

Literature Search Request

Search query	COVID-19
Search strategy CAB Abstracts on the OVID interface	Database: CAB Abstracts <2000 to 2021 Week 30> Search Strategy: ----- 1 ('covid 19' or 'novel coronavirus' or 'sars-cov-2').mp. (14625) 2 limit 1 to (latest update and yr="2021 -Current") (463) *****
Date of coverage	Publication in 2021

Search results

	Date searched	No of items found
CAB Abstracts	29/7/2021	463

References from CAB Abstracts

<1>

Accession Number

20210285920

Author

James, A.; Tripathi, V.

Title

Time series data analysis and ARIMA modeling to forecast the short-term trajectory of the acceleration of fatalities in Brazil caused by the corona virus (COVID-19).

Source

PeerJ; 2021. 9(11748). 44 ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Objective: This paper incorporates the concept of acceleration to fatalities caused by the coronavirus in Brazil from time series data beginning on 17th March 2020 (the day of the first death) to 3rd February 2021 to explain the trajectory of the fatalities for the next six months using confirmed infections as the explanatory variable. **Methods:** Acceleration of the cases of confirmed infection and fatalities were calculated by using the concept of derivatives. Acceleration of fatality function was then determined from multivariate linear function and calculus chain rule for composite function with confirmed infections as an explanatory variable. Different ARIMA models were fitted for each acceleration of fatality function: the de-seasonalized Auto ARIMA Model, the adjusted lag model, and the auto ARIMA model with seasonality. The ARIMA models were validated. The most realistic models were selected for each function for forecasting. Finally, the short run six-month forecast was conducted on the trajectory of the acceleration of fatalities for all the selected best ARIMA models. **Results:** It was found that the best ARIMA model for the acceleration functions were the seasonalized models. All functions suggest a general decrease in fatalities and the pace at which this change occurs will eventually slow down over the next six months. **Conclusion:** The decreasing fatalities over the next six-month period takes into consideration the direct impact of the confirmed infections. There is an early increase in acceleration for the forecast period, which suggests an increase in daily fatalities. The acceleration eventually reduces over the six-month period which shows that fatalities will eventually decrease. This gives health officials an idea on how the fatalities will be affected in the future as the trajectory of confirmed COVID-19 infections change.

Publication Type

Journal article.

<2>

Accession Number

20210285599

Author

Grant, F.; Scalvedi, M. L.; Scognamiglio, U.; Turrini, A.; Rossi, L.

Title

Eating habits during the COVID-19 lockdown in Italy: the nutritional and lifestyle side effects of the pandemic.

Source

Nutrients; 2021. 13(7). 67 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To limit the spread of coronavirus SARS-CoV-2, a nationwide lockdown started in Italy in March 2020. In this unpredictable situation, a cross-sectional study using an online questionnaire was carried out by the Observatory on Food Surplus, Recovery and Waste of CREA Food and Nutrition Centre. The aim of this work was to evaluate how Italian habits changed during this period, the determinants of changes, and the effect on food waste prevention. In a sample of 2678 respondents, 62% showed low Adherence to the Mediterranean Diet (AMD). During lockdown many of participants improved the quality of their diet, increasing their consumption of fruit (24.4%), vegetables (28.5%), legumes (22.1%), nuts (12%), and fish or shellfish (14%). Unfavorable changes were observed with the excessive consumption of sweets or pastries (36.9%) and comfort foods (22.7%), and a lack of physical activity (37.2%). The main novelty of this study was the examination of dietary changes identified by a cluster analysis. Respondents with generally high AMD improved their eating habits, while the habits of the respondents with generally low AMD remained unchanged. In addition, nearly 80% of respondents were sensitive to food waste. The study provides a useful contribution to the debate on nutritional recommendations in case of further lockdown.

Publication Type

Journal article.

<3>

Accession Number

20210285458

Author

Djuricic, I.; Calder, P. C.

Title

Beneficial outcomes of omega-6 and omega-3 polyunsaturated fatty acids on human health: an update for 2021.

Source

Nutrients; 2021. 13(7). 207 ref.

Publisher

MDPI AG

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Oxidative stress and inflammation have been recognized as important contributors to the risk of chronic non-communicable diseases. Polyunsaturated fatty acids (PUFAs) may regulate the antioxidant signaling pathway and modulate inflammatory processes. They also influence hepatic lipid metabolism and physiological responses of other organs, including the heart. Longitudinal prospective cohort studies demonstrate that there is an association between moderate intake of the omega-6 PUFA linoleic acid and lower risk of cardiovascular diseases (CVDs), most likely as a result of lower blood cholesterol concentration. Current evidence suggests that increasing intake of arachidonic acid (up to 1500 mg/day) has no adverse effect on platelet aggregation and blood clotting, immune function and markers of inflammation, but may benefit muscle and cognitive performance. Many studies show that higher intakes of omega-3 PUFAs, especially eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), are associated with a lower incidence of chronic diseases characterized by elevated inflammation, including CVDs. This is because of the multiple molecular and cellular actions of EPA and DHA. Intervention trials using EPA + DHA indicate benefit on CVD mortality and a significant inverse linear dose-response relationship has been found between EPA + DHA intake and CVD outcomes. In addition to their antioxidant and anti-inflammatory roles, omega-3 fatty acids are considered to regulate platelet homeostasis and lower risk of thrombosis, which together indicate their potential use in COVID-19 therapy.

Publication Type

Journal article.

<4>

Accession Number

20210285449

Author

Townsend, L.; Dyer, A. H.; McCluskey, P.; O'Brien, K.; Dowds, J.; Laird, E.; Bannan, C.; Bourke, N. M.; Ni Cheallaigh, C.; Byrne, D. G.; Kenny, R. A.

Title

Investigating the relationship between vitamin d and persistent symptoms following SARS-CoV-2 infection.

Source

Nutrients; 2021. 13(7). 66 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The emergence of persistent symptoms following SARS-CoV-2 infection, known as long COVID, is providing a new challenge to healthcare systems. The cardinal features are fatigue and reduced exercise tolerance. Vitamin D is known to have pleiotropic effects far beyond bone health and is associated with immune modulation and autoimmunity. We hypothesize that vitamin D levels are associated with persistent symptoms following COVID-19. Herein, we investigate the relationship between vitamin D and fatigue and reduced exercise tolerance, assessed by the Chalder Fatigue Score, six-minute walk test and modified Borg scale. Multivariable linear and logistic regression models were used to evaluate the relationships. A total of 149 patients were recruited at a median of 79 days after COVID-19 illness. The median vitamin D level was 62 nmol/L, with n = 36 (24%) having levels 30-49 nmol/L and n = 14 (9%) with levels <30 nmol/L. Fatigue was common, with n = 86 (58%) meeting the case definition. The median Borg score was 3, while the median distance covered for the walk test was 450 m. No relationship between vitamin D and the measures of ongoing ill-health assessed in the study was found following multivariable regression analysis. These results suggest that persistent fatigue and reduced exercise tolerance following COVID-19 are independent of vitamin D.

Publication Type

Journal article.

<5>

Accession Number

20210285356

Author

Cari, L.; Fiore, P.; Alhosseini, M. N.; Sava, G.; Nocentini, G.

Title

Blood clots and bleeding events following BNT162B2 and ChAdOx1 nCoV-19 vaccine: an analysis of European data.

Source

Journal of Autoimmunity; 2021. 122. 48 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The involvement of viruses and SARS-CoV-2 in autoimmune diseases is well known. The recent demonstration that ChAdOx1 nCoV-19 Covid-19 (AstraZeneca) vaccine (ChA) favors the production of anti-platelet factor 4 (anti-PF4) antibodies, blood clots, and thrombocytopenia raises the question of whether other anti-CoViD-19 vaccines favor the same patterns of events. We assessed the frequency of severe

adverse events (SAEs) documented in the EudraVigilance European database up to April 16, 2021 related to thrombocytopenia, bleeding, and blood clots in recipients of ChA compared to that of recipients of the BNT162b2 Covid-19 (Pfizer/BioNTech) vaccine (BNT). ChA administration was associated with a much higher frequency of SAEs in each AE Reaction Group as compared with that elicited by BNT. When considering AEs caused by thrombocytopenia, bleeding and blood clots, we observed 33 and 151 SAEs/1 million doses in BNT and ChA recipients, respectively. When considering patients with AEs related to cerebral/splanchnic venous thrombosis, and/or thrombocytopenia, we documented 4 and 30 SAEs and 0.4 and 4.8 deaths/1 million doses for BNT and ChA recipients, respectively. The highest risk following ChA vaccination is in young people and, likely, women of reproductive age, as suggested by hypothesized scenarios. In conclusion, the immune reaction promoted by ChA vaccine may lead to not only thrombocytopenia and cerebral/splanchnic venous thrombosis but also other thrombotic and thromboembolic SAEs. These events are not favored by BNT vaccine. Our study may help in the evaluation of the benefit/risk profile of the ChA vaccine considering the epidemic curve present in a country.

Publication Type

Journal article.

<6>

Accession Number

20210284916

Author

Jiang Hui; Song PengFei; Wang SiYi; Yin ShuangShuang; Yin JinFeng; Zhu ChenDi; Cai Chao; Xu WangLi; Li WeiMin

Title

Quantitative assessment of the effectiveness of joint measures led by Fangcang shelter hospitals in response to COVID-19 epidemic in Wuhan, China.

Source

BMC Infectious Diseases; 2021. 21(626):(1 July 2021). 23 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To quantitatively evaluate the effectiveness of Fangcang shelter hospitals, designated hospitals, and the time interval from illness onset to diagnosis toward the prevention and control of the COVID-19 epidemic. **Methods:** We used SEIAR and SEIA-CQFH warehouse models to simulate the two-period epidemic in Wuhan and calculate the time dependent basic reproduction numbers (BRNs) of symptomatic infected individuals, asymptomatic infected individuals, exposed individuals, and community-isolated infected individuals. Scenarios that varied in terms of the maximum numbers of open beds in Fangcang shelter hospitals and designated hospitals, and the time intervals from illness onset to hospitals visit and diagnosis were considered to quantitatively assess the optimal measures. **Results:** The BRN decreased from 4.50 on

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Jan 22, 2020 to 0.18 on March 18, 2020. Without Fangcang shelter hospitals, the cumulative numbers of cases and deaths would increase by 18.58 and 51.73%, respectively. If the number of beds in the designated hospitals decreased by 1/2 and 1/4, the number of cumulative cases would increase by 178.04 and 92.1%, respectively. If the time interval from illness onset to hospital visit was 4 days, the number of cumulative cases and deaths would increase by 2.79 and 6.19%, respectively. If Fangcang shelter hospitals were not established, the number of beds in designated hospitals reduced 1/4, and the time interval from visiting hospitals to diagnosis became 4 days, the cumulative number of cases would increase by 268.97%. Conclusion: The declining BRNs indicate the high effectiveness of the joint measures. The joint measures led by Fangcang shelter hospitals are crucial and need to be rolled out globally, especially when medical resources are limited.

Publication Type

Journal article.

<7>

Accession Number

20210284913

Author

Granato, P. A.; Kimball, S. R.; Alkins, B. R.; Cross, D. C.; Unz, M. M.

Title

Comparative evaluation of the Thermo fisher TaqPath™ COVID-19 combo kit with the Cepheid XpertR Xpress SARS-CoV-2 assay for detecting SARS-CoV-2 in nasopharyngeal specimens.

Source

BMC Infectious Diseases; 2021. 21(623):(30 June 2021). 12 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Purpose: With over 50 SARS-CoV-2 gene amplification assays that have been EUA cleared with minimal experimental validation performed, it is likely that not all of these assays are comparable in their ability to detect SARS-CoV-2 in clinical specimens. Thermo Fisher Scientific is a relatively new company in the molecular diagnostics field and the purpose of this study was to compare the performance of the Thermo Fisher TaqPath™ Combo Kit with an established test, the Cepheid XpertR Xpress SARS-CoV-2 assay, for its ability to detect SARS-CoV-2 in nasopharyngeal specimens. **Methods:** A total of 300 randomly selected nasopharyngeal specimens were evaluated and tested by the TaqPath and GeneXpert assays. Discordant test specimens were arbitrated by performing an alternative PCR assay and Sanger sequencing. **Results:** The TaqPath assay had a 96.7 and 99.6% positive and negative agreement respectively when compared to the Xpert Xpress test. However, after test arbitration, the three discordant specimens were arbitrated in favor of the TaqPath assay producing a positive and negative percent agreement of 100% for the TaqPath Combo Kit while the Xpress SARS-CoV-2 assay had a positive and negative percent agreement of 98.3 and 99.2%

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respectively. Conclusions: The TaqPath Combo Kit is a high complexity assay that compares favorably with the Xpert Xpress test and can be reliably used for the detection of SARS-CoV-2 in nasopharyngeal specimens.

Publication Type

Journal article.

<8>

Accession Number

20210284497

Author

Kusnik, A.; Weiss, C.; Neubauer, M.; Huber, B.; Gerigk, M.; Miethke, T.; Hunter, N.; Rotter, N.; Ludwig, S.; Schell, A.; Ebert, M. P.; Teufel, A.

Title

Presence of gustatory and olfactory dysfunction in the time of the COVID-19 pandemic.

Source

BMC Infectious Diseases; 2021. 21(612):(26 June 2021). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The unexpected outbreak of the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) caused more than 49 million cases and an estimated 2,000,000 associated deaths worldwide. In Germany, there are currently more than 2,000,000 laboratory-confirmed coronavirus disease 2019 (COVID-19) cases including 51,800 deaths. However, regional differences also became apparent and with the second wave of infections, the detailed characterization of COVID-19 patients is crucial to early diagnosis and disruption of chains of infections. **Methods:** Handing out detailed questionnaires to all individuals tested for COVID-19, we evaluated the clinical characteristics of negative and positive tested individuals. Expression of symptoms, symptom duration and association between predictor variables (i.e. age, gender) and a binary outcome (olfactory and gustatory dysfunction) were assessed. **Results:** Overall, the most common symptoms among individuals who tested positive for SARS-CoV-2 were fatigue, headache, and cough. Olfactory and gustatory dysfunction were also reported by many SARS-CoV-2 negative individuals, more than 20% of SARS-CoV-2 negative tested individuals in our study reported olfactory and gustatory dysfunction. Independent of SARS-CoV-2 status, more females displayed symptoms of gustatory (29.8%, $p = 0.0041$) and olfactory dysfunction (22.9%, $p = 0.0174$) compared to men. **Conclusions:** Bringing early SARS-CoV-2 tests to the populations at risk must be a main focus for the upcoming months. The reliability of olfactory and gustatory dysfunction in COVID-19 negative tested individuals requires deeper investigation in the future.

Publication Type

Journal article.

<9>

Accession Number

20210284493

Author

Xie ZongYu; Sun HaiTao; Wang Jian; Xu He; Li ShuHua; Zhao CanCan; Gao YuQing; Wang XiaoLei; Zhao TongTong; Duan ShaoFeng; Hu ChunHong; Ao WeiQun

Title

A novel CT-based radiomics in the distinction of severity of coronavirus disease 2019 (COVID-19) pneumonia.

Source

BMC Infectious Diseases; 2021. 21(608):(25 June 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Convenient and precise assessment of the severity in coronavirus disease 2019 (COVID-19) contributes to the timely patient treatment and prognosis improvement. We aimed to evaluate the ability of CT-based radiomics nomogram in discriminating the severity of patients with COVID-19 Pneumonia. Methods: A total of 150 patients (training cohort n = 105; test cohort n = 45) with COVID-19 confirmed by reverse transcription polymerase chain reaction (RT-PCR) test were enrolled. Two feature selection methods, Max-Relevance and Min-Redundancy (mRMR) and least absolute shrinkage and selection operator (LASSO), were used to extract features from CT images and construct model. A total of 30 radiomic features were finally retained. Rad-score was calculated by summing the selected features weighted by their coefficients. The radiomics nomogram incorporating clinical-radiological features was eventually constructed by multivariate regression analysis. Nomogram, calibration, and decision-curve analysis were all assessed. Results: In both cohorts, 40 patients with COVID-19 pneumonia were severe and 110 patients were non-severe. By combining the 30 radiomic features extracted from CT images, the radiomics signature showed high discrimination between severe and non-severe patients in the training set [Area Under the Curve (AUC), 0.857; 95% confidence interval (CI), 0.775-0.918] and the test set (AUC, 0.867; 95% CI, 0.732-949). The final combined model that integrated age, comorbidity, CT scores, number of lesions, ground glass opacity (GGO) with consolidation, and radiomics signature, improved the AUC to 0.952 in the training cohort and 0.98 in the test cohort. The nomogram based on the combined model similarly exhibited excellent discrimination performance in both training and test cohorts. Conclusions: The developed model based on a radiomics signature derived from CT images can be a reliable marker for discriminating the severity of COVID-19 pneumonia.

Publication Type

Journal article.

