patients. Cox regression models were used to analyse the risk of mortality after severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. **Results:** In total, 15,529 patients with COVID-19 were characterised; 62.6% of patients were aged older than 40 years, 57.8% were men and 1.4% were of indigenous ethnicity. A high proportion had a history of diabetes (18.4%), hypertension (21.9%) and obesity (20.9%). Among hospitalised patients, 11.2% received health care in the intensive care unit. Advanced age, male sex, indigenous ethnicity and having a history of chronic diseases, such as hypertension, diabetes and obesity, were significantly associated with a high risk of death after SARS-CoV-2 infection. Diabetes and obesity were the comorbidities most highly associated with death through the models used in this study. Moreover, living in Mexico City and Mexico State (where there is easy access to medical services) and walking (rather than driving or getting public transport) were negatively associated with mortality after SARS-CoV-2 infection. **Conclusions:** Diabetes, hypertension and obesity combined with older age, male sex and indigenous ethnicity increase the risk of death after SARS-CoV-2 infection in the Mexican population. It is recommended that the incidence of COVID-19 is monitored in indigenous communities, and access to health services is increased nationwide.

Publication Type

Journal article.

<787>

Accession Number

20203588724

Author

Butt, A. A.; Kartha, A. B.; Masoodi, N. A.; Azad, A. M.; Asaad, N. A.; Alhomsy, M. U.; Saleh, H. A. H.; Bertollini, R.; Abou-Samra, A. B.

Title

Hospital admission rates, length of stay, and in-hospital mortality for common acute care conditions in COVID-19 vs. pre-COVID-19 era.

Source

Public Health; 2020. 189:6-11. 10 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Objectives:** The impact of COVID-19 upon acute care admission rates and patterns are unknown. We sought to determine the change in rates and types of admissions to tertiary and specialty care hospitals in the COVID-19 era compared with pre-COVID-19 era. **Methods:** Acute care admissions to the largest tertiary care referral hospital, designated national referral centers for cardiac, cancer and maternity hospital in the State of Qatar during March 2020 (COVID-19 era) and January 2020 and March 2019 (pre-COVID-19 era) were compared. We calculated total admissions, admissions for eight specific acute care conditions, in-hospital mortality rate, and length of stay at each hospital. **Results:** A total of 18,889 hospital admissions were recorded. A sharp decline ranging from 9% to 75% was observed in overall admissions. A decline in both elective and non-elective surgeries was observed. A decline of 9%-58% was observed in admissions for acute appendicitis, acute coronary syndrome, stroke, bone fractures, cancer, and live births, whereas an increase in admissions due to respiratory tract infections was observed. Overall length of stay was shorter in the COVID-19 period possibly suggesting lesser overall disease severity, with no significant change in in-hospital mortality. Unadjusted mortality rate for Qatar showed marginal increase in the COVID-19 period. **Conclusions:** We observed a sharp decline in acute care hospital admissions, with a significant decline in admissions due to seven out of eight acute care conditions. This decline was associated with a shorter length of stay but not associated with a change in in-hospital mortality rate.

Publication Type

Journal article.

<788>

Accession Number

20203588675

Author

Chaturvedi, P.; Rathore, K. S.; Chaturvedi, M.; Singh, S.

Title

A comparative study of air quality assessment before and during lockdown among metro cities of India.

Source

Environment Conservation Journal; 2020. 21(3):177-185. 16 ref.

Publisher

Action for Sustainable, Efficacious Development and Awareness (ASEA)

Location of Publisher

Haridwar

Country of Publication

India

Abstract

The aim of present study was to compare the air quality before and during lockdown due to COVID-19 pandemic at selected metro cities of India (Delhi, Kolkata, Bangalore, and Mumbai). The data of the selected parameters Particulate Matter having diameter equal to or less than 2.5micron (PM2.5), Particulate Matter having diameter equal to or less than 10micron (PM10), Nitrogen oxides (NO2), Ammonia (NH3), Sulphur oxides (SO2) Carbon monoxides (CO), and Ozone (O3) for the present study was collected from the official website of Central pollution Control Board (CPCB) and analyzed by calculating mean, standard deviation, total variance, and correlation coefficient. Dendrogram analysis was also performed site wise. The concentration of all the parameters except ozone was found highest at Delhi among all the sites. Ozone values were found highest at Bangalore. A strong correlation was observed between PM10 and PM2.5 at all the sites during the study period. A great change in the values of all the studied parameters was observed before and during the lockdown periods. In metro cities values of PM2.5 was found higher than PM10 except at Bangalore where values of PM2.5 was found lower than PM10. Among all the studied metro cities, Delhi was found highly polluted before and during the lockdown period while Bangalore was found least polluted.

Publication Type

Journal article.



<789>

Accession Number

20203587679

Author

Magalhaes, J. J. F. de; Mendes, R. P. G.; Silva, C. T. A. da; Silva, S. J. R. da; Guarines, K. M.; Pena, L.

Title

Epidemiological and clinical characteristics of the first 557 successive patients with COVID-19 in Pernambuco state, Northeast Brazil.

Source

Travel Medicine and Infectious Disease; 2020. 38. 26 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: South America is the current epicenter of COVID-19 pandemic. Yet, the epidemiological and clinical features of the disease have not been described in Brazil, the third most affected country in the world. Methods: In this retrospective study, we describe the demographics, epidemiology and clinical features of the first 557 consecutive patients positive for SARS-CoV-2 living in Pernambuco state, Northeast Brazil. Results: The first COVID-19 cases occurred in the high income population. The age of infected patients ranged from 27 days to 97 years with a median of 47 years. The ratio of males to female in the SARS-CoV-2-infected group was 0.83:1. The most common symptom was cough (74.51%), followed by fever (66.79%), dyspnea (56.01%), sore throat (28.19%) and O2 saturation <95% (24.42%). 86.44% of the lethal cases were patients older than 51 years. The median time from illness onset to diagnosis was 4.0 days (range 0-39 days) Severe patients diagnosed after 14 days of symptoms onset had higher viral load than patients with mild disease. Conclusions: Our study provides important information about COVID-19 in the tropics and will assist physicians and health officials to face the current pandemics as SARS-CoV-2 continues to spread in the human population.

Publication Type

Journal article.

<790>

Accession Number

20203587672

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Author

Al-Tawfiq, J. A.; Amar Sattar; Husain Al-Khadra; Saeed Al-Qahtani; Mobarak Al-Mulhim; Omar Al-Omouh; Kheir, H. O.

Title

Incidence of COVID-19 among returning travelers in quarantine facilities: a longitudinal study and lessons learned.

Source

Travel Medicine and Infectious Disease; 2020. 38. 28 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

**Introduction** The emergence of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) had resulted in an unrepresented global pandemic. In the initial events, the Kingdom of Saudi Arabia implemented mandatory quarantine of returning travelers in order to contain COVID-19 cases. **Materials and methods** This is a longitudinal study of the arriving travelers to Quarantine facilities and the prevalence of positive SARS-CoV-2 as detected by RT-PCR. **Results** During the study period, there was a total of 1928 returning travelers with 1273 (66%) males. The age range was 28 days-69 years. Of all the travelers, 23 (1.2%) tested positive for SARS-CoV-2. Of the first swab, 14/1928 (0.7%) tested positive. The positivity rate was 0.63% and 0.92% among males and females, respectively ( $P = 0.57$ ). The second swab was positive in 9 (0.5%) of the other 1914 who were initially negative with a positivity rate of 0.39% and 0.62% among males and females, respectively ( $P = 0.49$ ). There was no statistical difference in the positivity rates between first and second swab ( $P = 0.4$ ). Of all travelers, 40 ( $n = 26, 1.3\%$ ) were admitted from the quarantine facility to the hospital due to COVID-19 related positive results or development of symptoms such as fever, cough, and respiratory symptoms; and 14 (0.7%) were admitted due to non-COVID-19 related illness. **Conclusion** This study showed the efforts put for facility quarantine and that such activity yielded a lower incidence of positive cases. There was a need to have a backup healthcare facility to accommodate those developing a medical need for evaluation and admission for non-COVID-19 related illnesses.

Publication Type

Journal article.

<791>

Accession Number

20203587526

Author

Maal-Bared, R.; Loudon, J.

Title

Strategies for managing N95 mask shortages at water resource recovery facilities during pandemics: a review.

Source

Water Science and Technology; 2020. 82(12):2798-2812.