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<10>

Accession Number

20210284118

Author

Taheri, M.; Rad, L. M.; Hussien, B. M.; Nicknafs, F.; Sayad, A.; Ghafouri-Fard, S.

Title

Evaluation of expression of VDR-associated lncRNAs in COVID-19 patients.

Source

BMC Infectious Diseases; 2021. 21(588):(19 June 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) has been shown to cause serious health problems among them is the Acute Respiratory Distress syndrome (ARDS). Vitamin D receptor (VDR) signaling possibly partakes in the pathophysiology of this devastating complication. Methods: In the current project, we have appraised expression levels of VDR, CYP27B1 and a number of associated lncRNAs in the circulation of COVID-19 patients versus healthy subjects using real-time PCR method. Results: Expression of SNHG6 was considerably lower in COVID-19 patients compared with control subjects (Ratio of mean expression (RME) = 0.22, P value = 7.04E-05) and in both female and male COVID-19 patients compared with sex-matched unaffected individuals (RME = 0.32, P value = 0.04 and RME = 0.16, P value = 0.000679683, respectively). However, its expression was similar among ICU-hospitalized and non-ICU patients. Similarly, expression of SNHG16 was lower in in COVID-19 patients compared with controls (RME = 0.20, P value = 5.94E-05) and in both female and male patients compared with sex-matched controls (RME = 0.32, P value = 0.04 and RME = 0.14, P value = 0.000496435, respectively) with no significant difference among ICU-hospitalized and non-ICU hospitalized patients. Expression of VDR was lower in COVID-19 patients compared with controls (RME = 0.42, P value = 0.04) and in male patients compared with male controls (RME = 0.27, P value = 0.02). Yet, expression of VDR was statistically similar between female subgroups and between ICU-hospitalized and non-ICU hospitalized patients. Expression levels CYP27B, Linc00511 and Linc00346 were similar among COVID-19 patients and healthy subjects or between their subgroups. Significant correlations have been detected between expression levels of VDR, CYP27B and SNHG6, SNHG16, Linc00511 and Linc00346 lncRNAs both among COVID-19 patients and among healthy controls with the most significant ones being SNHG6 and SNHG16 ($r = 0.74$, P value = $3.26e-17$ and $r = 0.81$, P = $1.54e-22$, respectively). Conclusion: Combination of transcript levels of VDR, CYP27B and SNHG6, SNHG16, Linc00511 and Linc00346 could differentiate patients from controls with AUC = 0.76, sensitivity = 0.62 and specificity = 0.81. The current data potentiate SNHG6, SNHG16 and VDR as possible contributors in COVID-19 infection but not in the severity of ARDS.

Publication Type

Journal article.

<11>

Accession Number

20210284110

Author

Trombetta, B. A.; Kandigian, S. E.; Kitchen, R. R.; Grauwet, K.; Webb, P. K.; Miller, G. A.; Jennings, C. G.; Jain, S.; Miller, S.; Kuo, Y.; Sweeney, T.; Gilboa, T.; Norman, M.; Simmons, D. P.; Ramirez, C. E.; Bedard, M.; Fink, C.; Ko, J.; Leon Peralta, E. J. de; Watts, G.; Gomez-Rivas, E.; Davis, V.; Barilla, R. M.; Wang JiaNing; Cunin, P.; Bates, S.; Morrison-Smith, C.; Nicholson, B.; Wong, E.; El-Mufti, L.; Kann, M.; Bolling, A.; Fortin, B.; Ventresca, H.; Zhou Wen; Pardo, S.; Kwock, M.; Hazra, A.; Cheng, L.; Ahmad, Q. R.; Toombs, J. A.; Larson, R.; Pleskow, H.; Luo, N. M.; Samaha, C.; Pandya, U. M.; Silva, P. de; Zhou, S.; Ganhadeiro, Z.; Yohannes, S.; Gay, R.; Slavik, J.; Mukerji, S. S.; Jarolim, P.; Walt, D. R.; Carlyle, B. C.; Ritterhouse, L. L.; Suliman, S.

Title

Evaluation of serological lateral flow assays for severe acute respiratory syndrome coronavirus-2.

Source

BMC Infectious Diseases; 2021. 21(580):(16 June 2021). 50 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 has resulted in significant morbidity and mortality worldwide. Lateral flow assays can detect anti-Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) antibodies to monitor transmission. However, standardized evaluation of their accuracy and tools to aid in interpreting results are needed. Methods: We evaluated 20 IgG and IgM assays selected from available tests in April 2020. We evaluated the assays' performance using 56 pre-pandemic negative and 56 SARS-CoV-2-positive plasma samples, collected 10-40 days after symptom onset, confirmed by a molecular test and analyzed by an ultra-sensitive immunoassay. Finally, we developed a user-friendly web app to extrapolate the positive predictive values based on their accuracy and local prevalence. Results: Combined IgG + IgM sensitivities ranged from 33.9 to 94.6%, while combined specificities ranged from 92.6 to 100%. The highest sensitivities were detected in Lumiquick for IgG (98.2%), BioHit for both IgM (96.4%), and combined IgG + IgM sensitivity (94.6%). Furthermore, 11 LFAs and 8 LFAs showed perfect specificity for IgG and IgM, respectively, with 15 LFAs showing perfect combined IgG + IgM specificity. Lumiquick had the lowest estimated limit-of-detection (LOD) (0.1 g/mL), followed by a similar LOD of 1.5 g/mL for CareHealth, Cellex, KHB, and Vivachek. Conclusion: We provide a public resource of the accuracy of select lateral flow assays with potential for home testing. The cost-effectiveness, scalable manufacturing process, and suitability for self-testing makes LFAs an attractive option for monitoring disease prevalence and assessing vaccine responsiveness. Our web tool provides an easy-to-use interface to demonstrate the impact of prevalence and test accuracy on the positive predictive values.

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Publication Type

Journal article.

<12>

Accession Number

20210284104

Author

Zhu Bin; Feng XiaoKai; Jiang ChunGuo; Mi Song; Yang LiYa; Zhao ZhiGang; Zhang Yong; Zhang LiMing

Title

Correlation between white blood cell count at admission and mortality in COVID-19 patients: a retrospective study.

Source

BMC Infectious Diseases; 2021. 21(574):(14 June 2021). 22 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease-19 (COVID-19) has become a world health threaten. Its risk factors with death were still not known. White blood cells (WBC) count as a reflection of inflammation has played a vital role in COVID-19, however its level with death is not yet investigated. Methods: In this retrospective, single-center study, all confirmed patients with COVID-19 at West Branch of Union Hospital from Jan 29 to Feb 28, 2020 were collected and analyzed. Demographic and clinical data including laboratory examinations were analyzed and compared between recovery and death patients. Results: A total of 163 patients including 33 death cases were included in this study. Significant association was found between WBC count and death (HR = 1.14, 95%CI: 1.09-1.20, $p < 0.001$). The regression analysis results showed there was a significant association between WBC count and death (HR = 5.72, 95%CI: 2.21-14.82, $p < 0.001$) when use the second quartile as a cutoff value ($> 6.16 \times 10^9/L$). The difference was still exist after adjusting for confounding factors (HR = 6.26, 95%CI: 1.72-22.77, $p = 0.005$). In addition, Kaplan-meier survival analysis showed that there was a significant decline of the cumulative survival rate ($p < 0.001$) in those with WBC count $6.16 \times 10^9/L$. Conclusion: WBC count at admission is significantly corelated with death in COVID-19 patients. Higher level of WBC count should be given more attention in the treatment of COVID-19.

Publication Type

Journal article.

<13>

Accession Number

20210283705

Author

Abu Sayeed; Rahman, M. H.; Bundschuh, J.; Herath, I.; Ahmed, F.; Bhattacharya, P.; Tariq, M. R.; Faujhia Rahman; Joy, M. T. I.; Abid, M. T.; Nondo Saha; Hasan, M. T.

Title

Handwashing with soap: a concern for overuse of water amidst the COVID-19 pandemic in Bangladesh.

Source

Groundwater for Sustainable Development; 2021. 13. 28 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Handwashing is one of the vital public health measures. It helps to prevent the spread of the COVID-19 pandemic. However, water overuse during hand scrubbing with soap keeping the tap on may put enormous pressure on the already overstretched groundwater resources and households' economic well-being. Therefore, this study aimed to determine the overuse of water while scrubbing hands with soap for handwashing when the tap is on amid the COVID-19 pandemic in Bangladesh. Sociodemographic data were collected using a web-based survey tool among 1980 participants and an experiment was conducted among 126 participants to estimate the overuse of water during hand scrubbing while the tap is on. A total of 80% of the participants washed their hands regularly after returning home from outside. About 57.3% of participants did not turn off their tap throughout the handwashing process. A single participant, who kept his tap on throughout the handwashing process, overused approximately 1.7 L of water per handwash and 14.9 L of water per day. Hand scrubbing with soap keeping the tap on, raised the overuse of water 13-fold during this pandemic compared to the non-pandemic situation which cost an extra 225.0 BDT (2.7\$) per day for 1980 participants. Minimize the speed of tap, using automatic taps, and using taps operated by legs might be an effective solution to reduce the water overuse. Furthermore, behavioral change interventions are needed to aware people turn off the tap during hand scrubbing with soap.

Publication Type

Journal article.

<14>

Accession Number

20210283571

Author

Campi, I.; Gennari, L.; Merlotti, D.; Mingiano, C.; Frosali, A.; Giovanelli, L.; Torlasco, C.; Pengo, M. F.; Heilbron, F.; Soranna, D.; Zambon, A.; Stefano, M. di; Aresta, C.; Bonomi, M.; Cangiano, B.; Favero, V.; Fatti, L.; Perego, G. B.; Chiodini, I.; Parati, G.; Persani, L.

Title

Vitamin D and COVID-19 severity and related mortality: a prospective study in Italy.

Source

BMC Infectious Diseases; 2021. 21(566):(14 June 2021). many ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Vitamin D deficiency has been suggested to favor a poorer outcome of Coronavirus disease-19 (COVID-19). We aimed to assess if 25-hydroxyvitamin-D (25OHD) levels are associated with interleukin 6 (IL-6) levels and with disease severity and mortality in COVID-19. Methods: We prospectively studied 103 in-patients admitted to a Northern-Italian hospital (age 66.1 \pm 14.1 years, 70 males) for severely-symptomatic COVID-19. Fifty-two subjects with SARS-CoV-2 infection but mild COVID-19 symptoms (mildly-symptomatic COVID-19 patients) and 206 subjects without SARS-CoV-2 infection were controls. We measured 25OHD and IL-6 levels at admission and focused on respiratory outcome during hospitalization. Results: Severely-symptomatic COVID-19 patients had lower 25OHD levels (18.2 \pm 11.4 ng/mL) than mildly-symptomatic COVID-19 patients and non-SARS-CoV-2-infected controls (30.3 \pm 8.5 ng/mL and 25.4 \pm 9.4 ng/mL, respectively, $p < 0.0001$ for both comparisons). 25OHD and IL-6 levels were respectively lower and higher in severely-symptomatic COVID-19 patients admitted to intensive care Unit [(ICU), 14.4 \pm 8.6 ng/mL and 43.0 (19.0-56.0) pg/mL, respectively], than in those not requiring ICU admission [22.4 \pm 1.4 ng/mL, $p = 0.0001$ and 16.0 (8.0-32.0) pg/mL, $p = 0.0002$, respectively]. Similar differences were found when comparing COVID-19 patients who died in hospital [13.2 \pm 6.4 ng/mL and 45.0 (28.0-99.0) pg/mL] with survivors [19.3 \pm 12.0 ng/mL, $p = 0.035$ and 21.0 (10.5-45.9) pg/mL, $p = 0.018$, respectively]. 25OHD levels inversely correlated with: (i) IL-6 levels ($p = 0.284$, $p = 0.004$); (ii) the subsequent need of the ICU admission [relative risk, RR 0.99, 95% confidence interval (95%CI) 0.98-1.00, $p = 0.011$] regardless of age, gender, presence of at least 1 comorbidity among obesity, diabetes, arterial hypertension, creatinine, IL-6 and lactate dehydrogenase levels, neutrophil cells, lymphocytes and platelets count; (iii) mortality (RR 0.97, 95%CI, 0.95-0.99, $p = 0.011$) regardless of age, gender, presence of diabetes, IL-6 and C-reactive protein and lactate dehydrogenase levels, neutrophil cells, lymphocytes and platelets count. Conclusion: In our COVID-19 patients, low 25OHD levels were inversely correlated with high IL-6 levels and were independent predictors of COVID-19 severity and mortality.

Publication Type

Journal article.

<15>

Accession Number

20210283173

Author

Grzyb, T.; Kulczyk, S.; Derek, M.; Wozniak, E.

Title

Using social media to assess recreation across urban green spaces in times of abrupt change.

Source

Ecosystem Services; 2021. 49.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

For most of the world's population, urban green spaces (UGS) offer the easiest form of contact with nature. Such environments deliver a wide variety of Recreational Ecosystem Services (RES) to visitors. This paper explores RES delivery in different types of UGS, differentiated with respect to their naturalness and distance from the city centre. Furthermore, it investigates how the identified use patterns are affected by an abrupt change in access. We extract data from Instagram, posted at the beginning of the COVID-19 pandemic, for Warsaw, Poland, and use it to measure both the intensity of use of UGS, and the experience of Instagram users. Furthermore, we compare these data with data from the same period for the previous year (2019). Our results indicate that, in typical conditions, the wilder the area, the fewer visitors. RES patterns changed, however, when access to UGS was restricted. The recent COVID-19 outbreak showed that soon after restrictions on visiting UGS were lifted, recreation shifted towards wilder green areas. Moreover, users became more oriented to wild nature. We conclude that the number of visitors, and the pattern of recreational use of UGS, are highly dependent on the character of green spaces across the urban wilderness continuum, and that they are influenced by abrupt changes in access.

Publication Type

Journal article.

<16>

Accession Number

20210283063

Author

Dong Min; Zhang XuHang; Yang Kun; Liu Rui; Chen Pei

Title

Forecasting the COVID-19 transmission in Italy based on the minimum spanning tree of dynamic region network.

Source

PeerJ; 2021. 9(11603). many ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: Italy surpassed 1.5 million confirmed Coronavirus Disease 2019 (COVID-19) infections on November 26, as its death toll rose rapidly in the second wave of COVID-19 outbreak which is a heavy burden on hospitals. Therefore, it is necessary to forecast and early warn the potential outbreak of COVID-19 in the future, which facilitates the timely implementation of appropriate control measures. However, real-time prediction of COVID-19 transmission and outbreaks is usually challenging because of its complexity intertwining both biological systems and social systems. Methods: By mining the dynamical information from region networks and the short-term time series data, we developed a data-driven model, the minimum-spanning-tree-based dynamical network marker (MST-DNM), to quantitatively analyze and monitor the dynamical process of COVID-19 spreading. Specifically, we collected the historical information of daily cases caused by COVID-19 infection in Italy from February 24, 2020 to November 28, 2020. When applied to the region network of Italy, the MST-DNM model has the ability to monitor the whole process of COVID-19 transmission and successfully identify the early-warning signals. The interpretability and practical significance of our model are explained in detail in this study. Results: The study on the dynamical changes of Italian region networks reveals the dynamic of COVID-19 transmission at the network level. It is noteworthy that the driving force of MST-DNM only relies on small samples rather than years of time series data. Therefore, it is of great potential in public surveillance for emerging infectious diseases.

Publication Type

Journal article.

<17>

Accession Number

20210283053

Author

Yao Shun; Narayanan, A.; Majowicz, S. A.; Jose, J.; Archetti, M.

Title

A synthetic defective interfering SARS-CoV-2.

Source

PeerJ; 2021. 9(11686). many ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Viruses thrive by exploiting the cells they infect, but in order to replicate and infect other cells they must produce viral proteins. As a result, viruses are also susceptible to exploitation by defective versions of themselves that do not produce such proteins. A defective viral genome with deletions in protein-coding genes could still replicate in cells coinfecting with full-length viruses. Such a defective genome could even replicate faster due to its shorter size, interfering with the replication of the virus. We have created a synthetic defective interfering version of SARS-CoV-2, the virus causing the Covid-19 pandemic, assembling parts of the viral genome that do not code for any functional protein but enable the genome to be replicated and packaged. This synthetic defective genome replicates three times faster than SARS-CoV-2 in coinfecting cells, and interferes with it, reducing the viral load of infected cells by half in 24 hours. The synthetic genome is transmitted as efficiently as the full-length genome, suggesting the location of the putative packaging signal of SARS-CoV-2. A version of such a synthetic construct could be used as a self-promoting antiviral therapy: by enabling replication of the synthetic genome, the virus would promote its own demise.

Publication Type

Journal article.

<18>

Accession Number

20210282986

Author

Denny, S.; Rawson, T. M.; Hart, P.; Satta, G.; Abdulaal, A.; Hughes, S.; Gilchrist, M.; Mughal, N.; Moore, L. S. P.