Publisher

IWA Publishing

Location of Publisher

London

Country of Publication

UK

Abstract

As the numbers of COVID-19 cases grew globally, the severe shortages of health care respiratory protective equipment impacted the ability of water resource recovery facilities (WRRFs) to acquire N95 masks for worker protection. While the Occupational Safety and Health Administration (OSHA) encourages WRRFs to conduct job safety assessments to mitigate risks from bioaerosols, it does not provide clear guidance on respiratory protection requirements, leaving the use of N95 masks across the industry non-standardized and difficult to justify. Strategies need to be developed to cope with shortages during pandemics, and these should take into consideration a WRRF's size and disinfection equipment available. Our objective is to provide an overview of respiratory protection-related practices recommended for health care professionals that apply to WRRFs (e.g., elimination, substitution, extended use, reuse, disinfection). Reviewed N95 mask disinfection strategies included using hydrogen peroxide, autoclaving, moist heat, dry heat, ultraviolet germicidal irradiation (UVGI), ethylene oxide, chlorine and ethanol. Of these, dry heat, autoclaving and UVGI present the most promise for WRRFs, with UVGI being limited to larger utilities. We recommend that WRRFs work closely with disinfection technology manufacturers, mask providers, health and safety staff and inspectors to develop suitable programs to cope with N95 mask shortages during pandemics.

Publication Type

Journal article.

<792>

Accession Number

20203587206

Author

Monticolo, F.; Palomba, E.; Santis, R. de; Assentato, L.; Triscino, V.; Langella, M. C.; Lanzotti, V.; Chiusano, M. L.

Title

Anti-HCoV: a web resource to collect natural compounds against human coronaviruses.

Source

Trends in Food Science & Technology; 2020. 106:1-11.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: A novel coronavirus, the SARS-CoV2, was revealed to be the cause of COVID19, the pandemic disease that already provoked more than 555.324 deaths in the world (July 10, 2020). No vaccine treatment has been defined against SARS-CoV2 or other human coronaviruses (HCoVs), including those causing epidemic infections, neither appropriate strategies for prevention and care are yet officially suggested. Scope and approach: We reviewed scientific literature on natural compounds that were defined as potentially effective against human coronaviruses. Our desk research identified non-chemically modified natural compounds that were shown (in vitro) and/or predicted (in silico) to act against one or more phases of human coronaviruses cell cycle. We selected all available information, merged and annotated the data to define a comprehensive list of natural compounds, describing their chemical classification, the source, the action, the specific target in the viral infection. Our aim was to collect possible compounds for prevention and care against human coronaviruses. Key findings and conclusions: The definition of appropriate interventions against viral diseases need a comprehensive view on the infection dynamics and on necessary treatments. Viral targeting compounds to be exploited in food sciences could be of relevant interest to this aim. We collected 174 natural compounds showing effects against human infecting coronaviruses, providing a curated annotation on actions and targets. The data are available in anti-HCoV, a web accessible resource to be exploited for testing and in vivo trials. The website is here launched to favour a community based cooperative effort to call for contribution and expand the collection. To be ready to fight.

Publication Type

Journal article.

<793>

Accession Number

20203586963

Author

Banat, I. M.; Carboue, Q.; Saucedo-Castaneda, G.; Cazares-Marinero, J. de J.

Title

Biosurfactants: the green generation of speciality chemicals and potential production using Solid-State fermentation (SSF) technology.

Source

Bioresource Technology; 2021. 320(Part A).

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Surfactants are multipurpose products found in most sectors of contemporary industry. Their large-scale manufacturing has been mainly carried out using traditional chemical processes. Some of the chemical species involved in their production are considered hazardous and some industrial processes employing them categorised as "having potential negative impact on the environment". Biological surfactants have therefore been generally accepted worldwide as suitable sustainable greener alternatives. Biosurfactants exhibit the same functionalities of synthetic analogues while having the ability to synergize with other molecules improving performances; this strengthens the possibility of reaching different markets via innovative formulations. Recently, their use was suggested to help combat Covid-19. In this review, an analysis of recent bibliography is presented with descriptions, statistics, classifications, applications, advantages, and challenges; evincing the reasons why biosurfactants can be considered as the chemical specialities of the future. Finally, the uses of the solid-state fermentation as a production technology for biosurfactants is presented.

Publication Type

Journal article.

<794>

Accession Number

20203585211

Author

Vijayasundaram, S.; Padmanabhan Karthikeyan; Mehta, S. D.

Title

Proficiency of virtual follow-up amongst tinnitus patients who underwent intratympanic steroid therapy amidst COVID 19 pandemic.

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Source

American Journal of Otolaryngology; 2020. 41(6). 18 ref.

Publisher

Elsevier Inc.

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

**Aim:** The aim of this study was to assess the efficacy and feasibility of virtual follow-up in patients who have undergone intratympanic steroid injection for treatment of tinnitus during COVID-19 pandemic. **Materials & methods:** Twenty-five patients having long-term tinnitus undergoing intratympanic steroid course, were followed up virtually via video calling & telephonic methods and evaluated using Tinnitus handicap inventory scoring over the period of 68 days. **Results:** 20 out of 25 patients expressed improvement from symptoms (80%) and 5 of the remaining (20%) showed no improvement. However, most of them were inarguably satisfied with this virtual method of follow up and had no reservation in following the similar method of observation in future. **Conclusion:** Virtual follow-up using video calling applications and telephonic call is an efficacious, cost effective and user-friendly method, which can provide accurate post procedural observation while keeping in account the nationwide lockdown during COVID 19 pandemic.

Publication Type

Journal article.

<795>

Accession Number

20203585066

Author

Lim ChunYee; Bohn, M. K.; Lippi, G.; Ferrari, M.; Loh, T. P.; Yuen KwokYung; Adeli, K.; Horvath, A. R.

Title

Staff rostering, split team arrangement, social distancing (physical distancing) and use of personal protective equipment to minimize risk of workplace transmission during the COVID-19 pandemic: a simulation study.

Source

Clinical Biochemistry; 2020. 86:15-22. 24 ref.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

**Background:** The recent global survey promoted by the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) Taskforce on COVID-19 (coronavirus disease 2019) described staff rostering and organization as significant operational challenges during the COVID-19 pandemic. **Method:** A discrete event simulation was used to explore the impact of different permutations of staff roster, including the number of shifts per day, the number of staff on duty per shift, overall number of staff accessible to work in the laboratory (i.e. overall staff pool), the frequency of shift changes (i.e. number of consecutive days worked), fixed work-rest days and split team arrangement on workplace transmission of COVID-19 by a simulated index staff who acquired the infection from the community over 21 days. Additionally, the impact of workplace social distancing (physical distancing) and use of personal protective equipment (PPE) were investigated. **Results:** A higher rate of transmission was associated with smaller overall staff pool (expressed as multiples of the number of staff per shift), higher number of shifts per day, higher number of staff per shift, and longer consecutive days worked. Having fixed work-rest arrangement did not significantly reduce the transmission rate unless the workplace outbreak was prolonged. Social distancing and PPE use significantly reduced the transmission rate. **Conclusion:** Laboratories should consider organizing the staff into smaller teams/shift and reduce the number of consecutive days worked. Additionally, our observation aligns with the IFCC biosafety recommendation of monitoring staff health (to detect early infection), split team arrangement, workplace social distancing and use of PPE.

Publication Type

Journal article.

<796>

Accession Number

20203584239

Author

Grange, L.; Guilpain, P.; Truchetet, M. E.; Cracowski, J. L.

Title

Challenges of autoimmune rheumatic disease treatment during the COVID-19 pandemic: a review. (Special issue: Drugs and COVID-19.)

Source

Therapie; 2020. 75(4):335-342.

Publisher

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Elsevier Masson

Location of Publisher

Paris

Country of Publication

France

Abstract

Since December 2019, the COVID-19 pandemic has become a major public health problem. To date, there is no evidence of a higher incidence of COVID in patients with autoimmune rheumatic diseases and we support the approach of maintaining chronic rheumatological treatments. However, once infected there is a small but significant increased risk of mortality. Among the different treatments, NSAIDs are associated with higher rates of complications, but data for other drugs are conflicting or incomplete. The use of certain drugs for autoimmune inflammatory rheumatism appears to be a potentially interesting option for the treatment. The rationale for their use is based on the immune system runaway and the secretion of pro-inflammatory cytokines (IL1, IL6, TNF $\alpha$ ) in severe forms of the disease. Notably, patients on chloroquine or hydroxychloroquine as a treatment for their autoimmune rheumatic disease are not protected from COVID-19.

Publication Type

Journal article.

<797>

Accession Number

20203583613

Author

Grima, J. S.; Perez, C. L.

Title

Role and importance of physical activity sciences professional in the society during and later lockdown for COVID-19: a view of different health professionals. [Spanish]

Source

Revista de Comunicacion y Salud; 2020. 10(2):593-606. 22 ref.