Title

Bacteraemia variation during the COVID-19 pandemic; a multi-centre UK secondary care ecological analysis.

Source

BMC Infectious Diseases; 2021. 21(556):(11 June 2021). 23 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: We investigated for change in blood stream infections (BSI) with Enterobacterales, coagulase negative staphylococci (CoNS), *Streptococcus pneumoniae*, and *Staphylococcus aureus* during the first UK wave of SARS-CoV-2 across five London hospitals. **Methods:** A retrospective multicentre ecological analysis was undertaken evaluating all blood cultures taken from adults from 01 April 2017 to 30 April 2020 across five acute hospitals in London. Linear trend analysis and ARIMA models allowing for seasonality were used to look for significant variation. **Results:** One hundred nineteen thousand five hundred eighty-four blood cultures were included. At the height of the UK SARS-CoV-2 first wave in April 2020, Enterobacterales bacteraemias were at an historic low across two London trusts (63/3814, 1.65%), whilst all CoNS BSI were at an historic high (173/3814, 4.25%). This differed significantly for both Enterobacterales ($p = 0.013$), CoNS central line associated BSIs (CLABSI) ($p < 0.01$) and CoNS non-CLABSI ($p < 0.01$), when compared with prior periods, even allowing for seasonal variation. *S. pneumoniae* ($p = 0.631$) and *S. aureus* ($p = 0.617$) BSI did not vary significant throughout the study period. **Conclusions:** Significantly fewer than expected Enterobacterales BSI occurred during the UK peak of the COVID-19 pandemic; identifying potential causes, including potential unintended consequences of national self-isolation public health messaging, is essential. High rates of CoNS BSI, with evidence of increased CLABSI, but also likely contamination associated with increased use of personal protective equipment, may result in inappropriate antimicrobial use and indicates a clear area for intervention during further waves.

Publication Type

Journal article.

<19>

Accession Number

20210282985

Author

Pizuorno, A.; Fierro, N. A.; Copado-Villagrana, E. D.; Herrera-Solis, M. E.; Oskrochi, G.; Brim, H.; Ashktorab, H.

Title

COVID-19 and gastrointestinal symptoms in Mexico, a systematic review: does location matter?

Source

BMC Infectious Diseases; 2021. 21(555):(11 June 2021). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Covid-19 in Mexico is on the rise in different parts of the country. We aimed to study the symptoms and comorbidities that associate with this pandemic in 3 different regions of Mexico. Methods: We analyzed data from SARS-CoV-2 positive patients evaluated at healthcare centers and hospitals of Mexico (n = 1607) including Northwest Mexico (Sinaloa state), Southeast Mexico (Veracruz state) and West Mexico (Jalisco state) between March 1 and July 30, 2020. Mexico consists of a total population that exceeds 128 million. Demographics, comorbidities and clinical symptoms were collected. Statistical descriptive analysis and correlation analyses of symptoms, comorbidities and mortality were performed. Results: A total of 1607 hospitalized patients positive for COVID-19 across all 3 regions of Mexico were included. The average age was 54.6 years and 60.4% were male. A mortality rate of 33.1% was observed. The most common comorbidities were hypertension (43.2%), obesity (30.3%) and diabetes (31.4%). Hypertension was more frequent in West (45%), followed by Northwest (37%) and Southeast Mexico (29%). Obesity was around 30% in Northwest and West whereas an 18% was reported in Southeast. Diabetes was most common in West (34%) followed by Northwest (22%) and Southeast (13%). This might be related to the highest mortality rate in Northwest (31%) and West (37%) when compared to Southeast. Most common symptoms in our overall cohort were fever (80.8%), cough (79.8%), headache (66%), dyspnea (71.1%), myalgia (53.8%), joints pain (50.8%) and odynophagia (34.8%). Diarrhea was the main gastrointestinal (GI) symptom (21.3%), followed by abdominal pain (18%), and nausea/vomiting (4.5%). Diarrhea and abdominal pain were more common in West (23.1 and 21%), followed by Southeast (17.8, and 9.8%) and Northwest (11.4 and 3.1%). Conclusion: Our study showed a high mortality rate likely related to high frequencies of comorbidities (hypertension, obesity and diabetes). Mortality was different across regions. These discrepancies might be related to the differences in the frequencies of comorbidities, and partially attributed to differences in socio-economic conditions and quality of care. Thus, our findings stress the need for improved strategies to get better outcomes in our population.

Publication Type

Journal article.

<20>

Accession Number

20210282925

Author

Paleker, M.; Tembo, Y. A.; Davies, M. A.; Mahomed, H.; Pienaar, D.; Madhi, S. A.; McCarthy, K.

Title

Asymptomatic COVID-19 in South Africa - implications for the control of transmission.

Source

Public Health Action; 2021. 11(2):58-60. 10 ref.

Publisher

International Union Against Tuberculosis and Lung Disease

Location of Publisher

Paris

Country of Publication

France

Abstract

Asymptomatic COVID-19 may contribute significantly to the pandemic trajectory based on global biological, epidemiological and modelling evidence. A retrospective analysis was done to determine the proportion of asymptomatic COVID-19 in the workplace during the lockdown period from 27 March to 31 May 2020. We found that nearly 45% of cases were asymptomatic at the time of the first test. This high proportion of asymptomatic COVID-19 cases has implications for interventions, such as enforcing quarantine of all close contacts of COVID-19 cases regardless of symptoms.

Publication Type

Journal article.

<21>

Accession Number

20210282896

Author

Patel, L. N.; Kozikott, S.; Ilboudo, R.; Kamateeka, M.; Lamorde, M.; Subah, M.; Tsiouris, F.; Vorndran, A.; Lee, C. T.

Title

Safer primary healthcare facilities are needed to protect healthcare workers and maintain essential services: lessons learned from a multicountry COVID-19 emergency response initiative.

Source

BMJ Global Health; 2021. 6(6). 43 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Healthcare workers (HCWs) are at increased risk of infection from SARS-CoV-2 and other disease pathogens, which take a disproportionate toll on HCWs, with substantial cost to health systems. Improved infection prevention and control (IPC) programmes can protect HCWs, especially in resource-limited settings where the health workforce is scarcest, and ensure patient safety and continuity of essential health services. In response to the COVID-19 pandemic, we collaborated with ministries of health and development partners to implement an emergency initiative for HCWs at the primary health facility level in 22 African countries. Between April 2020 and January 2021, the initiative trained 42 058 front-line HCWs from 8444 health facilities, supported longitudinal supervision and monitoring visits guided by a standardised monitoring tool, and provided resources including personal protective equipment (PPE). We documented significant short-term improvements in IPC performance, but gaps remain. Suspected HCW infections peaked at 41.5% among HCWs screened at monitored facilities in July 2020 during the first wave of the pandemic in Africa. Disease-specific emergency responses are not the optimal approach. Comprehensive, sustainable IPC programmes are needed. IPC needs to be incorporated into all HCW training programmes and combined with supportive supervision and mentorship. Strengthened data systems on IPC are needed to guide improvements at the health facility level and to inform policy development at the national level, along with

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

investments in infrastructure and sustainable supplies of PPE. Multimodal strategies to improve IPC are critical to make health facilities safer and to protect HCWs and the communities they serve.

Publication Type

Journal article.

<22>

Accession Number

20210282895

Author

Betty Lanyero; Edea, Z. A.; Musa, E. O.; Watare, S. H.; Mandalia, M. L.; Livinus, M. C.; Ebrahim, F. K.; Abiy Girmay; Bategereza, A. K.; Aschalew Abayneh; Sambo, B. H.; Ebba Abate

Title

Readiness and early response to COVID-19: achievements, challenges and lessons learnt in Ethiopia.

Source

BMJ Global Health; 2021. 6(6). 20 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Declaration of the novel coronavirus disease as a Public Health Emergency of International Concern necessitated countries to get ready to respond. Here, we describe key achievements, challenges and lessons learnt during the readiness and early response to COVID-19 in Ethiopia. Readiness activities commenced as early as January 2020 with the activation of a national Public Health Emergency Operations Centre and COVID-19 Incident Management System (IMS) by the Ethiopian Public Health Institute. The COVID-19 IMS conducted rapid risk assessments, developed scenario-based contingency plans, national COVID-19 guidelines and facilitated the enhancement of early warning and monitoring mechanisms. Early activation of a coordination mechanism and strengthening of detection and response capacities contributed to getting the country ready on time and mounting an effective early response. High-level political leadership and commitment led to focused efforts in coordination of response interventions. Health screening, mandatory 14-day quarantine and testing established for all international travellers arriving into the country slowed down the influx of travellers. The International Health Regulations (IHR) capacities in the country served as a good foundation for timely readiness and response. Leveraging on existing IHR capacities in the country built prior to COVID-19 helped slow down the importation and mitigated uncontrolled spread of the disease in the country. Challenges experienced included late operationalisation of a multisectoral coordination platform, shortage of personal protective equipment resulting from global disruption of importation and the huge influx of over 10 000 returnees from different COVID-19-affected countries over a short period of time with resultant constrain on response resources.

Publication Type

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Journal article.

<23>

Accession Number

20210282892

Author

Wariri, O.; Okomo, U.; Cerami, C.; Okoh, E.; Oko, F.; Jah, H.; Bojang, K.; Susso, B.; Olatunji, Y.; Nkereuwem, E.; Akemokwe, F. M.; Jobe, M.; Agboghroma, O. F.; Kebbeh, B.; Sowe, G.; Gilleh, T.; Jobe, N.; Usuf, E.; Clarke, E.; Brotherton, H.; Forrest, K.

Title

Establishing and operating a 'virtual ward' system to provide care for patients with COVID-19 at home: experience from The Gambia.

Source

BMJ Global Health; 2021. 6(6). 36 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Health systems in sub-Saharan Africa have remained overstretched from dealing with endemic diseases, which limit their capacity to absorb additional stress from new and emerging infectious diseases. Against this backdrop, the rapidly evolving COVID-19 pandemic presented an additional challenge of insufficient hospital beds and human resource for health needed to deliver hospital-based COVID-19 care. Emerging evidence from high-income countries suggests that a 'virtual ward' (VW) system can provide adequate home-based care for selected patients with COVID-19, thereby reducing the need for admissions and mitigate additional stress on hospital beds. We established a VW at the Medical Research Council Unit, The Gambia at the London School of Hygiene and Tropical Medicine, a biomedical research institution located in The Gambia, a low-income west African country, to care for members of staff and their families infected with COVID-19. In this practice paper, we share our experience focusing on the key components of the system, how it was set up and successfully operated to support patients with COVID-19 in non-hospital settings. We describe the composition of the multidisciplinary team operating the VW, how we developed clinical standard operating procedures, how clinical oversight is provided and the use of teleconsultation and data capture systems to successfully drive the process. We demonstrate that using a VW to provide an additional level of support for patients with COVID-19 at home is feasible in a low-income country in sub-Saharan Africa. We believe that other low-income or resource-constrained settings can adopt and contextualise the processes described in this practice paper to provide additional support for patients with COVID-19 in non-hospital settings.

Publication Type

Journal article.

<24>

Accession Number

20210282886

Author

Touchton, M.; Knaul, F. M.; Arreola-Ornelas, H.; Porteny, T.; Sanchez, M.; Mendez, O.; Faganello, M.; Edelson, V.; Gygi, B.; Hummel, C.; Otero, S.; Insua, J.; Undurraga, E.; Rosado, J. A.

Title

A partisan pandemic: state government public health policies to combat COVID-19 in Brazil.

Source

BMJ Global Health; 2021. 6(6). 49 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: To present an analysis of the Brazilian health system and subnational (state) variation in response to the COVID-19 pandemic, based on 10 non-pharmaceutical interventions (NPIs). **Materials and methods:** We collected daily information on implementation of 10 NPI designed to inform the public of health risks and promote distancing and mask use at the national level for eight countries across the Americas. We then analyse the adoption of the 10 policies across Brazil's 27 states over time, individually and using a composite index. We draw on this index to assess the timeliness and rigour of NPI implementation across the country, from the date of the first case, 26 February 2020. We also compile Google data on population mobility by state to describe changes in mobility throughout the COVID-19 pandemic. **Results:** Brazil's national NPI response was the least stringent among countries analysed. In the absence of a unified federal response to the pandemic, Brazilian state policy implementation was neither homogenous nor synchronised. The median NPI was no stay-at-home order, a recommendation to wear masks in public space but not a requirement, a full school closure and partial restrictions on businesses, public transportation, intrastate travel, interstate travel and international travel. These restrictions were implemented 45 days after the first case in each state, on average. Rondonia implemented the earliest and most rigorous policies, with school closures, business closures, information campaigns and restrictions on movement 24 days after the first case; Mato Grosso do Sul had the fewest, least stringent restrictions on movement, business operations and no mask recommendation. **Conclusions:** The study identifies wide variation in national-level NPI responses to the COVID-19 pandemic. Our focus on Brazil identifies subsequent variability in how and when states implemented NPI to contain COVID-19. States' NPIs and their scores on the composite policy index both align with the governors' political affiliations: opposition governors implemented earlier, more stringent sanitary measures than those supporting the Bolsonaro administration. A strong, unified national response to a pandemic is essential for keeping the population safe and disease-free, both at the outset of an outbreak and as communities begin to reopen. This national response should be aligned with state and municipal implementation of NPI, which we show is not the case in Brazil.

Publication Type

Journal article.

<25>

Accession Number

20210282873

Author

Hasan, M. Z.; Neill, R.; Das, P.; Vasuki Venugopal; Arora, D.; Bishai, D.; Nishant Jain; Gupta, S.

Title

Integrated health service delivery during COVID-19: a scoping review of published evidence from low-income and lower-middle-income countries.

Source

BMJ Global Health; 2021. 6(6). many ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Integrated health service delivery (IHSD) is a promising approach to improve health system resilience. However, there is a lack of evidence specific to the low/lower-middle-income country (L-LMIC) health systems on how IHSD is used during disease outbreaks. This scoping review aimed to synthesise the emerging evidence on IHSD approaches adopted in L-LMIC during the COVID-19 pandemic and systematically collate their operational features. Methods: A systematic scoping review of peer-reviewed literature, published in English between 1 December 2019 and 12 June 2020, from seven electronic databases was conducted to explore the evidence of IHSD implemented in L-LMICs during the COVID-19 pandemic. Data were systematically charted, and key features of IHSD systems were presented according to the postulated research questions of the review. Results: The literature search retrieved 1487 published articles from which 18 articles met the inclusion criteria and included in this review. Service delivery, health workforce, medicine and technologies were the three most frequently integrated health system building blocks during the COVID-19 pandemic. While responding to COVID-19, the L-LMICs principally implemented the IHSD system via systematic horizontal integration, led by specific policy measures. The government's stewardship, along with the decentralised decision-making capacity of local institutions and multisectoral collaboration, was the critical facilitator for IHSD. Simultaneously, fragmented service delivery structures, fragile supply chain, inadequate diagnostic capacity and insufficient workforce were key barriers towards integration. Conclusion: A wide array of context-specific IHSD approaches were operationalised in L-LMICs during the early phase of the COVID-19 pandemic. Emerging recommendations emphasise the importance of coordination and integration across building blocks and levels of the health system, supported by a responsive governance structure and stakeholder engagement strategies. Future reviews can revisit this emerging evidence base at subsequent phases of COVID-19 response and recovery in L-LMICs to understand how the approaches highlighted here evolve.

Publication Type

Journal article.

<26>

Accession Number

20210282865

Author

Simpson, N.; Angland, M.; Bhogal, J. K.; Bowers, R. E.; Cannell, F.; Gardner, K.; Lohiya, A. G.; James, D.; Jivraj, N.; Koch, I.; Laws, M.; Lipton, J.; Long, N. J.; Vieira, J.; Watt, C.; Whittle, C.; Zidaru-Barbulescu, T.; Bear, L.

Title

'Good' and 'Bad' deaths during the COVID-19 pandemic: insights from a rapid qualitative study.

Source

BMJ Global Health; 2021. 6(6). 46 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Dealing with excess death in the context of the COVID-19 pandemic has thrown the question of a 'good or bad death' into sharp relief as countries across the globe have grappled with multiple peaks of cases and mortality; and communities mourn those lost. In the UK, these challenges have included the fact that mortality has adversely affected minority communities. Corpse disposal and social distancing guidelines do not allow a process of mourning in which families and communities can be involved in the dying process. This study aimed to examine the main concerns of faith and non-faith communities across the UK in relation to death in the context of the COVID-19 pandemic. The research team used rapid ethnographic methods to examine the adaptations to the dying process prior to hospital admission, during admission, during the disposal and release of the body, during funerals and mourning. The study revealed that communities were experiencing collective loss, were making necessary adaptations to rituals that surrounded death, dying and mourning and would benefit from clear and compassionate communication and consultation with authorities.

Publication Type

Journal article.

<27>

Accession Number

20210282864

Author

Siddhesh Zadey; Surabhi Dharmadhikari; Pradeeksha Mukuntharaj

Title

Ethics-driven policy framework for implementation of movement restrictions in pandemics.

Source

BMJ Global Health; 2021. 6(6). 31 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

In the ongoing COVID-19 pandemic, countries across the globe undertook several stringent movement restrictions to prevent the virus spread. In April 2020, around 3.9 billion people in 90 countries were contained in their homes. Discourse on the ethical questions raised by such restrictions while historically rich is absent when it comes to pragmatic policy considerations by the decision-makers. Drawing from the existing literature, we present a unified ethical principles-pragmatic considerations-policy indicators framework flexibly applicable across different countries and contexts to assess the ethical soundness of movement-restricting policies. Our framework consolidates 11 unique but related ethical principles (harm, justifiability, proportionality, least restrictive means, utility efficiency, reciprocity, transparency, relevance, equity, accountability, and cost and feasibility). We mapped each ethical principle to answerable questions or pragmatic considerations to subsequently generate 34 policy indicators. These policy indicators can help policymakers and health practitioners to decide the ethically substantiated initiation of movement restrictions, monitor progress and systematically evaluate the imposed restrictions. As an example, we applied the framework to evaluate the first two phases of the largest lockdown (March-May 2020) implemented nationwide in India for its adherence to ethical principles. The policy indicators revealed ethical lapses in proportionality, utility efficiency and accountability for India's lockdown that should be focused on in subsequent restrictions. The framework possesses value towards ensuring that movement-restrictive public health interventions across different parts of the world in the ongoing pandemic and possible future outbreaks are ethically sound.

Publication Type

Journal article.

<28>

Accession Number

20210282808

Author

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Khan, M. F.; Majid Mahmood; Hasrat, M. N.; Bilal Javed; Ozan Javed

Title

Perception, preparedness and response of health care personals towards COVID-19 pandemic in Azad Jammu & Kashmir, Pakistan: a cross sectional interview based study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 18 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objective: To assess the state of knowledge, perception, preparedness and satisfaction level of health care personals (HCPs) in Azad Jammu & Kashmir (AJK) towards COVID-19. Study design: It was cross sectional survey conducted by personal interviews. Methodology: The study was conducted by interviewing 302 HCPs from 7 major district headquarter hospitals of AJK from May to September 2020. The questionnaire included 29 questions about demography, perception, training, preparedness, knowledge and awareness of HCPs about COVID-19. The data was encoded and analyzed statistically. Results: Majority of the respondents (78.5%) believed that corona-virus is a serious health threat. However, 10.6% perceived it as a bio-weapon and 4.3% as not dangerous. About 10% of doctors were not considering it very dangerous compared to 1% of paramedics and 2.5% of the supporting staff ($P = 0.003$). About 55% of the respondents showed confidence of the steps taken by government for prevention of COVID-19 while 45% had an opposite view. More than 70% of the participants had no formal training and the ratio of trained personals was significantly higher (0.018) in paramedical staff (33%) than doctors (15%). About 53% of the respondents were not satisfied with the provision of PPEs and 64% were not satisfied with their work and wages situation. Majority of the respondents (97%) were observed to follow the protocols for personal protection. Conclusion: Majority of HCPs perceive covid-19 as a serious health concern. However, most of the HCPs are neither well trained for the current pandemic nor fully satisfied about personal protection, work load, and wages.

Publication Type

Journal article.

<29>

Accession Number

20210282797

Author

Savitesh Kushwaha; Poonam Khanna; Vineeth Rajagopal; Tanvi Kiran

Title

Biological attributes of age and gender variations in Indian COVID-19 cases: a retrospective data analysis.

Source

Clinical Epidemiology and Global Health; 2021. 11. 30 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: The associated risk factors, co-morbid conditions and biological differences varying with gender and age might be the cause of higher COVID-19 infection and deaths among males and older persons. The objective of this study was to predict and specify the biological attributes of variation in age and gender-based on COVID-19 status (deceased/recovered). **Methods:** In this retrospective study, the data was extracted from a recognised web-based portal. A total of 112,860 patients' record was filtered out and an additional 9131 records were separately analysed to examine age and gender relationship with patient's COVID-19 status (recovered/deceased). Chi-square, t-test, binary logistic regression, and longitudinal regression analysis were conducted. **Results:** The male COVID-19 cases (65.39%) were more than females (34.61%) and mean age of infected and recovered patients was 39.47 +or- 17.59 years and 36.85 +or- 18.51 years respectively. The odds for infection was significantly higher among females for lower age categories, which declines with age. The age-adjusted odds for recovery were significantly higher among females (O.R. = 1.779) and odds for recovery was highest in 5-17 years age category (O.R. = 88.286) independent of gender. **Conclusion:** The chances of being COVID-19 infected was higher for females of lower age categories (<35 years) which decreases with age. The odds for recovery among females was significantly higher than males. The chances of recovery declines with increasing age and the variation could be attributed to the biological differences between age categories and gender.

Publication Type

Journal article.

<30>

Accession Number

20210282791

Author

Htay NuNu [Htay, N. N. M.]; Marzo, R. R.; Rafidah Bahari; Al-Rifai, A.; Kamberi, F.; El-Abasiri, R. A.; Nyamache, J. M.; Htet Aung Hlaing; Hassanein, M.; Moe Soe; Adinegara Lutfi Abas; Su TinTin

Title

How healthcare workers are coping with mental health challenges during COVID-19 pandemic? - a cross-sectional multi-countries study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 49 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: The coronavirus pandemic (COVID-19) has a social and psychological impact among healthcare workers worldwide and appropriate coping strategies are essential to avoid the negative mental health effects. This study aimed to investigate the coping strategies among the healthcare workers from different countries and their attitude towards teamwork during the COVID-19 pandemic. **Methods:** A cross-sectional study was conducted by using an online, web-based questionnaire, which was distributed to healthcare workers from 32 countries during April and May 2020. The respondents were recruited by the non-random convenience sampling method. **Results:** A total of 2166 respondents responded to the survey and the majority were working in low- and middle-income countries. Among them, 36% were doctors, 24% were nurses and 40% worked in other healthcare sectors. More than 70% of the respondents answered that "getting family support" and "positive thinking" were coping methods for them during the COVID-19 pandemic. Approximately half of the respondents worshiped according to their belief and conducted prayers (58.4%) and had adequate sleep and food intake (48.2%). The significant associations were observed between attitude score towards interprofessional teamwork and gender ($p = 0.009$), age (31-45 years) ($p < 0.001$), marital status ($p < 0.001$), occupation ($p < 0.001$), working experience (2-5 years) ($p = 0.005$), current workplace (clinics) ($p = 0.002$). **Conclusion:** The local healthcare authorities should promote coping methods and develop an innovative way to encourage practicing among healthcare workers. Digital mental health support interventions or workplace mental health support teams should be accessible to protect mental wellbeing among healthcare workers.

Publication Type

Journal article.

<31>

Accession Number

20210282790

Author

Shinta Oktya Wardhani; Jonny Karunia Fajar; Nina Nurarifah; Djoko Heri Hermanto; Siti Fatonah; Susanthi Djajalaksana; Arie Zainul Fatoni; Putu Moda Arsana; Laksmi Wulandari; Gatot Soegiarto; Kuldeep Dhama; Harapan Harapan

Title

The predictors of high titer of anti-SARS-CoV-2 antibody of convalescent plasma donors.

Source

Clinical Epidemiology and Global Health; 2021. 11. 24 ref.

Publisher

Elsevier B.V.

Location of Publisher

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Recent evidence suggested that the higher titers of anti-severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) antibody from convalescent plasma donors contributed to the clinical improvement in coronavirus disease 2019 (COVID-19) patients. However, the titers of anti-SARS-CoV-2 antibodies varied in each individual, and the precise factors that might govern such variation have not been elucidated. **Objectives:** To assess the factors associated with high titers of anti-SARS-CoV-2 antibody among COVID-19 convalescent plasma (CCP) donors. **Methods:** A cross-sectional study was conducted in Saiful Anwar General Hospital, Malang, Indonesia. Information of interest including demographic characteristics, clinical symptoms, comorbidities, laboratory findings, and the titers of anti-SARS-CoV-2 antibody among COVID-19 CCP donors were collected. The correlation was assessed using multiple logistic regression. **Results:** A total of 50 COVID-19 CCP donors with the titers of anti-SARS-CoV-2 antibody of more than 1:320 and 33 donors with the titers of less than 1:320 were analyzed. Our analysis revealed that CCP donors with history of cough, fever, dyspnea, and pneumonia significantly had higher titers of anti-SARS-CoV-2 antibody compared to asymptomatic donors. Moreover, CCP donors with elevated levels of eosinophils and immature granulocytes and low levels of albumins had higher levels of anti-SARS-CoV-2 antibody. The titer of antibody was not affected by comorbidities of donors. **Conclusions:** CPP donors who had experience of symptomatic COVID-19 with high eosinophils level, high immature granulocytes and low albumin level have higher titers of anti-SARS-COV-2 antibody than those who experienced asymptomatic COVID-19. Our current findings may be used as the additional baseline criteria for selecting the donors of CCP for the management of COVID-19.

Publication Type

Journal article.

<32>

Accession Number

20210282783

Author

Mukesh Bairwa; Rajesh Kumar; Kalpana Beniwal; Deepjyoti Kalita; Yogesh Bahurupi

Title

Hematological profile and biochemical markers of COVID-19 non-survivors: a retrospective analysis.

Source

Clinical Epidemiology and Global Health; 2021. 11. 25 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

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www.rcvsknowledge.org

Abstract

Background: Coronavirus disease is primarily transmitted through the respiratory route and bodily contact. The fatality in COVID-19 cases was alarming in the initial days. This study analyzes hematological and biochemical markers of COVID-19 non-survivors. Material and methods: In this single-center study, records of 249 patients hospitalized with COVID-19 were studied for hematological profile and biochemical markers. Records of patients with laboratory-confirmed COVID-19 disease hospitalized between April 14, 2020, to August 15, 2020, were included in the analysis. Results: Significantly, the disease mortality was associated with increased procalcitonin ($P < 0.05$), C-reactive protein ($P < 0.05$), aspartate transaminase ($P < 0.05$), serum potassium ($P < 0.05$), neutrophils count ($P < 0.05$), white blood cell count ($P < 0.05$), prothrombin time ($P < 0.05$) and activated prothrombin time ($P < 0.05$) in patients reported abnormal x-ray findings. Further, patients with abnormal radiological findings significantly showed a reduced level of lymphocyte counts ($P < 0.05$), oxygen saturation ($P < 0.05$), and partial oxygen pressure ($P < 0.05$). Reduced level of aspartate aminotransferase ($P < 0.05$), alanine aminotransferase ($P < 0.05$) and lactate dehydrogenase ($P < 0.05$) reported significant association with mortality among patients with COVID-19. Conclusions: The clinicians may consider the hematological and biochemical parameters in the patients with COVID-19 in future decision-making. These indicators might support clinical decisions to identify high fatality cases and poor diagnosis in the initial admission phase. In COVID-19 patients, we recommend close monitoring on procalcitonin, C-reactive protein, neutrophils count, and white blood cell count as a clinical indicator for potential progression to critical illness.

Publication Type

Journal article.

<33>

Accession Number

20210282782

Author

Sahil Sharma; Kapil Goel; Kurup, K. K.; Grover, G. S.; Rajesh Bhaskar

Title

COVID-19 in Punjab, India: epidemiological patterns, laboratory surveillance and contact tracing of COVID-19 cases, March-May 2020.

Source

Clinical Epidemiology and Global Health; 2021. 11. 16 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: In Punjab, first COVID-19 case was detected on March 5, 2020 followed by multiple clusters. Understanding the epidemiology of reported COVID-19 cases helps decision makers in planning future

responses. We described the epidemiological patterns, laboratory surveillance and contact tracing of COVID-19 cases in Punjab. Methods: We analysed state's COVID-19 data from March-May 2020 to describe time, place and person distribution. We analysed the laboratory surveillance and contact tracing reports to calculate frequency of testing, sample positivity rate (PR) and contacts traced per case. Findings: A total of 2256 cases were reported from March-May 2020 (attack rate 75 cases/million and case fatality rate 2%). Attack rate was higher among males (81 cases/million males) and maximum affected age group was 60-69 years (164.5 cases/million). Five of 22 districts reported almost half cases in May's first week. Mortality rate was highest among individuals >60 years (six deaths/million) and males (two deaths/million males). Of 45 deaths, 41 reported comorbidities [hypertension (42%), diabetes (40%)]. COVID-19 testing increased from 46 samples/day (PR: 2%) in March's first week to 4000 samples/day (PR: 2.5%) by May's end (2752 tests/million). Amritsar conducted 2035 tests/million (highest PR: 6.5%) while Barnala conducted 4158 tests/million (lowest PR: 1%). For 2256 cases, 19,432 contacts were traced (nine contacts/case) with 11% positivity rate. Interpretation: COVID-19 in Punjab mostly affected males, >60 years of age and individuals with comorbid conditions. Many districts with less testing and contact tracing had higher positivity rate. We recommended to implement and ensure adequate testing and contact tracing in all the districts of Punjab.

Publication Type

Journal article.

<34>

Accession Number

20210282775

Author

Wijaya, I.; Andhika, R.; Huang Ian; Purwiga, A.; Budiman, K. Y.; Bashari, M. H.; Reniarti, L.; Roesli, R. M. A.

Title

The use of Janus Kinase inhibitors in hospitalized patients with COVID-19: systematic review and meta-analysis.

Source

Clinical Epidemiology and Global Health; 2021. 11. 37 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: The evidence of using JAK inhibitors among hospitalized patients with COVID-19 is conflicting. The systematic review and meta-analysis aimed to address the efficacy of Janus Kinase (JAK) Inhibitors in reducing risk of mortality among hospitalized patients with COVID-19. Methods: Several electronic databases, including PubMed, EuropePMC, and the Cochrane Central Register of Controlled Trials, with relevant keywords "COVID-19" AND ("JAK inhibitor" OR "Ruxolitinib" OR "Tofacitinib" OR "Fedratinib" OR "Baricitinib") AND ("Severe" OR "Mortality"), were used to perform a systematic literature

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search up to December 11, 2020. All studies pertinent to the predetermined eligibility criteria were included in the analysis. Our outcome of interest was all types of mortality, clinical improvement, and clinical deterioration. Dichotomous variables of our outcomes of interest were analyzed using Maentel-Haenszel formula to obtain odds ratios (ORs) and 95% confidence intervals (CI) with random-effects modeling regardless of heterogeneity. Results: Five studies with a total of 1190 patients and were included in this systematic review and meta-analysis. The use of JAK inhibitors was associated with a reduced risk of mortality (OR 0.51, 95% CI 0.28-0.93, P = 0.02; I2: 7.8%, P = 0.354) and clinical improvement (OR 1.76, 95% CI 1.05-2.95, P = 0.032; I2: 26.4%, P = 0.253). The use of JAK inhibitors was not associated with a reduced risk of clinical deterioration (OR 0.58, 95% CI 0.28-1.19, P = 0.136; I2: 24.1%, P = 0.267). Conclusion: The use of JAK inhibitors was significantly associated with a reduced risk of mortality, and clinical improvement in hospitalized patients with COVID-19.

Publication Type

Journal article.

<35>

Accession Number

20210282769

Author

Prithvi Mohandas; Sathya Periasamy; Manimaran Marappan; Arun Sampath; Sundaram, V. K. G.; Cherian, V. K.

Title

Clinical review of COVID-19 patients presenting to a quaternary care private hospital in South India: a retrospective study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 25 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Coronavirus disease 2019 (COVID-19) has been declared a global public-health crisis due to its impact on health, economy, and mental well-being. Here, we evaluated the clinical and epidemiological parameters associated with COVID-19 in South India. Methods: A retrospective, quaternary care hospital-based study that included COVID-19 positive patients admitted to MIOT International Hospital, Chennai between 8 April-7 August 2020. Cases were identified by reverse transcriptase-polymerase chain reaction. Epidemiological, demographic, clinical, and radiological findings were recorded and analyzed. The primary endpoint was stable discharge from hospital/patient recovery or death. Associations between risk factors and comorbidities were analyzed using Chi-Square/Fisher's exact test. Results: Of the 5264 cases reviewed, 3345 cases were included. The mean (standard deviation, SD) age of the patients was 47.58 (16.69) years with a median and range hospital stay of 5 (2-41) days. 69.20% of patients were male. The most frequent

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comorbidities were diabetes (37.10%) and hypertension (29.10%). Contact history was available for 58% of patients. The most common symptoms were cough (36.60%), fever (28.30%), and myalgia (15.40%). Abnormal chest radiography was reported in 16.9% of patients. Phase of admission, age 50 years, hypertension, diabetes, coronary artery disease, chronic kidney disease was significantly associated with mortality ($p < 0.05$). There were 142 (4.2%) deaths in this study. Conclusion: In this single centre hospital-based study, late presentation and more severe form of COVID pneumonia lead to higher mortality although it had lower mortality rate for COVID-19 in comparison. Late phase of the pandemic showed better outcomes vs. the early group.