Publisher

Instituto Internacional de Comunicacion y Salud (INICyS)

Location of Publisher

Madrid

Country of Publication

Spain

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## Abstract

On March 11, 2020, the World Health Organization declared Covid-19 a pandemic. This new situation has caused the citizens around the world to be confined to their homes. In Spain, one of the countries hardest hit by the virus, its citizens have been held in their homes since March, 14, the date on which the state of alarm was declared. This confinement has led, among other things (social isolation, low exposure to sunlight, etc.), a drastic decrease of daily physical activity. Because lack of physical exercise or its poor performance worsens people's general health, professionals in the activity and sport (PASSP) become important these days. The aim of the present study was to collect and know the opinions of different health professionals (doctors, podiatrist, physiotherapist, researchers, etc.) on the present and future importance of the professional in PASSP in society. To achieve the proposed objective, semi-structured interviews were conducted with health professionals (n = 33). The results showed that 72.7% of the sample considered that the professional in PASSP is little recognized by the authorities, 60.6% believed that they are not recognized by society. The main conclusions are that the inclusion of professionals in PASSP in public health should be considered, as well as the regulation of their profession to avoid work intrusion.

## Publication Type

Journal article.

<798>

## Accession Number

20203583611

## Author

Sanchez Gonzalez, S.

## Title

Significance and internationalization of traditional Chinese medicine: the strategic communication of its use against SARS and COVID-19. [Spanish]

## Source

Revista de Comunicacion y Salud; 2020. 10(2):431-459. many ref.

## Publisher

Instituto Internacional de Comunicacion y Salud (INICyS)

## Location of Publisher

Madrid

## Country of Publication

Spain

## Abstract

The People's Republic of China (PRC) is a world power that has repositioned itself in the international system and in this process has sought to re-signify and internationalize its ancient culture. The objective of

this article is to understand the process of resignificance and internationalization of Traditional Chinese Medicine (TCM) as a central element of its culture, through the analysis of the strategic communication used by the Asian giant to show its use in the fight against the SARS epidemic and the COVID-19 pandemic. Chinese journalistic sources such as Xinhua, People's Daily and China Hoy are used, contrasted with other international agencies, as well as official sources like the White Paper on TCM and the document "Guidelines for using acupuncture and moxibustion to treat COVID-19" analyzed with a qualitative approach. It is proposed, at a hypothetical level, that Covid-19 pandemic has given new impetus to China's efforts to internationalize its traditional medicine, which it had already tried with the SARS epidemic in the Hu Jintao government. Through strategic communication, which emphasizes the positive effects of its use, it seeks to make it clear that, as stated by President Xi Jinping, TCM is a treasure of Chinese scientific heritage and therefore a sample of legacy of the Chinese civilization to the development of human kind in the "new era".

#### Publication Type

Journal article.

<799>

#### Accession Number

20203583173

#### Author

Kuhangana, T. C.; Mbayo, C. K.; Kitenge, J. P.; Ngoy, A. K.; Musambo, T. M.; Obadia, P. M.; Katoto, P. D. M. C.; Nkulu, C. B. L.; Nemery, B.

#### Title

COVID-19 pandemic: knowledge and attitudes in public markets in the former Katanga province of the Democratic Republic of Congo.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(20). 27 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

**Background.** Public markets were exempted from the restrictive regulations instituted to limit the rapid spread of the COVID-19 pandemic in the Democratic Republic of the Congo (DRC). In the early stage of the pandemic, we assessed people's knowledge, attitudes, and behavior on public markets towards COVID-19. **Methods.** We conducted a cross-sectional study from 16 to 29 April 2020 among sellers and customers

frequenting the food sections of ten public markets in three large cities (Kolwezi, Likasi, and Lubumbashi) and one small town (Lwambo) of the former Katanga province. We administered a questionnaire on knowledge (about clinical characteristics, transmission and prevention) and on attitudes in relation to COVID-19. We also observed prevailing practices (hand-washing and mask-wearing). Results: Of the 347 included participants (83% women, 83% sellers), most had low socioeconomic status and a low level of education. Only 30% of participants had correct knowledge of COVID-19. The majority of the respondents (88%) showed no confidence in the government's ability to manage the upcoming pandemic crisis. Nearly all respondents (98%) were concerned about the associated increase in food insecurity. Preventive practices were rarely in place. Conclusion: For an effective implementation of measures to prevent the spread of COVID-19 in Africa, appropriate health education programs to improve knowledge and attitudes are warranted among the population frequenting public markets.

#### Publication Type

Journal article.

<800>

#### Accession Number

20203583167

#### Author

Khan, A. A.; Yazed Alruthia; Bander Balkhi; Alghadeer, S. M.; Mohamad-Hani Temsah; Althunayyan, S. M.; Alsofayan, Y. M.

#### Title

Survival and estimation of direct medical costs of hospitalized COVID-19 patients in the kingdom of Saudi Arabia.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(20). 33 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

**Objectives:** Assess the survival of hospitalized coronavirus disease 2019 (COVID-19) patients across age groups, sex, use of mechanical ventilators (MVs), nationality, and intensive care unit (ICU) admission in the Kingdom of Saudi Arabia. **Methods:** Data were retrieved from the Saudi Ministry of Health (MoH) between 1 March and 29 May 2020. Kaplan-Meier (KM) analyses and multiple Cox proportional-hazards regression were conducted to assess the survival of hospitalized COVID-19 patients from hospital admission to

discharge (censored) or death. Micro-costing was used to estimate the direct medical costs associated with hospitalization per patient. Results: The number of included patients with complete status (discharge or death) was 1422. The overall 14-day survival was 0.699 (95%CI: 0.652-0.741). Older adults (>70 years) (HR = 5.00, 95%CI = 2.83-8.91), patients on MVs (5.39, 3.83-7.64), non-Saudi patients (1.37, 1.01-1.89), and ICU admission (2.09, 1.49-2.93) were associated with a high risk of mortality. The mean cost per patient (in SAR) for those admitted to the general Medical Ward (GMW) and ICU was 42,704.49 +or- 29,811.25 and 79,418.30 +or- 55,647.69, respectively. Conclusion: The high hospitalization costs for COVID-19 patients represents a significant public health challenge. Efficient allocation of healthcare resources cannot be emphasized enough.

#### Publication Type

Journal article.

<801>

#### Accession Number

20203583053

#### Author

Kim YoungJae; Cho JeongHyung; Kang SeungWoo

#### Title

Study on the relationship between leisure activity participation and wearing a mask among Koreans during COVID-19 crisis: using TPB model.

#### Source

International Journal of Environmental Research and Public Health; 2020. 17(20). 43 ref.

#### Publisher

MDPI AG

#### Location of Publisher

Basel

#### Country of Publication

Switzerland

#### Abstract

This study utilizes the Theory of Planned Behavior (TPB) variables - including "attitude," "subjective norms," and "perceived behavioral control" - to understand the relationship between mask-wearing behavior and physical/non-physical leisure activity participation in Koreans as well as the tendencies behind mask-wearing intentions within leisure activities. The measurement tools used attitude, subjective norms, control, and mask use intention factors based on the TPB. Overall, 545 individuals participated, and the non-overlapping regions, sex, and age were considered through the stratified sampling method. The survey was conducted online owing to COVID-19, and collected data were derived through descriptive and multiple linear regression analyses. First, a difference in mask-wearing intention based on physical and non-

physical leisure activities was identified; second, attitudes and perceived behaviors were considered in light of the dangers posed by COVID-19. It was found that control influences the tendency of intention to wear a mask depending on whether the group was engaged in physical or non-physical activity. Therefore, it can be stated that mask-wearing must be mandatory during physical and non-physical activities owing to respiratory diseases such as COVID-19. It is also important to simultaneously promote a positive attitude toward mask-wearing to enable people to believe that they can stay in full control of their own health.

#### Publication Type

Journal article.

<802>

#### Accession Number

20203582959

#### Author

Wang SanWang; Wen Xin; Dong YingYing; Liu Bin; Cui MingHu

#### Title

Psychological influence of coronavirus disease 2019 (COVID-19) pandemic on the general public, medical workers, and patients with mental disorders and its countermeasures.

#### Source

Psychosomatics (Washington, D.C.); 2020. 61(6):616-624. 57 ref.

#### Publisher

Elsevier

#### Location of Publisher

New York

#### Country of Publication

USA

#### Abstract

Background: Coronavirus disease 2019 (COVID-19) first broke out in Wuhan, Hubei Province, China, in 2019, and now it spreads in more than 100 countries around the world. On January 30th, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern. It was classified as a pandemic by the WHO on March 11, 2020. With the increase in the number of cases reported by various countries every day, the COVID-19 pandemic has attracted more and more attention around the world. At the same time, this public health emergency has caused a variety of psychological problems, such as panic disorder, anxiety, and depression. In addition, the Wuhan Mental Health Center's analysis of 2144 calls from the psychological hotline from February 4 to February 20, 2020, showed that the general public accounted for 70%, medical workers accounted for 2.2%, patients with mental disorders accounted for 19.5%, and other personnel accounted for 8.3% (<https://mp.weixin.qq.com/s/kmff1vnaLsT2d9xQkK5pwg>). Conclusion: Therefore, while controlling the pandemic, the government should also pay attention to the

mental health of the general public, medical workers, and patients with mental disorders. Community mental health service systems, online mental health services, telemedicine, and other measures for patients with mental disorders may play a vital role during the pandemic.

#### Publication Type

Journal article.

<803>

#### Accession Number

20203582300

#### Author

Yeo KeeThai; Oei JuLee; Luca, D. de; Schmolzer, G. M.; Guaran, R.; Palasanthiran, P.; Kumar, K.; Buonocore, G.; Cheong, J.; Owen, L. S.; Kusuda, S.; James, J.; Lim, G.; Sharma, A.; Uthaya, S.; Gale, C.; Whittaker, E.; Battersby, C.; Modi, N.; Norman, M.; Naver, L.; Giannoni, E.; Diambomba, Y.; Shah, P. S.; Gagliardi, L.; Harrison, M.; Pillay, S.; Abdullah Alburaey; Yuan Yuan; Zhang HuaYan

#### Title

Review of guidelines and recommendations from 17 countries highlights the challenges that clinicians face caring for neonates born to mothers with COVID-19.

#### Source

Acta Paediatrica; 2020. 109(11):2192-2207. 83 ref.

#### Publisher

Wiley

#### Location of Publisher

Copenhagen

#### Country of Publication

Denmark

#### Abstract

**Aim:** This review examined how applicable national and regional clinical practice guidelines and recommendations for managing neonates born to mothers with COVID-19 mothers were to the evolving pandemic. **Methods:** A systematic search and review identified 20 guidelines and recommendations that had been published by May 25, 2020. We analysed documents from 17 countries: Australia, Brazil, Canada, China, France, India, Italy, Japan, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, the UK and the United States. **Results:** The documents were based on expert consensus with limited evidence and were of variable, low methodological rigour. Most did not provide recommendations for delivery methods or managing symptomatic infants. None provided recommendations for post-discharge assimilation of potentially infected infants into the community. The majority encouraged keeping mothers and infants together, subject to infection control measures, but one-third recommended separation. Although breastfeeding or using breastmilk was widely encouraged, two countries specifically

prohibited this. Conclusion: The guidelines and recommendations for managing infants affected by COVID-19 were of low, variable quality and may be unsustainable. It is important that transmission risks are not increased when new information is incorporated into clinical recommendations. Practice guidelines should emphasise the extent of uncertainty and clearly define gaps in the evidence.

#### Publication Type

Journal article.

<804>

#### Accession Number

20203581257

#### Author

Kaaren Mathias; Meenal Rawat; Sharad Philip; Grills, N.

#### Title

We've got through hard times before: acute mental distress and coping among disadvantaged groups during COVID-19 lockdown in north India - a qualitative study.

#### Source

International Journal for Equity in Health; 2020. 19(224). 61 ref.

#### Publisher

BioMed Central Ltd

#### Location of Publisher

London

#### Country of Publication

UK

#### Abstract

**Background:** The COVID-19 crisis in India negatively impacted mental health due to both the disease and the harsh lockdown, yet there are almost no qualitative studies describing mental health impacts or the strategies of resilience used, and in particular, no reports from the most vulnerable groups. This study aimed to examine the acute mental health impacts of the COVID-19 crisis as well as coping strategies employed by disadvantaged community members in North India. **Methods:** We used an intersectional lens for this qualitative study set in rural Tehri Garwhal and urban Dehradun districts of Uttarakhand, India. In-depth interviews were conducted in May 2020 during lockdown, by phone and in person using purposive selection, with people with disabilities, people living in slums with psychosocial disabilities and widows (total n = 24). We used the framework method for analysis following steps of transcription and translation, familiarisation, coding, developing and then applying a framework, charting and then interpreting data. **Findings:** The participants with compounded disadvantage had almost no access to mobile phones, health messaging or health care and experienced extreme mental distress and despair, alongside hunger and loss of income. Under the realms of intrapersonal, interpersonal and social, six themes related to mental

distress emerged: feeling overwhelmed and bewildered, feeling distressed and despairing, feeling socially isolated, increased events of othering and discrimination, and experiencing intersectional disadvantage. The six themes summarising coping strategies in the COVID-19 crisis were: finding sense and meaning, connecting with others, looking for positive ways forward, innovating with new practices, supporting others individually and collectively, and engaging with the natural world. Conclusions: People intersectionally disadvantaged by their social identity experienced high levels of mental distress during the COVID-19 crisis, yet did not collapse, and instead described diverse and innovative strategies which enabled them to cope through the COVID-19 lockdown. This study illustrates that research using an intersectional lens is valuable to design equitable policy such as the need for access to digital resources, and that disaggregated data is needed to address social inequities at the intersection of poverty, disability, caste, religious discrimination and gender inherent in the COVID-19 pandemic in India.

#### Publication Type

Journal article.

<805>

#### Accession Number

20203580524

#### Author

Parvinder Kour; Aruditya Jasrotia; Sudhanshu Gupta

#### Title

Understanding the impact of airport service quality on passengers' revisit intentions amidst COVID-19 pandemic.

#### Source

Enlightening Tourism: A Pathmaking Journal (ET); 2020. 10(2):358-386. many ref.

#### Publisher

University of Huelva

#### Location of Publisher

Huelva

#### Country of Publication

Spain

#### Abstract

With the increased competitive scenario destination authorities are looking at every possible aspect for attracting the tourists by serving quality services. Airports around the world are looking for enhancing airport service quality thereby working towards overall travel satisfaction. Quality of service and consumer satisfaction is considered as critical determinant of strategic framework for determining any business performance. The current study aims to examine the impact of airport service quality on passengers' revisit intentions amidst the COVID-19 pandemic and further its association with destination selection or choice.



Crisis situations like COVID-19 immediately hit airports and therefore, it becomes absolutely essential for them to revive and adapt their services quickly according to the changing conditions. The SEM analysis was applied where satisfaction was observed as a mediator between airport service quality and travelers' intent to revisit the airport, willingness to spend at the airport as well as their intent to come and visit again the destination. To this, positive and in fact significant relation has been observed between Airport Service Quality and willingness to spend at the airport and revisit the airport as well the destination. Since airports are amongst the service providers tourism destinations, this study gives the authorities with theoretical and empirical background to consider numerous factors that the passengers are actually looking in a service or might seek in future which currently is unclear and ambiguous due to COVID-19.

#### Publication Type

Journal article.

<806>

#### Accession Number

20203579781

#### Author

Adhikari, J.; Timsina, J.; Khadka, S. R.; Ghale, Y.; Ojha, H.

#### Title

COVID-19 impacts on agriculture and food systems in Nepal: implications for SDGs.

#### Source

Agricultural Systems; 2021. 186. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

The objective of this study was to understand the impacts of COVID-19 crisis in agriculture and food systems in Nepal and assess the effectiveness of measures to deal with this crisis. The study draws policy implications, especially for farming systems resilience and the achievement of SDGs 1 and 2. The findings are based on (i) three panel discussions over six months with policy makers and experts working at grassroots to understand and manage the crisis, (ii) key informants' interviews, and (iii) an extensive literature review. Results revealed that the lockdown and transport restrictions have had severe consequences, raising questions on the achievement of SDGs 1 and 2, especially in the already vulnerable regions dependent on food-aid. This crisis has also exposed the strengths and limitations of both subsistence and commercial farming systems in terms of resiliency, offering important lessons for policy

makers. Traditional subsistence farming appears to be somewhat resilient, with a potential to contribute to key pillars of food security, especially access and stability, though with limited contributions to food availability because of low productivity. On the other hand, commercial farming - limited to the periphery of market centres, cities, and emerging towns and in the accessible areas - was more impacted due to the lack of resilient supply networks to reach even the local market. Lower resiliency of commercial farming was also evident because of its growing dependence on inputs (mainly seeds and fertilizer) on distant markets located in foreign countries. The observation of crisis over eight months unleashed by the pandemic clearly revealed that wage labourers, indigenous people, and women from marginalized groups and regions already vulnerable in food security and malnutrition suffered more due to COVID-19 as they lost both external support and the coping mechanisms. The findings have implications for policies to improve both subsistence and commercial farming systems - in particular the former by improving the productivity through quality inputs and by diversifying, promoting and protecting the indigenous food system, while the latter through sustainable intensification by building reliant supply network linking farming with markets and guarantying the supply of inputs.

#### Publication Type

Journal article.

<807>

#### Accession Number

20203579394

#### Author

Zhao YuanYuan; Wei Lai; Liu Bin; Du DunFeng

#### Title

Management of transplant patients outside hospital during COVID-19 epidemic: a Chinese experience.

#### Source

Transplant Infectious Disease; 2020. 22(5). 16 ref.