Publication Type

Journal article.

<36>

Accession Number

20210282766

Author

Doi, A.; Iwata, K.; Kuroda, H.; Hasuike, T.; Nasu, S.; Kanda, A.; Nagao, T.; Nishioka, H.; Tomii, K.; Morimoto, T.; Kihara, Y.

Title

Estimation of seroprevalence of novel Coronavirus disease (COVID-19) using preserved serum at an outpatient setting in Kobe, Japan: a cross-sectional study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 12 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objectives: Coronavirus disease 2019 (COVID-19) pandemic caused by SARS-CoV-2 has been affecting many people on earth and our society. Japan is known to have relatively smaller number of its infections as well as deaths among developed nations. However, accurate prevalence of COVID-19 in Japan remains unknown. Therefore, we conducted a cross-sectional study to estimate seroprevalence of SARS-CoV-2 infection. **Methods:** We conducted a cross-sectional serologic testing for SARS-CoV-2 antibody using 1000 samples from patients at outpatient settings who visited the clinic from March 31 to April 7, 2020, stratified by the decade of age and sex. **Results:** There were 33 positive IgG among 1000 serum samples (3.3%, 95%CI: 2.3-4.6%). By applying this figure to the census of Kobe City (population: 1,518,870), it is estimated that the number of people with positive IgG be 50,123 (95%CI: 34,934-69,868). Age and sex adjusted prevalence of positivity was calculated 2.7% (95%CI: 1.8-3.9%), and the estimated number of people with positive IgG was 40,999 (95%CI: 27,333-59,221). These numbers were 396 to 858-fold more than confirmed cases with PCR testing in Kobe City. **Conclusions:** Our cross-sectional serological study suggests that the number of people

with seropositive for SARS-CoV-2 infection in Kobe, Japan is far more than the confirmed cases by PCR testing.

Publication Type

Journal article.

<37>

Accession Number

20210282763

Author

Jangra, M. K.; Akanksha Saxena; Prahharsh Anurag

Title

Knowledge and awareness among physiotherapy students to combat COVID-19: a questionnaire based study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 13 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Objective: Despite the various preventive guidelines and recommendation for infection control, the COVID-19 is spreading very extensively. So it becomes essential for healthcare professionals to have proper knowledge and awareness of it. The objective of this study was to assess the level of knowledge and Awareness among Physiotherapy students to combat COVID-19. Methods: A total of 203 participants from MMIPR, MM(DU), Mullana completed a questionnaire based survey on the Knowledge and Awareness among Physiotherapy students to Combat COVID-19. The questionnaire was self-administrated and distributed through WhatsApp. Convenient sampling method was used for data collection and the distributions of responses were presented as frequencies and percentages. Results: A total of 203 physiotherapy students participated in this survey (143 females & 60 males), forming a response rate of 53.4% (203 participated out of 380). The overall awareness for all the participants was adequate with 73.1% reporting correct answers. The findings of this study revealed that 93% of subjects (score more than 60%) have good knowledge and awareness to combat COVID-19. However, only 49% knew the correct name of the virus causing COVID-19 infection, only 41% of participants were aware about the diagnostic measures, and only 25.6% were aware of the treatment strategies. 91% of the respondents uses 'Aarogya Setu' app, while 85% says agrees that it helps to know more about the social distancing. Conclusion: We conclude that physiotherapy students of MMIPR, MM(DU), Mullana (Ambala) were well aware about the knowledge on COVID-19 infection and its preventive measures.

Publication Type

Journal article.

<38>

Accession Number

20210282760

Author

George, N.; Tyagi, N. K.; Prasad, J. B.

Title

COVID-19 pandemic and its average recovery time in Indian states.

Source

Clinical Epidemiology and Global Health; 2021. 11. 18 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Many studies have been carried out in modelling COVID-19 pandemic. However, region-wise average duration of recovery from COVID-19 has not been attempted; hence, an effort has been made to estimate state-wise recovery duration of India's COVID-19 patients. Determining the recovery time in each region is intended to assist healthcare professionals in providing better care and planning of logistics. Methods: This study used database provided by Kaggle, which takes data from the Ministry of Health & Family Welfare. The simple Linear Regression model between incidence, prevalence, and duration was used to assess the duration of COVID-19 disease in various Indian states. Results: The fitted model suits ideal for most of the states, except for some union territories and northeastern states. The average time to recover from disease was ranging from 5 to 36 days in Indian states/union territories except for Madhya Pradesh. Tamil Nadu has an average recovery time of 7 days with an value of 0.96, followed by Odisha, Karnataka, West Bengal, Kerala and Chhattisgarh and the average recovery duration was estimated as 7, 13, 17, 11, 14 and 12 days respectively. Conclusion: The average recovery from COVID-19 was ten or less days in twenty percentage of states, whereas in forty-four percentage of states/union territories had an average recovery duration between ten to twenty days. However, around twentyfour percentage of states/union territory recovered between twenty to thirty days. In the rest of Indian states/union territories, the average duration of recovery was more than thirty days.

Publication Type

Journal article.

<39>

Accession Number

20210282759

Author

Singh, R. K.; Bajpai, R.; Pradeep Kaswan

Title

COVID-19 pandemic and psychological wellbeing among health care workers and general population: a systematic-review and meta-analysis of the current evidence from India.

Source

Clinical Epidemiology and Global Health; 2021. 11. 44 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Introduction: Coronavirus disease 2019 (COVID-19) was declared as pandemic and measures adopted for its control included quarantine of at-risk, isolation of infected along with other measures such as lockdown, restrictions on movement, and social interactions. Both the pandemic and these measures have the potential to cause mental health problems among individuals. Objective The present study aimed to investigate and estimate the prevalence of psychological well-being, particularly from an Indian perspective using systematic review and meta-analysis of existing literature. Methods: We searched in the PubMed database, starting from the onset of the current pandemic and until 10th October 2020 to synthesize evidence on mental health outcomes from India. DerSimonian and Laird method of the random-effects meta-analysis was employed and heterogeneity between studies was assessed using the Chi-square based Cochran's Q statistic and I-squared (I²) statistics. Results: The pooled prevalence of stress in nine studies was 60.7% (95% CI: 42.3%-77.7%), depression in eight studies was 32.7% (95% CI: 24.6%-41.3%), anxiety in six studies was 34.1% (95% CI: 26.3%-42.3%) and sleep disturbances in six studies was 26.7% (95% CI: 13.9%-41.8%). As expected, high heterogeneity was observed in the above-mentioned outcomes. Sub-group analysis showed that Health Care Workers (HCWs) had a higher prevalence of stress, anxiety, depression & psychological distress in comparison to the general population. Conclusion: A significant impact on psychological well-being during COVID-19 was observed in India as common adverse outcomes were stress (61%), psychological distress (43%), anxiety (34%), depression (33%), and sleep disturbances (27%). Thus the COVID-19 pandemic represents an unprecedented threat to mental health, which should become a priority for public health strategies.

Publication Type

Journal article.

<40>

Accession Number

20210282757

Author

Jaya Shukla; Manohar Singh, R.

Title

Psychological health amidst COVID-19: a review of existing literature in the Indian context.

Source

Clinical Epidemiology and Global Health; 2021. 11. 34 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

The COVID-19 pandemic has emerged as a global health crisis. As of now, the total confirmed cases have exceeded 50 million and total deaths more than 1 million across the world. Such widespread diseases in the past have been associated with a surge in mental health disturbances. In this backdrop, the present review article pertains to discuss the overall impact of COVID-19 pandemic on mental health by synthesizing the existing literature from India, using PRISMA technique. The articles have been retrieved from Google scholar, NCBI and PubMed database. The result obtained on synthesizing the literature indicates that lockdown (home confinement) and social distancing as a measure to mitigate the outbreak of disease have affected physical and mental well-being. There has been an increase in the prevalence of anxiety and depressive disorders due to sustained stress related to COVID-19. It has led to a medico-socio-economic crisis around the world. The pandemic continues to evolve with several countries experiencing multiple waves due to continuous mutations in the virus. Hence, it is essential to carefully observe and monitor the impact of COVID-19 on the onset and progression of poor mental health.

Publication Type

Journal article.

<41>

Accession Number

20210282750

Author

Mahat, R. K.; Suchismita Panda; Vedika Rathore; Sharmistha Swain; Lalendra Yadav; Sah, S. P.

Title

The dynamics of inflammatory markers in Coronavirus disease-2019 (COVID-19) patients: a systematic review and meta-analysis.

Source

Clinical Epidemiology and Global Health; 2021. 11. 142 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Coronavirus disease-2019 (COVID-19) is a global pandemic and high mortality rate among severe or critical COVID-19 is linked with SARS-CoV-2 infection-induced hyperinflammation of the innate and adaptive immune systems and the resulting cytokine storm. This paper attempts to conduct a systematic review and meta-analysis of published articles, to evaluate the association of inflammatory parameters with the severity and mortality in COVID-19 patients. Methods: A comprehensive systematic literature search of medical electronic databases including Pubmed/Medline, Europe PMC, and Google Scholar was performed for relevant data published from January 1, 2020 to June 26, 2020. Observational studies reporting clear extractable data on inflammatory parameters in laboratory-confirmed COVID-19 patients were included. Screening of articles, data extraction and quality assessment were carried out by two authors independently. Standardized mean difference (SMD)/mean difference (MD/WMD) and 95% confidence intervals (CIs) were calculated using random or fixed-effects models. Results: A total of 83 studies were included in the meta-analysis. Of which, 54 studies were grouped by severity, 25 studies were grouped by mortality, and 04 studies were grouped by both severity and mortality. Random effect model results demonstrated that patients with severe COVID-19 group had significantly higher levels of C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), procalcitonin (PCT), interleukin-6 (IL-6), interleukin-10 (IL-10), interleukin-2R (IL-2R), serum amyloid A (SAA) and neutrophil-to-lymphocyte ratio (NLR) compared to those in the non-severe group. Similarly, the fixed-effect model revealed significant higher ferritin level in the severe group when compared with the non-severe group. Furthermore, the random effect model results demonstrated that the non-survivor group had significantly higher levels of CRP, PCT, IL-6, ferritin, and NLR when compared with the survivor group. Conclusion: In conclusion, the measurement of these inflammatory parameters could help the physicians to rapidly identify severe COVID-19 patients, hence facilitating the early initiation of effective treatment.

Publication Type

Journal article.

<42>

Accession Number

20210282748

Author

Kathiresan Jeyashree; Mohankumar Raju; Manickam Ponnaiah; Sendhilkumar Muthappan; Rozario, A. G. A.; Rose Raichel; Jeris, W. L.; Gangakhedkar, R. R.; Murhekar, M. V.

Title

Self-reported and clinically identified loss of smell and taste among persons tested for COVID-19 in Chennai, southern India, July-August 2020: a cross sectional study.

Source

Clinical Epidemiology and Global Health; 2021. 11. 43 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Background: Early detection of symptoms of loss of smell and taste lately added for Coronavirus disease 2019 (COVID-19) has the potential for improving pandemic response. In the Indian context, we compared proportion experiencing new loss of smell or taste among COVID-19 positive and negative individuals in Chennai city, Southern India. **Methods:** We did an analytical cross-sectional study among individuals aged 18-80 years undergoing testing at COVID-19 sample collection centres. We ascertained loss of smell and taste using standardised self-reporting and clinical examination procedures. We administered Sino Nasal Outcome (SNOT 22) questionnaire for comprehensive understanding of these symptoms. We compared proportion having symptoms between COVID-19 positive and negative persons. We compared the two assessment methods to compute diagnostic validity indicators. **Results:** Of the 277 participants, 169 (61%) were men and mean age of 40.7 years [SD = 13.3]. Fifty eight (21%) had COVID-19 and 12 (36%) of them were asymptomatic. Predominantly reported symptoms were fever (30%), headache (18%) and cough (18%). Self-reported or clinically identified new loss of smell or taste was higher among COVID-19 positive (n = 13; 22%) than negative persons (n = 23; 11%) [p = 0.02]. Sensitivity was higher for self-reported or clinically identified loss of smell (17.2%) than that of loss of taste (6.9%). Negative predictive value for loss of smell or taste, self-reported or clinically identified was 81%. Likelihood ratio of positive test was 2.13. **Conclusion:** Loss of smell or taste are predominantly reported by COVID-19 confirmed individuals. Objective and subjective assessments of smell and taste may be required to identify those requiring COVID-19 testing.

Publication Type

Journal article.

<43>

Accession Number

20210282746

Author

Sharad Chand; Shastry, C. S.; Shivakumar Hiremath; Joel, J. J.; Krishnabhat, C. H.; Mateti, U. V.

Title

Updates on biomedical waste management during COVID-19: the Indian scenario.

Source

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www.rcvsknowledge.org

Clinical Epidemiology and Global Health; 2021. 11. 32 ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Biomedical waste poses various health and environmental hazards. Hence, it should be handled with the utmost care and disposed off safely. Several lacunas exist in the management of biomedical waste in India, and the pandemic posed by the coronavirus has made it even more challenging. The sudden outbreak of the virus led to an exponential rise in the quantity of biomedical waste. Furthermore, the poor infrastructure and lack of human resources have aggravated this situation. To combat this serious problem in a timely manner, the government has formulated various standard operating procedures and has amended the existing rules and guidelines.

Publication Type

Journal article.

<44>

Accession Number

20210282736

Author

Vidhi Jain; Gupta, M. K.; Malika Grover; Tejashree Nare; Saumya Srivastava; Pankaj Bhardwaj; Goel, A. D.; Suman Saurabh; Sanjeeta Dara; Ashok Kumar; Praveen Sharma; Nag, V. L.; Sanjeev Misra

Title

COVID-19 seropositivity among non-medical frontline office staff from two cities in Rajasthan, India.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2400-2404. 18 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Aims: The indigenously developed Indian Council of Medical Research (ICMR)-NIV COVID Kavach IgG enzyme linked immunosorbent assay (ELISA) has been recommended for seroprevalence among vulnerable populations in India, which provided essential services throughout the lockdown. The staff working in the High Court was one such group. We compared anti-SARS-CoV-2 IgG seropositivity among the staff of Jodhpur and Jaipur High Courts, Rajasthan, India. **Methods:** Asymptomatic judiciary staff of Jodhpur and Jaipur benches of High Courts were enrolled after informed written consent. A questionnaire was filled and 3-5 ml venous blood was collected from participants. The ICMR-NIV COVID Kavach IgG ELISA and EUROIMMUN IgG ELISA were used for detection of Anti-SARS-CoV-2 IgG antibodies. **Results:** A total of 63 samples (41 from Jodhpur and 22 from Jaipur) were collected between 28th July to 4th August 2020. The overall anti-SARS-CoV-2 IgG seroprevalence was found to be 6.35%. Seropositivity was higher among the staff from Jaipur (13.64%) as compared to Jodhpur (2.44%). The Kavach ELISA results were in complete agreement with EUROIMMUN ELISA. The infection control measures were deemed effective. **Conclusion:** Seroprevalence among the staff of Jodhpur High Court was found to be lower than Jaipur, reflecting higher susceptibility to COVID-19 in the former. Many offices worldwide are closed till mid 2020 but need to come up with pre-emptive policies eventually. This study may help to anticipate the possible challenges when other government/private offices start functioning. The infection control practices of one workplace may help formulate guidelines for other offices.

Publication Type

Journal article.

<45>

Accession Number

20210282731

Author

Farzana Islam; Rashmi Agarwalla; Meely Panda; Yasir Alvi; Vishal Singh; Arup Debroy; Arindam Ray; Amruta Vadnerkar; Shraddha Uttakar

Title

Assessment of the knowledge, preferences and concern regarding the prospective COVID-19 vaccine among adults residing in New Delhi, India - a cross-sectional study.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2369-2375. 25 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: Understanding the perception and concerns of people about COVID-19 vaccine in developing and populous country like India will help in understanding demand for the vaccine and further tailoring out public health information and education activities. The study was carried out to assess the present state of knowledge people have about the probable vaccine for COVID-19, to know the preferences of respondents

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E: library@rcvsknowledge.org

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about this vaccine and to learn the expectations and apprehensions of people about features of this prospective COVID-19 vaccine residing in the capital city of India. Methods: This cross-sectional study was conducted amongst the residents of Delhi, India from July to October 2020. Both offline and online interview method was used to collect data from 513 participants representing various occupational strata. Data were collected on sociodemographic variable, vaccine acceptance and concerns regarding COVID-19 vaccine. Results: Among the study population, 79.5% said they will take the vaccine while 8.8% said they were not going to take the vaccine and remaining 11.7% had not yet decided about it. More than 50% were willing to pay for the vaccine and 72% felt vaccine should first be given to health workers and high-risk group. Conclusion: The following study has helped to understand the percentage of people who are hesitant to take the vaccine and also the concerns regarding the vaccine. Also since half of the population is willing to pay for the vaccine, a strategic approach considering the various economical classes of people could be applied in a developing country like India.