#### Publisher

Wiley

#### Location of Publisher

Boston

#### Country of Publication

USA

#### Abstract

Coronavirus disease 2019 (COVID-19) pandemic poses an increasing challenge for transplant community. Aggressive management measures are conducive to improve compliance and to lower the risk of intra-hospital infection. In this Personal Viewpoint essay, we shared experiences about management strategies of transplant patients outside hospital amid the epidemic. With the aid of Cloud Clinic service and

telemedicine care, transplant patients could be regularly followed up and get medical consultation online. Furthermore, personal health education and mental health assistance are enrolled in our practice.

#### Publication Type

Journal article.

<808>

#### Accession Number

20203578796

#### Author

Rivera-Morales, J.; Sotuyo, S.; Vargas-Guadarrama, L. A.; Santiago, S. de; Pasquet, P.

#### Title

Physical activity and cardiorespiratory fitness in Tarahumara and Mestizo adolescents from Sierra Tarahumara, Mexico. (Special Issue: Human biologists Confront the COVID-19 Pandemic.)

#### Source

American Journal of Human Biology; 2020. 32(5).

#### Publisher

Wiley

#### Location of Publisher

Hoboken

#### Country of Publication

USA

#### Abstract

**Objectives:** Our purpose was to explore the levels of cardiorespiratory fitness (CRF) and the relationship between CRF, physical activity, and other physical traits in traditional and nontraditional Tarahumara, and Mestizo adolescents from Sierra Tarahumara, Mexico. **Methods:** A sample of 87 adolescents aged 16.9 +or- 1.2 years (mean +or- SD) performed the Margaria step test to quantify CRF. Physical activity was estimated using the International Physical Activity Questionnaire. Blood pressure (BP) and anthropometric measures were taken to estimate body composition and other physical characteristics. **Results:** Traditional Tarahumara showed higher levels of CRF than nontraditional Tarahumara and Mestizo adolescents ( $F = 5.5$ ,  $p = .006$ ). The time allotted to sedentary activities was higher in the Mestizo and nontraditional Tarahumara ( $X^2 = 10.17$ ,  $p = .006$ ). In nontraditional Tarahumara, adiposity was associated with CRF reduction ( $r^2 = -.63$ ,  $p = .00$ ), while vigorous physical activities were positively associated with CRF ( $r^2 = .43$ ,  $p = .03$ ) and negatively associated with the z-score of body fat ( $r^2 = -.42$ ,  $p = .03$ ). Finally, CRF was negatively associated with fat percentage ( $r^2 = -.27$ ,  $p = .00$ ) and systolic blood pressure ( $r^2 = -.09$ ,  $p = .04$ ) in the Mestizo. In this group, walking activities ( $r^2 = -.25$ ,  $p = .003$ ) and total physical activity score ( $r^2 = -.11$ ,  $p = .03$ ) had a positive association with the CRF, while moderate activities had a negative association with the body mass index ( $r^2 = .09$ ,  $p = .04$ ), and vigorous activities were negatively associated with body weight ( $r^2$

= .11, p = .03). Conclusions: In the sampled nontraditional Tarahumara and Mestizo adolescents, moderate and vigorous physical activities were important factors in determining levels in CRF, fat percentage, and other health parameters.

#### Publication Type

Journal article.

<809>

#### Accession Number

20203578726

#### Author

Sepahvand, R.; Mofrad, M. M.; Taghipour, S.

#### Title

Identifying and prioritizing the psychological consequences of the COVID 19 virus in nurses. [Persian]

#### Source

Hospital; 2020. 19(2):fa25-fa32. 13 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:** The increasing prevalence of Covid 19 virus in the world has various consequences for people involved in the treatment process of patients with this virus. Accordingly, the main purpose of this study was to identify and prioritize the psychological consequences of Covid 19 virus in nurses. **Materials and Methods:** This study is based on the applied purpose and in terms of how to collect data in the field of descriptive survey studies. The analysis approach in this study is mixed and a combination of qualitative and quantitative methods. The statistical population of this study consists of nursing professors and medical specialists of Lorestan University of Medical Sciences. Using purposive sampling method and according to the principle of theoretical saturation, 14 professors and specialists were included as the research sample. The statistical population of the quantitative ward also included the managers of hospitals providing services to coronary patients in Lorestan province, which were selected as a research sample by 35 people using non-probability sampling method. Identification of psychological consequences was performed using analysis of interview data with Atlas.ti software and prioritization of consequences using a triangular fuzzy method. **Results:** Analysis of interview data led to the identification of 16 psychological consequences affecting nurses. Prioritization of these factors showed that depression, decreased concentration and apathy are the most important psychological consequences of Covid virus 19. **Conclusion:** Developing

supportive strategies to maintain the health of nurses should be a priority in future plans, and a separate part of the annual hospital costs should be allocated to this important matter.

#### Publication Type

Journal article.

<810>

#### Accession Number

20203577509

#### Author

Shen LiJuan; Zhao TianLiang; Wang HongLei; Liu Jane; Bai YongQing; Kong ShaoFei; Zheng Huang; Zhu Yan; Shu ZhuoZhi

#### Title

Importance of meteorology in air pollution events during the city lockdown for COVID-19 in Hubei Province, Central China.

#### Source

Science of the Total Environment; 2021. 754. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Compared with the 21-year climatological mean over the same period during 2000-2020, the aerosol optical depth (AOD) and Angstrom exponent (AE) during the COVID-19 lockdown (January 24-February 29, 2020) decreased and increased, respectively, in most regions of Central-Eastern China (CEC). The AOD (AE) values decreased (increased) by 39.2% (29.4%) and 31.0% (45.3%) in Hubei and Wuhan, respectively, because of the rigorous restrictions. These inverse changes reflected the reduction of total aerosols in the air and the contribution of the increase in fine-mode particles during the lockdown. The surface PM<sub>2.5</sub> had a distinct spatial distribution over CEC during the lockdown, with high concentrations in North China and East China. In particular, relatively high PM<sub>2.5</sub> concentrations were notable in the lower flatlands of Hubei Province in Central China, where six PM<sub>2.5</sub> pollution events were identified during the lockdown. Using the observation data and model simulations, we found that 50% of the pollution episodes were associated with the long-range transport of air pollutants from upstream CEC source regions, which then converged in the downstream Hubei receptor region. However, local pollution was dominant for the remaining episodes because of stagnant meteorological conditions. The long-range transport of air pollutants substantially

contributed to PM2.5 pollution in Hubei, reflecting the exceptional importance of meteorology in regional air quality in China.

Publication Type

Journal article.

<811>

Accession Number

20203577480

Author

Hashim, B. M.; Al-Naseri, S. K.; Al-Maliki, A.; Al-Ansari, N.

Title

Impact of COVID-19 lockdown on NO<sub>2</sub>, O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> concentrations and assessing air quality changes in Baghdad, Iraq.

Source

Science of the Total Environment; 2021. 754. 49 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Covid-19 was first reported in Iraq on February 24, 2020. Since then, to prevent its propagation, the Iraqi government declared a state of health emergency. A set of rapid and strict countermeasures have taken, including locking down cities and limiting population's mobility. In this study, concentrations of four criteria pollutants, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> before the lockdown from January 16 to February 29, 2020, and during four periods of partial and total lockdown from March 1 to July 24, 2020, in Baghdad were analysed. Overall, 6, 8 and 15% decreases in NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> concentrations, respectively in Baghdad during the 1st partial and total lockdown from March 1 to April 21, compared to the period before the lockdown. While, there were 13% increase in O<sub>3</sub> for same period. During the 2nd partial lockdown from June 14 to July 24, NO<sub>2</sub> and PM<sub>2.5</sub> decreases 20 and 2.5%, respectively. While, there were 525 and 56% increase in O<sub>3</sub> and PM<sub>10</sub>, respectively for same period. The air quality index (AQI) improved by 13% in Baghdad during the 1st partial lockdown from March 1 to April 21, compared to its pre-lockdown. The results of NO<sub>2</sub> tropospheric column extracted from the Sentinel-5P satellite shown the NO<sub>2</sub> emissions reduced up to 35 to 40% across Iraq, due to lockdown measures, between January and July, 2020, especially across the major cities such as Baghdad, Basra and Erbil. The lockdown due to COVID-19 has drastic effects on social and

economic aspects. However, the lockdown also has some positive effect on natural environment and air quality improvement.

Publication Type

Journal article.

<812>

Accession Number

20203576945

Author

Beery, T.

Title

What we can learn from environmental and outdoor education during COVID-19: a lesson in participatory risk management.

Source

Sustainability; 2020. 12(21). 39 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

COVID-19 has impacted education on all levels, with many institutions turning to online formats to deal with the global public health crisis. This study aims to carefully consider participatory risk management, given concerns about the specific impact of COVID-19 upon environmental and outdoor education. An environmental and outdoor education expedition-style university-based field course at the Laponia World Heritage Site provided the context for considering environmental and outdoor education's response to COVID-19. Whether or how risk could be effectively managed in the unique setting during the COVID-19 pandemic was explored using action research methodology. A combination of systematic instructor observation, student-instructor communication, and surveys to student participants provided the data to consider the research question. Outcomes underscore the critical role of participatory risk management in environmental and outdoor education settings and highlight the concept of interdependence in environmental and outdoor education risk management. In addition, the research provides support for the action research idea of practitioners as researchers.