Publication Type

Journal article.

<46>

Accession Number

20210282730

Author

Om Prakash; Bhavin Solanki; Jay Sheth; Divyang Oza; Mina Kadam; Sheetal Vyas; Aparajita Shukla; Jayshri Pethani; Hemant Tiwari

Title

Population-based seropositivity for IgG antibodies against SARS-CoV-2 in Ahmedabad city.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2363-2368. 24 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Context: Ahmedabad city with approximately 7 million population was one of the earliest cities to witness the high case load of COVID-19 pandemic in India. A population-based sero-survey was ideally suited in Ahmedabad to guide the public health response for managing COVID-19 pandemic. Objectives: To study the percentage sero-positivity for SARS-CoV-2 to understand the pandemic status and deriving conclusions for guiding the public health measures for managing the COVID-19 pandemic. Settings and Design: Population-based cross-sectional sero-surveillance. Methods and Material: Large scale sero-surveillance with population-based stratified sampling covering more than 10,000 samples from general population of Ahmedabad was carried out during second half of August 2020. The seropositivity was correlated and compared with various demographic factors and other parameters for valid and precise predictions on the immunity status of the population. Results: With 2,396 samples positive for IgG antibodies from a total of

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10,310 samples, the seropositivity against COVID-19 in the general population of Ahmedabad is around 23.24%. The seropositivity has increasing trend with increasing age and is significantly higher among females (25.37%) than males (21.81%). The zone wise positivity ranged from 11.74% to 33.14%. This closely correlates with the cases recorded so far, higher for those zones with high current or past cases. Conclusions: Seropositivity of 23.24% in general population indicate the overall current level of protection. Since effective vaccine is not yet available, it is required to continue emphasis on the public health preventive measures for controlling and managing the COVID-19 pandemic.

Publication Type

Journal article.

<47>

Accession Number

20210282727

Author

Al-Mansoori, L.; Al-Kaabi, S.; Nair, S. C.; Al-Katheeri, M.; Ghatasheh, G.; Al-Dhanhani, H.; Al-Kaabi, A.

Title

Epidemiological characteristics of children with Coronavirus at a joint commission-accredited hospital in the United Arab Emirates.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2348-2352. 22 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Objectives: Our aim was to identify the epidemiological characteristics and transmission patterns of coronavirus (COVID-19) among pediatric patients in the multicultural and multiethnic city of Al Ain in the United Arab Emirates (UAE). **Method:** A retrospective study was conducted by abstracting data from the electronic medical records of pediatric patients with COVID-19 from two major public hospitals in Al Ain. The data of patients from birth through 16 years of the cases with COVID-19 confirmed by reverse transcription-polymerase chain reaction were obtained. In addition to the epidemiological characteristics, transmission patterns, comorbidities, index cases, travel history, and coinfection with other viruses were analyzed. Cohen's kappa was used to assess interrater reliability and descriptive data. Chi-square test was used to assess significant differences between the variables and was conducted using Statistical Product and Service Solutions software. **Results:** We identified 298 (150 males, 148 females) laboratory-confirmed cases. The patients' median age was 7 years. Of these, 50% had parents who also tested positive. Most patients (86.9%) were healthy without any known medical problems. The coinfection rate was ~2%. **Conclusion:** The epidemiological characteristics of children with COVID-19 in Al Ain are similar to those observed internationally. Children of all ages appeared to be susceptible to COVID-19 and no significant sex or

ethnicity differences were detected. Furthermore, this study provides strong evidence of human-to-human transmission.

Publication Type

Journal article.

<48>

Accession Number

20210282705

Author

Nizami, D. J.; Raman, V.; Paulose, L.; Hazari, K. S.; Mallick, A. K.

Title

Role of laboratory biomarkers in assessing the severity of COVID-19 disease. a cross-sectional study.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2209-2215. 38 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: Corona virus disease 2019 (Covid-19) has high infectivity and mortality rate. Covid-19 patients can suddenly deteriorate and develop life threatening complications. Hence, there is a need to identify laboratory biomarkers in order to categorize high risk patients. The main purpose of the study is to investigate the role and correlation of laboratory parameters such as total leucocyte count (TLC), absolute lymphocyte count, platelet count, C-Reactive Proteins (CRP), serum ferritin, serum lactate dehydrogenase (LDH), serum procalcitonin and D-dimer in severe and non-severe Covid-19 patients. Methodology: This retrospective cross-sectional study was conducted at Latifa Women and Child Hospital in the UAE after obtaining ethical committee clearance. Based on the symptoms and the criteria by National Institute of Health, USA, 109 patients were divided into three groups: Non-severe with 75, severe with 18 and critical with 16 patients. Laboratory data of these patients were assessed through the electronic medical records (SALAMA). Statistical analysis was done using Statistical Packages for Social Sciences (SPSS) version 25.0 (SPSS/PC; SPSS-25.0, Chicago, USA). Laboratory test profiles were expressed as mean (SD). Independent 't' test and ANOVA were used to study the significance of means. P value less than 0.05 was considered significant. Result: Males were more severely affected than females. Severe and critically ill Covid-19 patients had a significantly higher TLC, serum LDH, ferritin and CRP and lower absolute lymphocyte count. PCT and D-dimer were significantly elevated in critical group. Conclusion: Along with clinical presentation and radiological findings, biochemical parameter may also be considered as important predictors for assessing severity in covid-19 patients.

Publication Type

Journal article.

<49>

Accession Number

20210282694

Author

Niti Mittal; Rakesh Mittal; Gupta, M. C.; Jyoti Kaushal; Ankita Chugh; Daisy Khera; Surjit Singh

Title

Systematic review and meta-analysis of efficacy and safety of hydroxychloroquine and chloroquine in the treatment of COVID-19.

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2126-2139. 43 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Repurposed drugs like hydroxychloroquine (HCQ) and chloroquine (CQ) are being tested for potential therapeutic role in COVID-19. We aimed to evaluate efficacy and safety of HCQ and CQ in COVID-19. Using PubMed, EMBASE, medRxiv, Google Scholar, clinicaltrials.gov, electronic search was carried out to identify relevant articles till June 2020 with re-evaluation in last week of November 2020. Observational and interventional clinical studies comparing efficacy of CQ or HCQ to standard management or other drug/s for SARS-CoV-2 infection patients were included. Cochrane review manager version 5.3 was used for synthesis of meta-analysis results. For randomized controlled trials, risk of bias was assessed using cochrane collaboration risk of bias assessment tool, version 2.0 (ROB-2). ROBINS-I was used for quality assessment of observational studies. Overall evidence quality generated by review was graded as per GRADE Recommendation. A total of 903 studies were screened. Nineteen studies were included in synthesis of meta-analysis with total of 4,693, 1,626, and 6,491 patients in HCQ/CQ, HCQ/CQ + AZ and control groups, respectively. HCQ/CQ treatment was associated with significantly increased rates of virological cure (OR = 2.08, 95%ci = 1.36-3.17; P = 0.0007) and radiological cure (OR = 3.89, 95%ci = 1.35 - 11.23; P = 0.01) compared to control. HCQ/CQ had no difference in unadjusted mortality rate (unadjusted OR = 0.98 95% ci = 0.70-1.37, P = 0.89, random effect model) and adjusted hazard ratio for mortality (adjusted HR = 1.05, 95%ci = 0.86--1.29; P = 0.64). However, a significant increase in odds of disease progression (OR = 1.77, 95%ci = 1.46-2.13; P < 0.00001) and QT prolongation (OR = 11.15, 95%ci = 3.95-31.44; P < 0.00001) was noted. The results with HCQ/CQ and azithromycin combination were similar to HCQ/CQ mono-therapy. In the light of contemporary evidence on effectiveness of HCQ/CQ, judicious and monitored use of HCQ/CQ for treatment of COVID-19 patients is recommended in low to middle income countries with emphasis on no mortality benefit.

Publication Type

Journal article.

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<50>

Accession Number

20210282693

Author

Ravi Kant; Poonam Yadav; Surekha Kishore; Mukesh Bairwa; Mahendra Singh

Title

Is it time to consider shreds of epidemiological and environmental evidence associated with high transmission of COVID-19?

Source

Journal of Family Medicine and Primary Care; 2021. 10(6):2120-2125. 44 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Novel coronavirus named COVID-19 that emerged in late December from Wuhan affected almost the entire globe. Recent studies provided new insight into the high transmission of the disease. This review explores the current evidence of epidemiological and environmental factors associated with high transmission of COVID-19. Even transmission and symptoms found among cats, dogs, ferrets, and tiger suggested low species barrier of the virus. The airborne transmission was found even up to 4 m, and fecal transmission with virus particles and RNA in sewage and wastewater suggests rethinking containment strategies. However, temperature, humidity, and pollution were also associated with transmission and mortality trends of COVID-19. To better mitigate and contain the current pandemic, it is a need of hours to consider the recent shreds of evidence to prevent further spread and require detailed investigations of these evidences by extensive epidemiological and meteorological studies.

Publication Type

Journal article.

<51>

Accession Number

20210282631

Author

Souza Santos, A. A. de; Silva Candido, D. da; Souza, W. M. de; Buss, L.; Li, S. L.; Pereira, R. H. M.; Wu ChiehHsi; Sabino, E. C.; Faria, N. R.

Title

Dataset on SARS-CoV-2 non-pharmaceutical interventions in Brazilian municipalities.

Source

Scientific Data; 2021. 8(73). 15 ref.

Publisher

Springer Nature Publishing AG

Location of Publisher

Cham

Country of Publication

Switzerland

Abstract

Brazil has one of the fastest-growing COVID-19 epidemics worldwide. Non-pharmaceutical interventions (NPIs) have been adopted at the municipal level with asynchronous actions taken across 5,568 municipalities and the Federal District. This paper systematises the fragmented information on NPIs reporting on a novel dataset with survey responses from 4,027 mayors, covering 72.3% of all municipalities in the country. This dataset responds to the urgency to track and share findings on fragmented policies during the COVID-19 pandemic. Quantifying NPIs can help to assess the role of interventions in reducing transmission. We offer spatial and temporal details for a range of measures aimed at implementing social distancing and the dates when these measures were relaxed by local governments.

Publication Type

Journal article.

<52>

Accession Number

20210282549

Author

Liu, B.; Spokes, P.; He WenQiang; Kaldor, J.

Title

High risk groups for severe COVID-19 in a whole of population cohort in Australia.

Source

BMC Infectious Diseases; 2021. 21(685):(16 July 2021). 17 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Increasing age is the strongest known risk factor for severe COVID-19 disease but information on other factors is more limited. **Methods:** All cases of COVID-19 diagnosed from January-October 2020 in New South Wales Australia were followed for COVID-19-related hospitalisations, intensive care unit (ICU) admissions and deaths through record linkage. Adjusted hazard ratios (aHR) for severe COVID-19 disease, measured by hospitalisation or death, or very severe COVID-19, measured by ICU admission or death according to age, sex, socioeconomic status and co-morbidities were estimated. **Results:** Of 4054 confirmed cases, 468 (11.5%) were classified as having severe COVID-19 and 190 (4.7%) as having very severe disease. After adjusting for sex, socioeconomic status and comorbidities, increasing age led to the greatest risk of very severe disease. Compared to those 30-39 years, the aHR for ICU or death from COVID-19 was 4.45 in those 70-79 years; 8.43 in those 80-89 years; 16.19 in those 90+ years. After age, relative risks for very severe disease associated with other factors were more moderate: males vs females aHR 1.40 (95%CI 1.04-1.88); immunosuppressive conditions vs none aHR 2.20 (1.35-3.57); diabetes vs none aHR 1.88 (1.33-2.67); chronic lung disease vs none aHR 1.68 (1.18-2.38); obesity vs not obese aHR 1.52 (1.05-2.21). More comorbidities was associated with significantly greater risk; comparing those with 3+ comorbidities to those with none, aHR 5.34 (3.15-9.04). **Conclusions:** In a setting with high COVID-19 case ascertainment and almost complete case follow-up, we found the risk of very severe disease varies by age, sex and presence of comorbidities. This variation should be considered in targeting prevention strategies.

Publication Type

Journal article.

<53>

Accession Number

20210282463

Author

Ben Ali, M.; Amor Hedfi; Mohammed Almalki; Karachle, P. K.; Boufahja, F.

Title

Toxicity of hydroxychloroquine, a potential treatment for COVID-19, on free-living marine nematodes.

Source

Marine Pollution Bulletin; 2021. 167.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

On March 2020, hydroxychloroquine (HCQ) was recommended as a treatment for COVID-19 high risk patients. Following the massive and widespread use of HCQ worldwide, a discernible high quantity is anticipated to end-up through the sewage systems in marine coastal areas. A closed microcosm study was undertaken herein for 30 days where meiobenthic nematodes were exposed to a range of HCQ concentrations (3.162, 31.62 and 63.24 g.ml⁻¹). After one month of exposure in HCQ, the total abundances and Shannon-Wiener index of the assemblages decreased, whereas the individual mass and the Trophic Diversity Index increased at the highest concentrations. Overall, a numerical negative impact was observed for the epistrate feeders and non-selective deposit feeders, however, this benefited to the omnivores-carnivores, and particularly to the Oncholaimids. Such responses of the nematodes 2B and the corresponding taxa are bioindicative of current- or post-COVID-19 crisis risks in relation with the bioaccumulation of HCQ in seafood.

Publication Type

Journal article.

<54>

Accession Number

20210282058

Author

Bezabih, Y. M.; Bezabih, A.; Alamneh, E.; Peterson, G. M.; Bezabhe, W.

Title

Comparison of renin-angiotensin-aldosterone system inhibitors with other antihypertensives in association with Coronavirus disease-19 clinical outcomes.

Source

BMC Infectious Diseases; 2021. 21(527):(5 June 2021). 59 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Reports on the effects of renin-angiotensin-aldosterone system (RAAS) inhibitors on the clinical outcomes of coronavirus disease-19 (COVID-19) have been conflicting. We performed this meta-analysis to find conclusive evidence. Methods: We searched published articles through PubMed, EMBASE and medRxiv from 5 January 2020 to 3 August 2020. Studies that reported clinical outcomes of patients with COVID-19, stratified by the class of antihypertensives, were included. Random and fixed-effects models

were used to estimate pooled odds ratio (OR). Results: A total 36 studies involving 30,795 patients with COVID-19 were included. The overall risk of poor patient outcomes (severe COVID-19 or death) was lower in patients taking RAAS inhibitors (OR = 0.79, 95% CI: [0.67, 0.95]) compared with those receiving non-RAAS inhibitor antihypertensives. However, further sub-meta-analysis showed that specific RAAS inhibitors did not show a reduction of poor COVID-19 outcomes when compared with any class of antihypertensive except beta-blockers (BBs). For example, compared to calcium channel blockers (CCBs), neither angiotensin-I-converting enzyme inhibitors (ACEIs) (OR = 0.91, 95% CI: [0.67, 1.23]) nor angiotensin-II receptor blockers (ARBs) (OR = 0.90, 95% CI: [0.62, 1.33]) showed a reduction of poor COVID-19 outcomes. When compared with BBs, however, both ACEIs (OR = 0.85, 95% CI: [0.73, 0.99]) and ARBs (OR = 0.72, 95% CI: [0.55, 0.94]) showed an apparent decrease in poor COVID-19 outcomes. Conclusions: RAAS inhibitors did not increase the risk of mortality or severity of COVID-19. Differences in COVID-19 clinical outcomes between different class of antihypertensive drugs were likely due to the underlying comorbidities for which the antihypertensive drugs were prescribed, although adverse effects of drugs such as BBs could not be excluded.

Publication Type

Journal article.

<55>

Accession Number

20210282057

Author

Sun Wen; Liao JiPing; Yu KunYao; Qiu JianXing; Que ChenLi; Wang GuangFa; Ma Jing

Title

A severe case of human coronavirus 229E pneumonia in an elderly man with diabetes mellitus: a case report.

Source

BMC Infectious Diseases; 2021. 21(524):(4 June 2021). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: With pandemic of coronavirus disease 2019 (COVID-19), human coronaviruses (HCoVs) have recently attracted worldwide attention as essential pathogens in respiratory infection. HCoV-229E has been described as a rare cause of lower respiratory infection in immunocompetent adults. Case presentation: We reported a 72-year-old man infected by HCoV-229E with rapid progression to acute respiratory distress syndrome, in conjunction with new onset atrial fibrillation, intensive care unit acquired weakness, and recurrent hospital acquired pneumonia. Clinical and radiological data were continuously collected. The absolute number of peripheral T cells and the level of complement components diminished initially and recovered after 2 months. The patient was successfully treated under intensive support care and discharged

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from the hospital after 3 months and followed. Conclusion: HCoV-229E might an essential causative agent of pulmonary inflammation and extensive lung damage. Supportive treatment was essential to HCoVs infection on account of a long duration of immunological recovery in critical HCoV-229E infection.