Publication Type

Journal article.

<813>

Accession Number

20203570955

Author

Dombroski, K.; Diprose, G.; Sharp, E.; Graham, R.; Lee, L.; Scobie Matthew; Richardson, S.; Watkins, A.; Martin-Neuning, R.

Title

Food for people in place: reimagining resilient food systems for economic recovery.

Source

Sustainability; 2020. 12(22). 57 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic and associated response have brought food security into sharp focus for many New Zealanders. The requirement to "shelter in place" for eight weeks nationwide, with only "essential services" operating, affected all parts of the New Zealand food system. The nationwide full lockdown highlighted existing inequities and created new challenges to food access, availability, affordability, distribution, transportation, and waste management. While Aotearoa New Zealand is a food producer, there remains uncertainty surrounding the future of local food systems, particularly as the long-term effects of the pandemic emerge. In this article we draw on interviews with food rescue groups, urban farms, community organisations, supermarket management, and local and central government staff to highlight the diverse, rapid, community-based responses to the COVID-19 pandemic. Our findings reveal shifts at both the local scale, where existing relationships and short supply chains have been leveraged quickly, and national scale, where funding has been mobilised towards a different food strategy. We use these findings to re-imagine where and how responsibility might be taken up differently to enhance resilience and care in diverse food systems in New Zealand.

Publication Type

Journal article.



<814>

Accession Number

20203567930

Author

Hirvonen, K.; Mohammed, B.; Minten, B.; Seneshaw Tamru

Title

Food marketing margins during the COVID-19 pandemic. Evidence from vegetables in Ethiopia.

Source

ESSP Working Paper - Ethiopia Strategy Support Program; 2020. (150):ii + 14 pp. 38 ref.

Publisher

International Food Policy Research Institute (IFPRI)

Location of Publisher

Washington D.C.

Country of Publication

USA

Abstract

It is widely feared that the COVID-19 pandemic will lead to a significant worsening of the food security situation in low and middle-income countries. One reason for this is the disruption of food marketing systems and subsequent changes in farm and consumer prices. Based on primary data in Ethiopia collected just before the start and a few months into the pandemic, we assess changes in farm and consumer prices of four major vegetables and the contribution of different segments of the rural-urban value chain in urban retail price formation. We find large, but heterogeneous, price changes for different vegetables with relatively larger changes seen at the farm level, compared to the consumer level, leading to winners and losers among local vegetable farmers due to pandemic-related trade disruptions. We further note that despite substantial hurdles in domestic trade reported by most value chain agents, increases in marketing - and especially transportation - costs have not been the major contributor to overall changes in retail prices. Marketing margins even declined for half of the vegetables studied. The relatively small changes in marketing margins overall indicate the resilience of these domestic value chains during the pandemic in Ethiopia.

Publication Type

Bulletin.

<815>

Accession Number

20203556599

Author

Li RenFeng; Lu XiaoHui; Jiang JinQing; Wang ZiLiang

Title

Research advances on porcine emerging coronaviruses. [Chinese]

Source

Acta Veterinaria et Zootechnica Sinica; 2020. 51(10):2359-2366. 67 ref.

Publisher

Institute of Animal Science, Chinese Academy of Agricultural Sciences

Location of Publisher

Beijing

Country of Publication

China

Abstract

Currently, corona virus disease 2019 (COVID-19) caused by SARS-CoV-2 is still raging worldwide, which attracts great concern about coronavirus originated from animal. Porcine deltacoronavirus (PDCoV) and swine acute diarrhea syndrome coronavirus (SADS-CoV) are newly discovered porcine coronaviruses in recent years, they not only damage pig industry severely but also pose potential threats to public health. This article reviews the literature concerning the etiology, origin and evolution, pathogenicity, and diagnostics of PDCoV and SADS-CoV, presenting the prospect of research work. We aim to expand understanding on SARS-CoV-2 and provide references for subsequent research on PDCoV and SADS-CoV.

Publication Type

Journal article.

<816>

Accession Number

20203556383

Author

Osmyatchenko, V. O.; Vavilov, V. V.

Title

Peculiarities of application of the computerized information systems of accountance in the institutions for physical culture and health recreation. [Ukrainian]

Source

Business Inform; 2020. (7):200-207. 11 ref.

Publisher

Inzhek Publishing House

Location of Publisher

Kharkiv

Country of Publication

Ukraine

Abstract

The article is aimed at studying the peculiarities of application of the computerized information systems of accountance and reporting in the institutions of physical culture and health recreation. It is proved that the adoption by the managers of different levels at institutions of physical culture and health recreation of effective managerial decisions, especially in the conditions of world pandemic COVID-19, is possible only when receiving timely, complete, accurate, objective information on economic activities of the enterprises provided by the system of accountance and reporting. It is substantiated that, in the conditions of globalization and world pandemic COVID-19, a modification of the existing and emergence of new accounting tasks is going on, which is caused by the reorientation to the online services, change of motives and requests of all interested in accounting information of the participants of economic relations. The tasks of accountance at the institutions of physical culture and health recreation are formed and systematized. To make efficient managerial decisions in the accounting and analytical system of an institution of physical culture and health recreation, it is proposed to allocate four sections of information: accounting, analytical, forecasting, and management. It is proved that the main task of information systems and technologies of accountance at the institutions of physical culture and health recreation of Ukraine is achievement of a more qualitative level of cooperation, coordination and communication of the information relations between the departments and consumers of the services for making efficient managerial decisions. The algorithm of the automated process of taking account of any economic management operations at the institutions of physical culture and health recreation by means of accounting modeling is suggested.

Publication Type

Journal article.

<817>

Accession Number

20203551270

Author

Izes, A. M.; Yu, J.; Norris, J. M.; Govendir, M.

Title

Current status on treatment options for feline infectious peritonitis and SARS-CoV-2 positive cats.

Source

Veterinary Quarterly; 2020. 40(322-330):322-330. 81 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Feline infectious peritonitis (FIP) is a viral-induced, immune-mediated disease of cats caused by virulent biotypes of feline coronaviruses (FCoV), known as the feline infectious peritonitis virus (FIPV). Historically, three major pharmacological approaches have been employed to treat FIP: (1) immunomodulators to stimulate the patient's immune system non-specifically to reduce the clinical effects of the virus through a robust immune response, (2) immunosuppressive agents to dampen clinical signs temporarily, and (3) re-purposed human antiviral drugs, all of which have been unsuccessful to date in providing reliable efficacious treatment options for FIPV. Recently, antiviral studies investigating the broad-spectrum coronavirus protease inhibitor, GC376, and the adenosine nucleoside analogue GS-441524, have resulted in increased survival rates and clinical cure in many patients. However, prescriber access to these antiviral therapies is currently problematic as they have not yet obtained registration for veterinary use. Consequently, FIP remains challenging to treat. The purpose of this review is to provide an update on the current status of therapeutics for FIP. Additionally, due to interest in coronaviruses resulting from the current human pandemic, this review provides information on domesticated cats identified as SARS-CoV-2 positive.

Publication Type

Journal article.

<818>

Accession Number

20203542438

Author

Parikh, P.

Title

Suggested precautions for those under COVID-19 home quarantine/lockdown.

Source

Indian Journal of Medical Sciences; 2019. 71(3):100-101.

Publisher

Scientific Scholar Pvt. Ltd.

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The article presents some guidelines we should abide while on lockdown due to COVID-19: (1) make a list of what is likely to be required for the whole week: Vegetables, medicines, milk, bread, etc. Put down on the list alternatives/plan B. For instance, if fresh milk is not available, get Tetra-Pack milk or even milk powder. Minimize the number of times you need to step out of the house. (2) know your neighborhood facilities that are open and/deliver to your home. For instance, Big Bazaar has publicized phone number of their home delivery service, their locations, and what they will/will not deliver. If your needs can be ordered for delivery do not step out. (3) when items are delivered to you (4) for items where you need to step out and (5) on returning home.

Publication Type

Correspondence.

<819>

Accession Number

20203516961

Author

Broman, D. R.; Ilango, D. M.

Title

COVID-19 solar disinfectant in Kuthambakkam, India - a model of the framework for strategic sustainable development in marginalised communities.

Source

Journal of Sustainable Development; 2020. 13(5):46-66. many ref.

Publisher

Canadian Center of Science and Education

Location of Publisher

Toronto

Country of Publication

Canada

Abstract

Using the Framework for Strategic Sustainable Development (FSSD) as an analytical tool, this work examines the sustainability decision making in an Indian village. Kuthambakkam - through the efforts of Elango Rangasamy - has become a site of value for understanding how sustainable development concepts can be applied successfully in an actual developing world scenario. The FSSD, including the concepts of 'The Funnel', back-casting and the principle based definition are used to analyse the Kuthambakkam case. This identifies how the decision-making process and actions in the panchayat provide a unique and valuable model of leadership for sustainability - with well-being as a goal. A decentralised, solar-powered disinfectant production method pioneered by Elango is the main project that is examined for this article. The model is currently operated by women's self help groups in several locations within and nearby to the village - including a large scale production at a vital vegetable market. As the priority of the leadership - or end goal of the funnel - is the well-being of disadvantaged people, the results show superior alignment with sustainability principles compared to decisions made by leaders in corporations and the developed world.

#### Publication Type

Journal article.

<820>

#### Accession Number

20203502604

#### Author

Sargin, S. A.

#### Title

Potential anti-influenza effective plants used in Turkish folk medicine: a review.

#### Source

Journal of Ethnopharmacology; 2021. 265. many ref.

#### Publisher

Elsevier Ltd

#### Location of Publisher

Oxford

#### Country of Publication

UK

#### Abstract

Ethnopharmacological relevance: Due to the outbreaks such as SARS, bird flu and swine flu, which we frequently encounter in our century, we need fast solutions with no side effects today more than ever. Due to having vast ethnomedical experience and the richest flora (34% endemic) of Europe and the Middle East, Turkey has a high potential for research on this topic. Plants that locals have been using for centuries for the prevention and treatment of influenza can offer effective alternatives to combat this problem. In this context, 224 herbal taxa belonging to 45 families were identified among the selected 81 studies conducted

in the seven regions of Turkey. However, only 35 (15.6%) of them were found to be subjected to worldwide in vitro and in vivo research conducted on anti-influenza activity. Quercetin and chlorogenic acid, the effectiveness of which has been proven many times in this context, have been recorded as the most common (7.1%) active ingredients among the other 56 active substances identified. Aim of the study: This study has been carried out to reveal the inventory of plant species that have been used in flu treatment for centuries in Turkish folk medicine, which could be used in the treatment of flu or flu-like pandemics, such as COVID 19, that humanity has been suffering with, and also compare them with experimental studies in the literature. Materials and methods: The investigation was conducted in two stages on the subject above by using electronic databases, such as Web of Science, Scopus, ScienceDirect, ProQuest, Medline, Cochrane Library, EBSCO, HighWire Press, PubMed and Google Scholar. The results of both scans are presented in separate tables, together with their regional comparative analysis. Results: Data obtained on taxa are presented in a table, including anti-influenza mechanism of actions and the active substances. *Rosa canina* (58.7%) and *Mentha x piperita* (22.2%) were identified as the most common plants used in Turkey. Also, *Sambucus nigra* (11.6%), *Olea europaea* (9.3%), *Eucalyptus* spp., *Melissa officinalis*, and *Origanum vulgare* (7.0%) emerged as the most investigated taxa. Conclusion: This is the first nationwide ethnomedical screening work conducted on flu treatment with plants in Turkey. Thirty-nine plants have been confirmed in the recent experimental anti-influenza research, which strongly shows that these plants are a rich pharmacological source. Also, with 189 (84.4%) taxa, detections that have not been investigated yet, they are an essential resource for both national and international pharmacological researchers in terms of new natural medicine searches. Considering that the production of antimalarial drugs and their successful use against COVID-19 has begun, this correlation was actually a positive and remarkable piece of data, since there are 15 plants, including *Centaurea drabifolia* subsp. *Phlocosa* (an endemic taxon), that were found to be used in the treatment of both flu and malaria.

#### Publication Type

Journal article.

<821>

#### Accession Number

20203501322

#### Author

Wang Nan; Han ShengLi; Liu Rui; Meng LieSu; He HuaiZhen; Zhang YongJing; Wang Cheng; Lv YanNi; Wang Jue; Li XiaoWei; Ding YuanYuan; Fu Jia; Hou YaJing; Lu Wen; Ma WeiNa; Zhan YingZhuan; Dai BingLing; Zhang Jie; Pan XiaoYan; Hu ShiLing; Gao JiaPan; Jia QianQian; Zhang LiYang; Ge Shuai; Wang SaiSai; Liang PeiDa; Hu Tian; Lu JiaYu; Wang XiangJun; Zhou HuaXin; Ta WenJing; Wang YueJin; Lu SheMin; He LangChong

#### Title

Chloroquine and hydroxychloroquine as ACE2 blockers to inhibit viropexis of 2019-nCoV spike pseudotyped virus.

#### Source

Phytomedicine; 2020. 79. 40 ref.

#### Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

**Background:** The novel coronavirus disease (2019-nCoV) has been affecting global health since the end of 2019 and there is no sign that the epidemic is abating. The major issue for controlling the infectious is lacking efficient prevention and therapeutic approaches. Chloroquine (CQ) and Hydroxychloroquine (HCQ) have been reported to treat the disease, but the underlying mechanism remains controversial. **Purpose:** The objective of this study is to investigate whether CQ and HCQ could be ACE2 blockers and used to inhibit 2019-nCoV virus infection. **Methods:** In our study, we used CCK-8 staining, flow cytometry and immunofluorescent staining to evaluate the toxicity and autophagy of CQ and HCQ, respectively, on ACE2 high-expressing HEK293T cells (ACE2h cells). We further analyzed the binding character of CQ and HCQ to ACE2 by molecular docking and surface plasmon resonance (SPR) assays, 2019-nCoV spike pseudotyped virus was also used to observe the viropexis effect of CQ and HCQ in ACE2h cells. **Results:** Results showed that HCQ is slightly more toxic to ACE2h cells than CQ. Both CQ and HCQ could bind to ACE2 with  $KD = (7.31 \pm 0.62) \times 10^{-7}$  M and  $(4.82 \pm 0.87) \times 10^{-7}$  M, respectively. They exhibit equivalent suppression effect for the entrance of 2019-nCoV spike pseudotyped virus into ACE2h cells. **Conclusions:** CQ and HCQ both inhibit the entrance 2019-nCoV into cells by blocking the binding of the virus with ACE2. Our findings provide novel insights into the molecular mechanism of CQ and HCQ treatment effect on virus infection.

Publication Type

Journal article.

<822>

Accession Number

20203501302

Author

Zheng ShiChao; Baak, J. P.; Li Shuang; Xiao WenKe; Ren Hong; Yang Huan; Gan YanXiong; Wen ChuanBiao

Title

Network pharmacology analysis of the therapeutic mechanisms of the traditional Chinese herbal formula Lian Hua Qing Wen in corona virus disease 2019 (COVID-19), gives fundamental support to the clinical use of LHQW.

Source

Phytomedicine; 2020. 79. many ref.

Publisher

Elsevier GmbH

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Location of Publisher

Munich

Country of Publication

Germany

Abstract

Background: The traditional Chinese Medicine (TCM) herbal formula Lian Hua Qing Wen (LHQW) improves the results of COVID-19 treatment. Three very recent studies analyzed with network pharmacology some working mechanisms of LHQW. However, we used more techniques and also included Angiotensin converting enzyme 2 (ACE2) (a SARS-CoV receptor, possibly the viral entry point in alveolar lung cells) and the immune system, as cytokine storm is essential in the late phase. Purpose: Extensive detailed Network Pharmacology analysis of the LHQW- treatment mechanism in COVID-19. Methods: TCM-herb-meridian and protein interaction network (PIN) of LHQW, based on LHQW herbs meridian information and the protein-protein interaction (PPI) information of the LHQW-component targets. Hub and topological property analyses to obtain crucial targets and construct the crucial LHQW-PIN. Functional modules determination using MCODE, GO and KEGG pathway analysis of biological processes and pathway enrichment. Intersection calculations between the LHQW-proteins and ACE2 co-expression-proteins. Results: LHQW herbs have relationships to Stomach-, Heart-, Liver- and Spleen-systems, but most (10 of the 13 herbs) to the Lung system, indicating specific effects in lung diseases. The crucial LHQW PIN has the scale-free property, contains 2,480 targets, 160,266 PPIs and thirty functional modules. Six modules are enriched in leukocyte-mediated immunity, the interferon-gamma-mediated signaling pathway, immune response regulating signaling pathway, interleukin 23 mediated signaling pathway and Fc gamma receptor-mediated phagocytosis (GO analysis). These 6 are also enriched in cancer, immune system-, and viral infection diseases (KEGG). LHQW shared 189 proteins with ACE2 co-expression proteins. Conclusions: Detailed network analysis shows, that LHQW herbal TCM treatment modulates the inflammatory process, exerts antiviral effects and repairs lung injury. Moreover, it also relieves the "cytokine storm" and improves ACE2-expression-disorder-caused symptoms. These innovative findings give a rational pharmacological basis and support for treating COVID-19 and possibly other diseases with LHQW.