Publication Type

Journal article.

<56>

Accession Number

20210282035

Author

Guerrero, J. I.; Barragan, L. A.; Martinez, J. D.; Montoya, J. P.; Pena, A.; Sobrino, F. E.; Tovar-Spinoza, Z.; Ghotme, K. A.

Title

Central and peripheral nervous system involvement by COVID-19: a systematic review of the pathophysiology, clinical manifestations, neuropathology, neuroimaging, electrophysiology, and cerebrospinal fluid findings.

Source

BMC Infectious Diseases; 2021. 21(515):(2 June 2021). many ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: SARS-CoV-2 can affect the human brain and other neurological structures. An increasing number of publications report neurological manifestations in patients with COVID-19. However, no studies have comprehensively reviewed the clinical and paraclinical characteristics of the central and peripheral nervous system's involvement in these patients. This study aimed to describe the features of the central and peripheral nervous system involvement by COVID-19 in terms of pathophysiology, clinical manifestations, neuropathology, neuroimaging, electrophysiology, and cerebrospinal fluid findings. Methods: We conducted a comprehensive systematic review of all the original studies reporting patients with neurological involvement by COVID-19, from December 2019 to June 2020, without language restriction. We excluded studies with animal subjects, studies not related to the nervous system, and opinion articles. Data analysis combined descriptive measures, frequency measures, central tendency measures, and dispersion measures for all studies reporting neurological conditions and abnormal ancillary tests in patients with confirmed COVID-19. Results: A total of 143 observational and descriptive studies reported central and peripheral nervous system involvement by COVID-19 in 10,723 patients. Fifty-one studies described pathophysiologic mechanisms of neurological involvement by COVID-19, 119 focused on clinical manifestations, 4 described neuropathology findings, 62 described neuroimaging findings, 28 electrophysiology findings, and 60 studies reported cerebrospinal fluid results. The reviewed studies reflect a significant prevalence of the nervous system's involvement in patients with COVID-19, ranging from 22.5 to 36.4% among different studies, without mortality

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rates explicitly associated with neurological involvement by SARS-CoV-2. We thoroughly describe the clinical and paraclinical characteristics of neurological involvement in these patients. Conclusions: Our evidence synthesis led to a categorical analysis of the central and peripheral neurological involvement by COVID-19 and provided a comprehensive explanation of the reported pathophysiological mechanisms by which SARS-CoV-2 infection may cause neurological impairment. International collaborative efforts and exhaustive neurological registries will enhance the translational knowledge of COVID-19's central and peripheral neurological involvement and generate therapeutic decision-making strategies.

Publication Type

Journal article.

<57>

Accession Number

20210281733

Author

Masson, C. L.; McCuistian, C.; Straus, E.; Elahi, S.; Chen, M.; Gruber, V. A.; Thao Le; Guydish, J.

Title

COVID-19 vaccine trust among clients in a sample of California residential substance use treatment programs.

Source

Drug and Alcohol Dependence; 2021. 225. many ref.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Background: Individuals with a substance use disorder (SUD) are at a significantly higher risk for coronavirus disease-19 (COVID-19) and have higher rates of COVID-19 related hospitalization and death than those without SUD. This study assessed COVID-19 vaccine trust, transmission awareness, risk and protective behaviors, and effects of COVID-19 on mental health and smoking among a sample of clients in California residential SUD treatment programs and identified factors associated with vaccine trust. Methods: A multi-site sample of SUD treatment clients (n = 265) completed a cross-sectional survey. Multivariable logistic regression was used to identify factors associated with COVID-19 vaccine trust. Results: Participants were predominantly male (82.3%) and racially/ethnically diverse (33.3% Non-Hispanic White). Most participants were aware of COVID-19 modes of transmission, however, only 39.5% trusted a COVID-19 vaccine would be safe and effective. Factors independently associated with trust in a COVID-19 vaccine included age (AOR = 1.03, 95% CI = 1.02, 1.05, p = 0.0001) and wearing a mask all the time (AOR = 2.48, 95% CI = 1.86, 3.31, p = 0.0001). African Americans were less likely than White participants to trust that a COVID-19 vaccine is safe and effective (AOR = 0.41, 95% CI = 0.23, 0.70, p = 0.001). Conclusion: SUD treatment clients were aware of COVID-19 modes of transmission; however, fewer than half trusted that a

COVID-19 vaccine would be safe and effective. Health communication about COVID-19 for people with SUD should use a multipronged approach to address COVID-19 vaccine mistrust and transmission risk behaviors.

Publication Type

Journal article.

<58>

Accession Number

20210281684

Author

Nascimento, I. J. B. do; O'Mathuna, D. P.; Groote, T. C. von; Abdulazeem, H. M.; Weerasekara, I.; Marusic, A.; Puljak, L.; Civile, V. T.; Zakarija-Grkovic, I.; Pericic, T. P.; Atallah, A. N.; Filoso, S.; Bragazzi, N. L.; Marcolino, M. S.

Title

Coronavirus disease (COVID-19) pandemic: an overview of systematic reviews.

Source

BMC Infectious Diseases; 2021. 21(525):(4 June 2021). 58 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Navigating the rapidly growing body of scientific literature on the SARS-CoV-2 pandemic is challenging, and ongoing critical appraisal of this output is essential. We aimed to summarize and critically appraise systematic reviews of coronavirus disease (COVID-19) in humans that were available at the beginning of the pandemic. Methods: Nine databases (Medline, EMBASE, Cochrane Library, CINAHL, Web of Sciences, PDQ-Evidence, WHO's Global Research, LILACS, and Epistemonikos) were searched from December 1, 2019, to March 24, 2020. Systematic reviews analyzing primary studies of COVID-19 were included. Two authors independently undertook screening, selection, extraction (data on clinical symptoms, prevalence, pharmacological and non-pharmacological interventions, diagnostic test assessment, laboratory, and radiological findings), and quality assessment (AMSTAR 2). A meta-analysis was performed of the prevalence of clinical outcomes. Results: Eighteen systematic reviews were included; one was empty (did not identify any relevant study). Using AMSTAR 2, confidence in the results of all 18 reviews was rated as "critically low". Identified symptoms of COVID-19 were (range values of point estimates): fever (82-95%), cough with or without sputum (58-72%), dyspnea (26-59%), myalgia or muscle fatigue (29-51%), sore throat (10-13%), headache (8-12%) and gastrointestinal complaints (5-9%). Severe symptoms were more common in men. Elevated C-reactive protein and lactate dehydrogenase, and slightly elevated aspartate and alanine aminotransferase, were commonly described. Thrombocytopenia and elevated levels of procalcitonin and cardiac troponin I were associated with severe disease. A frequent finding on chest imaging was uni- or bilateral multilobar ground-glass opacity. A single review investigated the impact of medication (chloroquine) but found no verifiable clinical data. All-cause mortality ranged from 0.3 to 13.9%. Conclusions: In this

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overview of systematic reviews, we analyzed evidence from the first 18 systematic reviews that were published after the emergence of COVID-19. However, confidence in the results of all reviews was "critically low". Thus, systematic reviews that were published early on in the pandemic were of questionable usefulness. Even during public health emergencies, studies and systematic reviews should adhere to established methodological standards.

Publication Type

Journal article.

<59>

Accession Number

20210281673

Author

Coletti, P.; Libin, P.; Petrof, O.; Willem, L.; Abrams, S.; Herzog, S. A.; Faes, C.; Kuylen, E.; Wambua, J.; Beutels, P.; Hens, N.

Title

A data-driven metapopulation model for the Belgian COVID-19 epidemic: assessing the impact of lockdown and exit strategies.

Source

BMC Infectious Diseases; 2021. 21(503):(30 May 2021). 63 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In response to the ongoing COVID-19 pandemic, several countries adopted measures of social distancing to a different degree. For many countries, after successfully curbing the initial wave, lockdown measures were gradually lifted. In Belgium, such relief started on May 4th with phase 1, followed by several subsequent phases over the next few weeks. **Methods:** We analysed the expected impact of relaxing stringent lockdown measures taken according to the phased Belgian exit strategy. We developed a stochastic, data-informed, meta-population model that accounts for mixing and mobility of the age-structured population of Belgium. The model is calibrated to daily hospitalization data and is able to reproduce the outbreak at the national level. We consider different scenarios for relieving the lockdown, quantified in terms of relative reductions in pre-pandemic social mixing and mobility. We validate our assumptions by making comparisons with social contact data collected during and after the lockdown. **Results:** Our model is able to successfully describe the initial wave of COVID-19 in Belgium and identifies interactions during leisure/other activities as pivotal in the exit strategy. Indeed, we find a smaller impact of school re-openings as compared to restarting leisure activities and re-openings of work places. We also assess the impact of case isolation of new (suspected) infections, and find that it allows re-establishing relatively more social interactions while still ensuring epidemic control. Scenarios predicting a second wave of hospitalizations were not observed, suggesting that the per-contact probability of infection has changed with respect to the pre-lockdown period.

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Conclusions: Contacts during leisure activities are found to be most influential, followed by professional contacts and school contacts, respectively, for an impending second wave of COVID-19. Regular re-assessment of social contacts in the population is therefore crucial to adjust to evolving behavioral changes that can affect epidemic diffusion.

Publication Type

Journal article.

<60>

Accession Number

20210281661

Author

Glans, H.; Gredmark-Russ, S.; Olausson, M.; Falck-Jones, S.; Varnaite, R.; Christ, W.; Maleki, K. T.; Karlberg, M. L.; Brodsson, S.; Falck-Jones, R.; Bell, M.; Johansson, N.; Farnert, A.; Smed-Sorensen, A.; Klingstrom, J.; Brave, A.

Title

Shedding of infectious SARS-CoV-2 by hospitalized COVID-19 patients in relation to serum antibody responses.

Source

BMC Infectious Diseases; 2021. 21(494):(27 May 2021). 37 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a global pandemic. The understanding of the transmission and the duration of viral shedding in SARS-CoV-2 infection is still limited. Objectives: To assess the timeframe and potential risk of SARS-CoV-2 transmission from hospitalized COVID-19 patients in relation to antibody response. Method: We performed a cross-sectional study of 36 COVID-19 patients hospitalized at Karolinska University Hospital. Patients with more than 8 days of symptom duration were sampled from airways, for PCR analysis of SARSCoV-2 RNA and in vitro culture of replicating virus. Serum SARS-CoV-2-specific immunoglobulin G (IgG) and neutralizing antibodies titers were assessed by immunofluorescence assay (IFA) and microneutralization assay. Results: SARS-CoV-2 RNA was detected in airway samples in 23 patients (symptom duration median 15 days, range 9-53 days), whereas 13 patients were SARS-CoV-2 RNA negative (symptom duration median 21 days, range 10-37 days). Replicating virus was detected in samples from 4 patients at 9-16 days. All but two patients had detectable levels of SARS-CoV-2-specific IgG in serum, and SARS-CoV-2 neutralizing antibodies were detected in 33 out of 36 patients. Total SARS-CoV-2-specific IgG titers and neutralizing antibody titers were positively correlated. High levels of both total IgG and neutralizing antibody titers were observed in patients sampled later after symptom onset and in patients where replicating virus could not be detected. Conclusions: Our data suggest that the presence of SARS-

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Cov-2 specific antibodies in serum may indicate a lower risk of shedding infectious SARS-CoV-2 by hospitalized COVID-19 patients.

Publication Type

Journal article.

<61>

Accession Number

20210281638

Author

Abdulrahman, A.; Mallah, S. I.; Alqahtani, M.

Title

COVID-19 viral load not associated with disease severity: findings from a retrospective cohort study.

Source

BMC Infectious Diseases; 2021. 21(688):(16 July 2021). 9 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Being able to use COVID-19 RT-PCR Ct values as simple clinical markers of disease outcome or prognosis would allow for the easy and proactive identification and triaging of high-risk cases. This study's objective was thus to explore whether a correlation exists between COVID-19 viral loads, as indicated by RT-PCR Ct values, and disease severity, as indicated by respiratory indices. Results: A multi-centre cross-sectional retrospective study was conducted, using data obtained from Bahrain's National COVID-19 Task force's centralised database. The study period ranged from May 2, 2020 to July 31, 2020. A multivariable logistic regression was used to assess for a correlation using data from a total of 1057 admitted COVID-19 cases. The covariates adjusted for included sex, age, presentation, and comorbidities. In our cohort, Ct value showed no statistical significance for an association with requirement for oxygenation on admission (Odds ratio 1.046; 95%CI 0.999 to 1.096, $p = 0.054$). Conclusion: Viral load, as indicated by Ct values, did not seem to be associated with requirement for oxygenation on admission in our cohort. We postulate however that time since onset of symptom may have acted as an unaccounted-for confounder. As such, RT-PCR Ct values may not be a useful prognostic clinical tool in isolation.

Publication Type

Journal article.

<62>

Accession Number

20210281596

Author

Ryu, S.; Ali, S. T.; Noh, E.; Kim, D.; Lau, E. H. Y.; Cowling, B. J.

Title

Transmission dynamics and control of two epidemic waves of SARS-CoV-2 in South Korea.

Source

BMC Infectious Diseases; 2021. 21(485):(26 May 2021). 46 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: After relaxing social distancing measures, South Korea experienced a resurgent second epidemic wave of coronavirus disease 2019 (COVID-19). In this study, we aimed to identify the transmission dynamics of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections and assess the impact of COVID-19 case finding and contact tracing in each epidemic wave. Methods: We collected data on COVID-19 cases published by local public health authorities in South Korea and divided the study into two epidemic periods (19 January-19 April 2020 for the first epidemic wave and 20 April-11 August 2020 for the second epidemic wave). To identify changes in the transmissibility of SARS-CoV-2, the daily effective reproductive number (R_t) was estimated using the illness onset of the cases. Furthermore, to identify the characteristics of each epidemic wave, frequencies of cluster types were measured, and age-specific transmission probability matrices and serial intervals were estimated. The proportion of asymptomatic cases and cases with unknown sources of infection were also estimated to assess the changes of infections identified as cases in each wave. Results: In early May 2020, within 2-weeks of a relaxation in strict social distancing measures, R_t increased rapidly from 0.2 to 1.8 within a week and was around 1 until early July 2020. In both epidemic waves, the most frequent cluster types were religious-related activities and transmissions among the same age were more common. Furthermore, children were rarely infectors or infectees, and the mean serial intervals were similar (~ 3 days) in both waves. The proportion of asymptomatic cases at presentation increased from 22% (in the first wave) to 27% (in the second wave), while the cases with unknown sources of infection were similar in both waves (22 and 25%, respectively). Conclusions: Our study shows that relaxing social distancing measures was associated with increased SARS-CoV-2 transmission despite rigorous case findings in South Korea. Along with social distancing measures, the enhanced contact tracing including asymptomatic cases could be an efficient approach to control further epidemic waves.

Publication Type

Journal article.

<63>

Accession Number

20210281589

Author

Lu QingBin; Zhang HaiYang; Che TianLe; Zhao Han; Chen Xi; Li Rui; Jiang WanLi; Zeng HaoLong; Zhang XiaoAi; Long Hui; Wang Qiang; Wu MingQing; Ward, M. P.; Chen Yue; Zhang ZhiJie; Yang Yang; Fang LiQun; Liu Wei

Title

The differential demographic pattern of coronavirus disease 2019 fatality outside Hubei and from six hospitals in Hubei, China: a descriptive analysis.

Source

BMC Infectious Diseases; 2021. 21(481):(26 May 2021). 31 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) epidemic has been largely controlled in China, to the point where case fatality rate (CFR) data can be comprehensively evaluated. Methods: Data on confirmed patients, with a final outcome reported as of 29 March 2020, were obtained from official websites and other internet sources. The hospitalized CFR (HCFR) was estimated, epidemiological features described, and risk factors for a fatal outcome identified. Results: The overall HCFR in China was estimated to be 4.6% (95% CI 4.5-4.8%, $P < 0.001$). It increased with age and was higher in males than females. Although the highest HCFR observed was in male patients 70 years old, the relative risks for death outcome by sex varied across age groups, and the greatest HCFR risk ratio for males vs. females was shown in the age group of 50-60 years, higher than age groups of 60-70 and 70 years. Differential age/sex HCFR patterns across geographical regions were found: the age effect on HCFR was greater in other provinces outside Hubei than in Wuhan. An effect of longer interval from symptom onset to admission was only observed outside Hubei, not in Wuhan. By performing multivariate analysis and survival analysis, the higher HCFR was associated with older age (both $P < 0.001$), and male sex (both $P < 0.001$). Only in regions outside Hubei, longer interval from symptom onset to admission, were associated with higher HCFR. Conclusions: This up-to-date and comprehensive picture of COVID-19 HCFR and its drivers will help healthcare givers target limited medical resources to patients with high risk of fatality.