Publication Type

Journal article.

<823>

Accession Number

20203500667

Author

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Title

Phillyrin (KD-1) exerts anti-viral and anti-inflammatory activities against novel coronavirus (SARS-CoV-2) and human coronavirus 229E (HCoV-229E) by suppressing the nuclear factor kappa B (NF-B) signaling pathway.

Source

Phytomedicine; 2020. 78. 38 ref.

Publisher

Elsevier GmbH

Location of Publisher

Munich

Country of Publication

Germany

Abstract

Background: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has extensively and rapidly spread in the world, causing an outbreak of acute infectious pneumonia. However, no specific antiviral drugs or vaccines can be used. Phillyrin (KD-1), a representative ingredient of *Forsythia suspensa*, possesses anti-inflammatory, anti-oxidant, and antiviral activities. However, little is known about the antiviral abilities and mechanism of KD-1 against SARS-CoV-2 and human coronavirus 229E (HCoV-229E). Purpose: The study was designed to investigate the antiviral and anti-inflammatory activities of KD-1 against the novel SARS-CoV-2 and HCoV-229E and its potential effect in regulating host immune response in vitro. Methods: The antiviral activities of KD-1 against SARS-CoV-2 and HCoV-229E were assessed in Vero E6 cells using cytopathic effect and plaque-reduction assay. Proinflammatory cytokine expression levels upon infection with SARS-CoV-2 and HCoV-229E infection in Huh-7 cells were measured by real-time quantitative PCR assays. Western blot assay was used to determine the protein expression of nuclear factor kappa B (NF-B) p65, p-NF-B p65, I $\kappa$ B $\alpha$ , and p-I $\kappa$ B $\alpha$  in Huh-7 cells, which are the key targets of the NF-B pathway. Results: KD-1 could significantly inhibit SARS-CoV-2 and HCoV-229E replication in vitro. KD-1 could also markedly reduce the production of proinflammatory cytokines (TNF- $\alpha$ , IL-6, IL-1 $\beta$ , MCP-1, and IP-10) at the mRNA levels. Moreover, KD-1 could significantly reduce the protein expression of p-NF-B p65, NF-B p65, and p-I $\kappa$ B $\alpha$ , while increasing the expression of I $\kappa$ B $\alpha$  in Huh-7 cells. Conclusions: KD-1 could significantly inhibit virus proliferation in vitro, the up-regulated expression of proinflammatory cytokines induced by SARS-CoV-2 and HCoV-229E by regulating the activity of the NF-B signaling pathway. Our findings indicated that KD-1 protected against virus attack and can thus be used as a novel strategy for controlling the coronavirus disease 2019.

Publication Type

Journal article.

<824>

Accession Number

20203497337

Author

Rogerson, C. M.; Rogerson, J. M.

Title

COVID-19 tourism impacts in South Africa: government and industry responses.

Source

GeoJournal of Tourism and Geosites; 2020. 31(3):1083-1091. many ref.

Publisher

Universitatea din Oradea Romania

Location of Publisher

Oradea

Country of Publication

Romania

Abstract

The COVID-19 pandemic is having devastating economic and social consequences in the global South. This article is a rapid response critical assessment and examines COVID-19's emerging impacts for the tourism sector of South Africa, one of the world's worst affected destinations. Specific focus is upon responses by industry and government to the crisis and its unfolding impact for the tourism sector. The study is situated within the context of an expanding tourism scholarship and debates around the pandemic. Findings show a hollowing out of the South African tourism industry is taking place at an accelerating tempo with the most severely impacted being tourism small and micro-enterprises. The study highlights the occurrence of conflicts between key stakeholders and especially the frustrations of the tourism industry about the chaotic and changing policy regulations towards the sector as well as the weakness of government support interventions.

Publication Type

Journal article.

<825>

Accession Number

20203495614

Author

Rowan, N. J.; Galanakis, C. M.

Title

Unlocking challenges and opportunities presented by COVID-19 pandemic for cross-cutting disruption in agri-food and green deal innovations: Quo Vadis?

Source

Science of the Total Environment; 2020. 748. many ref.

Publisher

Elsevier Ltd

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Location of Publisher

Oxford

Country of Publication

UK

Abstract

COVID-19 pandemic is on a trajectory to cause catastrophic global upheaval with the potential to alter geopolitical and socio-economic norms. Many countries are frantically responding with staggering financial stimulus recovery initiatives. This opinion-paper reviews challenges, opportunities, and potential solutions for the post-COVID-19 era that focuses on intensive sustaining of agri-food supply chain in tandem with meeting the high demand for new green deal innovation. For example, the development of wet peatland innovation, known as Paludiculture, can intensively sustain and blend agri-food and green innovations that will help support COVID-19 pandemic transitioning. The future looks bright for the creation of new sustainability multi-actor innovation hubs that will support, connect, and enable businesses to recover and pivot beyond the COVID-19 pandemic. The nexus between first 'Green Deal' initiative supporting 64 selected European Startups and SMEs (European Innovation Council) and 43 Irish Disruptive Technology projects are addressed in the context of cross-cutting developments and relevance to COVID-19. Candidate areas for future consideration will focus on climate action, digitization, manufacturing, and sustainable food production, security, and waste mitigation. Recommendations are also provided to facilitate community transitioning, training, enterprise, and employment to low carbon economy.

Publication Type

Journal article.

<826>

Accession Number

20203487943

Author

Caplin, M.; Chen LuoHai

Title

The potential role of xanthohumol in SARS-CoV-2 treatment-globally accessible and economically viable.

Source

Nutrition and Dietary Supplements; 2020. 12(201-204):201-204. 16 ref.

Publisher

Dove Medical Press Ltd

Location of Publisher

Macclesfield

Country of Publication

UK

Abstract

Infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has resulted in significant global morbidity and mortality and there are a lack of effective therapies. There is a need for treatment which could be available for all in the global community, as well as within hospital, which is efficacious, affordable and safe. Xanthohumol from hop extract has been shown in vitro and in vivo to have antiviral properties against RNA and DNA viruses but also importantly anti-inflammatory properties against severe respiratory syndrome via inhibition of NFB dependent pathways. We review the evidence for xanthohumol to be considered as a treatment for SARS-CoV-2 infection. We need an economic and globally available therapy and thinking beyond the traditional is important; thus, studies are warranted to assess efficacy of xanthohumol against SARS-CoV-2.

Publication Type

Journal article.

<827>

Accession Number

20203451368

Author

Chersich, M. F.; Gray, G.; Fairlie, L.; Eichbaum, Q.; Mayhew, S.; Allwood, B.; English, R.; Scorgie, F.; Luchters, S.; Simpson, G.; Haghghi, M. M.; Minh Duc Pham; Rees, H.

Title

COVID-19 in Africa: care and protection for frontline healthcare workers.

Source

Globalization and Health; 2020. 16(46):(5 May 2020). 53 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Medical staff caring for COVID-19 patients face mental stress, physical exhaustion, separation from families, stigma, and the pain of losing patients and colleagues. Many of them have acquired SARS-CoV-2 and some have died. In Africa, where the pandemic is escalating, there are major gaps in response capacity, especially in human resources and protective equipment. We examine these challenges and propose interventions to protect healthcare workers on the continent, drawing on articles identified on Medline

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(Pubmed) in a search on 24 March 2020. Global jostling means that supplies of personal protective equipment are limited in Africa. Even low-cost interventions such as facemasks for patients with a cough and water supplies for handwashing may be challenging, as is 'physical distancing' in overcrowded primary health care clinics. Without adequate protection, COVID-19 mortality may be high among healthcare workers and their family in Africa given limited critical care beds and difficulties in transporting ill healthcare workers from rural to urban care centres. Much can be done to protect healthcare workers, however. The continent has learnt invaluable lessons from Ebola and HIV control. HIV counselors and community healthcare workers are key resources, and could promote social distancing and related interventions, dispel myths, support healthcare workers, perform symptom screening and trace contacts. Staff motivation and retention may be enhanced through carefully managed risk 'allowances' or compensation. International support with personnel and protective equipment, especially from China, could turn the pandemic's trajectory in Africa around. Telemedicine holds promise as it rationalises human resources and reduces patient contact and thus infection risks. Importantly, healthcare workers, using their authoritative voice, can promote effective COVID-19 policies and prioritization of their safety. Prioritizing healthcare workers for SARS-CoV-2 testing, hospital beds and targeted research, as well as ensuring that public figures and the population acknowledge the commitment of healthcare workers may help to maintain morale. Clearly there are multiple ways that international support and national commitment could help safeguard healthcare workers in Africa, essential for limiting the pandemic's potentially devastating health, socio-economic and security impacts on the continent.

#### Publication Type

Journal article.