Publication Type

Journal article.

<64>

Accession Number

20210281586

Author

Iruretagoyena Mirentxu; Vial, M. R.; Spencer-Sandino Maria; Gaete, P.; Peters AnNe; Delgado, I.; Perez, I.; Calderon, C.; Porte Lorena; Legarraga Paulette; Anderson Alicia; Aguilera, X.; Vial, P.; Weitzel Thomas; Munita, J. M.

Title

Longitudinal assessment of SARS-CoV-2 IgG seroconversion among front-line healthcare workers during the first wave of the COVID-19 pandemic at a tertiary-care hospital in Chile.

Source

BMC Infectious Diseases; 2021. 21(478):(26 May 2021). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Healthcare workers (HCWs) are at high risk of exposure to SARS-CoV-2. Cross-sectional studies have provided variable rates of seroprevalence in HCWs. Longitudinal assessments of the serological response to Covid-19 among HCWs are crucial to understanding the risk of infection and changes in antibody titers over time. We aimed to investigate seroprevalence and risk factors associated with seroconversion in a prospective cohort of HCWs during the peak of the first wave of the Covid-19 pandemic. Methods: We conducted a longitudinal study among 446 front-line HCWs in a tertiary-care hospital in Chile from April to July 2020. IgG was determined monthly using two different ELISAs in serum samples of HCWs, during the three-month period. In each visit, demographic data, symptoms, risk factors, and exposure risks were also assessed. Results The overall seroprevalence at the end of the study period was 24% (95% CI 20.2-28.3), with 43% of seropositive HCWs reporting no prior symptoms. Seroconversion rates significantly differed over the study period, from 2.1% to as high as 8.8% at the peak of the epidemic. There were no statistically significant differences observed between HCWs in direct clinical care of patients with Covid-19 and those working in low risk areas. Antibody titers appeared to wane over time. Conclusions: HCWs were severely affected with a high rate of seroconversion that appeared to mirror the local epidemiological situation. A significant amount of participants underwent an asymptomatic infection, highlighting the need for improved surveillance policies. Antibody titers appear to wane over time; further studies to understand this finding's impact on the risk of reinfection are warranted.

Publication Type

Journal article.

<65>

Accession Number

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www.rcvsknowledge.org

20210281580

Author

Sohrabi, M. R.; Amin, R.; Maher, A.; Bahadorimonfared, A.; Janbazi, S.; Hannani, K.; Kolahi, A. A.; Zali, A. R.

Title

Sociodemographic determinants and clinical risk factors associated with COVID-19 severity: a cross-sectional analysis of over 200,000 patients in Tehran, Iran.

Source

BMC Infectious Diseases; 2021. 21(474):(25 May 2021). 33 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Defining socio-demographic factors, clinical presentations and underlying diseases associated with COVID-19 severity could be helpful in its management. This study aimed to further clarify the determinants and clinical risk factors of the disease severity in patients infected with COVID-19. Methods: A multi-centre descriptive study on all patients who have been diagnosed with COVID-19 in the province of Tehran from March 2020 up to Dec 2020 was conducted. Data on socio-demographic characteristics, clinical presentations, comorbidities, and the health outcomes of 205,654 patients were examined. Characteristics of the study population were described. To assess the association of study variables with the disease severity, the Chi-Squared test and Multiple Logistic Regression model were applied. Results: The mean age of the study population was 52.8 years and 93,612 (45.5%) were women. About half of the patients have presented with low levels of blood oxygen saturation. The ICU admission rate was 17.8% and the overall mortality rate was 10.0%. Older age, male sex, comorbidities including hypertension, cancer, chronic respiratory diseases other than asthma, chronic liver diseases, chronic kidney diseases, chronic neurological disorders, and HIV/AIDS infection were risk markers of poor health outcome. Clinical presentations related with worse prognosis included fever, difficulty breathing, impaired consciousness, and cutaneous manifestations. Conclusion: These results might alert physicians to pay attention to determinants and risk factors associated with poor prognosis in patients with COVID-19. In addition, our findings aid decision makers to emphasise on vulnerable groups in the public health strategies that aim at preventing the spread of the disease and its mortalities.

Publication Type

Journal article.

<66>

Accession Number

20210281569

Author

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T: +44 (0) 20 7202 0752
E: library@rcvsknowledge.org
www.rcvsknowledge.org

Amir, M.; Renata, A.; Ratana, L. T.

Title

Symptomatic sinus bradycardia due to electrolyte imbalances in syndrome of inappropriate antidiuretic hormone (SIADH) related COVID-19: a case report.

Source

BMC Infectious Diseases; 2021. 21(465):(21 May 2021). 17 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus Disease-2019 (COVID-19) has been declared a global pandemic since March 11th, 2020. Despite emerging reports and literature covering a broad spectrum of COVID-19 clinical manifestations, facets of COVID-19 have not been fully elucidated. To the authors' concern, sinus bradycardia as a manifestation of COVID-19-induced syndrome of inappropriate antidiuretic hormone (SIADH) has never been reported before. Case presentation: In this paper, we report a case of a 59-year-old male patient with confirmed COVID-19 initially presented with presyncope. Further investigations reveal sinus bradycardia related to COVID-19-induced SIADH. This case highlights the possibility of immuno-neuroendocrino-cardiovascular crosstalk resulting in an atypical manifestation of COVID-19: near syncope due to sinus bradycardia. Conclusions: Another possible cause of sinus bradycardia in COVID-19 is electrolyte imbalance due to COVID-19-related SIADH.

Publication Type

Journal article.

<67>

Accession Number

20210281562

Author

Alinia, C.; Yaghmaei, S.; Abdullah, F. Z.; Ahmadi, A.; Samadi, N.; Pourteimour, S.; Safari, H.; Mahmoodi, H.; Moradi, G.; Piroozi, B.

Title

The health-related quality of life in Iranian patients with COVID-19.

Source

BMC Infectious Diseases; 2021. 21(459):(20 May 2021). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 is a public health emergency with a high mortality rate and it reduces the patient's Health-Related Quality of Life (HRQoL) significantly. This effect is measured in the current study. Methods: In a cross-sectional study in Iran, 320 randomly selected treated patients from COVID-19 were studied. To collect the required data, we applied a questionnaire that included socio-demographic factors, clinical characteristics, and questions on the patients' HRQoL. Time trade-off (TTO) approach was used to measure the lost HRQoL attributed to COVID-19. Besides, we applied a two-limit Tobit regression model to determine the effects of the socio-demographic factors on patients' health utility and the visual analogue scale approach was used to estimate the perceived total current health status. Results: The overall mean (SE) and median (IQR) of the health utility values were 0.863 (0.01) and 0.909 (0.21) respectively. These values for the traders (those who were willing to lose a part of their remaining time of life to avoid the disease) were estimated at 0.793 (0.01) and 0.848 (0.17), respectively. The lowest amount of utility value belonged to the elderly (mean (SE) = 0.742 (0.04); median (IQR) = 0.765 (0.42)) and those living in rural areas (mean (SE) = 0.804 (0.03); median (IQR) = 0.877 (0.30)). The univariate analysis showed that age, place of residence, and household size had a statistically significant effect on health utility. Moreover, findings of the regression analysis indicated that the participants' age and hospitalization status were the key determinants of COVID-19 health utility value. Conclusion: COVID-19 is associated with a substantial and measurable decrease in HRQoL. This decline in HRQoL can be directly compared with that induced by systemic health states.

Publication Type

Journal article.

<68>

Accession Number

20210281561

Author

Gaipov, A.; Gusmanov, A.; Abbay, A.; Sakko, Y.; Issanov, A.; Kadyrzhanuly, K.; Yermakhanova, Z.; Aliyeva, L.; Kashkynbayev, A.; Moldaliyev, I.; Crape, B.; Sarria-Santamera, A.

Title

SARS-CoV-2 PCR-positive and PCR-negative cases of pneumonia admitted to the hospital during the peak of COVID-19 pandemic: analysis of in-hospital and post-hospital mortality.

Source

BMC Infectious Diseases; 2021. 21(458):(20 May 2021). 39 ref.

Publisher

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Location of Publisher

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

London

Country of Publication

UK

Abstract

Background: During the spike of COVID-19 pandemic in Kazakhstan (June-2020), multiple SARS-CoV-2 PCR-test negative pneumonia cases with higher mortality were reported by media. We aimed to study the epidemiologic characteristics of hospitalized PCR-test positive and negative patients with analysis of in-hospital and post-hospital mortality. We also compare the respiratory disease characteristics between 2019 and 2020. **Methods:** The study population consist of 17,691 (March-July-2020) and 4600 (March-July-2019) hospitalized patients with respiratory diseases (including COVID-19). The incidence rate, case-fatality rate and survival analysis for overall mortality (in-hospital and post-hospital) were assessed. **Results:** The incidence and mortality rates for respiratory diseases were 4-fold and 11-fold higher in 2020 compared to 2019 (877.5 vs 228.2 and 11.2 vs 1.2 per 100,000 respectively). The PCR-positive cases (compared to PCR-negative) had 2-fold higher risk of overall mortality. We observed 24% higher risk of death in males compared to females and in older patients compared to younger ones. Patients residing in rural areas had 66% higher risk of death compared to city residents and being treated in a provisional hospital was associated with 1.9-fold increased mortality compared to those who were treated in infectious disease hospitals. **Conclusion:** This is the first study from the Central Asia and Eurasia regions, evaluating the mortality of SARS-CoV-2 PCR-positive and PCR-negative respiratory system diseases during the peak of COVID-19 pandemic. We describe a higher mortality rate for PCR-test positive cases compared to PCR-test negative cases, for males compared to females, for elder patients compared to younger ones and for patients living in rural areas compared to city residents.

Publication Type

Journal article.

<69>

Accession Number

20210281556

Author

Safer, M.; Letaief, H.; Hechaichi, A.; Harizi, C.; Dhaouadi, S.; Bouabid, L.; Darouiche, S.; Gharbi, D.; Elmili, N.; Ben Salah, H.; Hammami, M.; Talmoudi, K.; Moussa, R.; Charaa, N.; Termiz, H.; Ltaief, F.; Tounekti, H.; Makhlof, M.; Sriha, A. B.; Ben Fredj, M.; Khalfallah, S.; Jabrane, H.; Mchirgui, S.; Amich, C.; Dabghi, R.; Anez, Z.; Abdelkader, L.; Mhamdi, M.; Ouerfeli, N.; Zoghلامي, S.; Bougatef, S.; Chahed, M. K.; Ben Alaya, N. B.

Title

Identification of transmission chains and clusters associated with COVID-19 in Tunisia.

Source

BMC Infectious Diseases; 2021. 21(453):(19 May 2021). 22 ref.

Publisher

BioMed Central Ltd

Location of Publisher

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

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Country of Publication

UK

Abstract

Background: The aim of this study was to characterize the transmission chains and clusters of COVID-19 infection in Tunisia. **Methods:** All cases were confirmed by Reverse Transcriptase Polymerase Chain Reaction of a nasopharyngeal specimen. Contact tracing is undertaken for all confirmed cases in order to identify close contacts that will be systematically screened and quarantined. Transmission chains were identified based on field investigation, contact tracing, results of screening tests and by assessing all probable mode of transmission and interactions. **Results:** As of May 18, 2020, 656 cases out of a total of 1043 confirmed cases of Coronavirus disease 2019 belong to 127 transmission chains identified during the epidemic (mean age 42.36 years, Standard deviation 19.56 and sex ratio 0.86). The virus transmission is the most concentrated in the governorate of Tunis (31.5%), Ariana (10.2%) and Ben Arous (10.2%). Virus transmission occurred 50 times (9.72% of secondary transmission events) between two different governorates. A maximum of seven generations of secondary infection was identified, whereas 62% of these secondary infections belong the first generation. A total of 11 "super spreader" cases were identified in this investigation. Four large clusters have been identified. The evolution of secondary cases highlighted two peaks: one in 2nd April and a second in 16th April whereas imported cases caused local transmission of virus during the early phase of the epidemic. **Conclusion:** Correct contact tracing and early active case finding is useful to identify transmission chains and source of infection in order to contain the widespread transmission in the community.

Publication Type

Journal article.

<70>

Accession Number

20210281552

Author

Zhang HaiYang; Zhang AnRan; Lu QingBin; Zhang XiaoAi; Zhang ZhiJie; Guan XiuGang; Che, T. le; Yang Yang; Li, H.; Liu, W.; Fang LiQun

Title

Association between fatality rate of COVID-19 and selenium deficiency in China.

Source

BMC Infectious Diseases; 2021. 21(452):(19 May 2021). 48 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 has impacted populations around the world, with the fatality rate varying dramatically across countries. Selenium, as one of the important micronutrients implicated in viral infections, was suggested to play roles. Methods: An ecological study was performed to assess the association between the COVID-19 related fatality and the selenium content both from crops and topsoil, in China. Results Totally, 14,045 COVID-19 cases were reported from 147 cities during 8 December 2019-13 December 2020 were included. Based on selenium content in crops, the case fatality rates (CFRs) gradually increased from 1.17% in non-selenium-deficient areas, to 1.28% in moderate-selenium-deficient areas, and further to 3.16% in severe-selenium-deficient areas ($P = 0.002$). Based on selenium content in topsoil, the CFRs gradually increased from 0.76% in non-selenium-deficient areas, to 1.70% in moderate-selenium-deficient areas, and further to 1.85% in severe-selenium-deficient areas ($P < 0.001$). The zero-inflated negative binomial regression model showed a significantly higher fatality risk in cities with severe-selenium-deficient selenium content in crops than non-selenium-deficient cities, with incidence rate ratio (IRR) of 3.88 (95% CIs: 1.21-12.52), which was further confirmed by regression fitting the association between CFR of COVID-19 and selenium content in topsoil, with the IRR of 2.38 (95% CIs: 1.14-4.98) for moderate-selenium-deficient cities and 3.06 (1.49-6.27) for severe-selenium-deficient cities. Conclusions Regional selenium deficiency might be related to an increased CFR of COVID-19. Future studies are needed to explore the associations between selenium status and disease outcome at individual-level.

Publication Type

Journal article.

<71>

Accession Number

20210281549

Author

Davoudi, A.; Najafi, N.; Aarabi, M.; Tayebi, A.; Nikaeen, R.; Izadyar, H.; Salar, Z.; Delavarian, L.; Vaseghi, N.; Daftarian, Z.; Ahangarkani, F.

Title

Lack of association between vitamin D insufficiency and clinical outcomes of patients with COVID-19 infection.

Source

BMC Infectious Diseases; 2021. 21(450):(18 May 2021). 37 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: A protective effect of vitamin D against COVID-19 infection is under investigation. We aimed to analyze the effect of vitamin D sufficiency on the clinical outcomes of patients infected with COVID-19. Methods: In this cross-sectional study we analyzed the vitamin D levels of COVID-19 patients who were admitted to Razi Hospital (an infectious disease referral center in Mazandaran province in northern Iran) from

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

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February to March 2020. Overall, a cutoff point of 30 ng/mL was used for the definition of vitamin D sufficiency. Results: One hundred fifty-three patients were analyzed in this study who had laboratory documentation of a 25(OH) D level at the time of hospitalization. The vitamin D levels of the patients were 27.19 ± 20.17 ng/mL. In total, 62.7% (n = 96) of the patients had a 25(OH) D level of less than 30 ng/mL and 37.25% (n = 57) had a 25(OH) D level of more than 30 ng/mL. In total, 49% (n = 75) of the patients suffered from at least one underlying disease. The univariate and multivariable regression showed that vitamin D sufficiency was not associated with a statistically significant lower risk of adverse clinical outcomes of COVID-19 such as duration of hospitalization and severity of infection (P > 0.05). Conclusions: Sufficient vitamin D levels were not found to be protective against adverse clinical outcomes in patients infected with COVID-19. Chronic disorders in COVID-19 patients were found to have greater relevance than vitamin D levels in determining the adverse outcomes of the infection. Further studies are needed to determine the role of vitamin D level in predicting the outcomes of COVID-19 infection.

Publication Type

Journal article.

<72>

Accession Number

20210281543

Author

Bichara, C. D. A.; Amoras, E. da S. G.; Vaz, G. L.; Torres, M. K. da S.; Queiroz, M. A. F.; Amaral, I. P. C. do; Vallinoto, I. M. V. C.; Bichara, C. N. C.; Vallinoto, A. C. R.

Title

Dynamics of anti-SARS-CoV-2 IgG antibodies post-COVID-19 in a Brazilian Amazon population.

Source

BMC Infectious Diseases; 2021. 21(443):(15 May 2021). 37 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In this study, the prevalence and persistence of anti-SARS-CoV-2 (severe acute respiratory syndrome-coronavirus) IgG was evaluated in volunteers 90 days after COVID-19 (coronavirus disease 2019) diagnosis by correlating response dynamics with clinical conditions, epidemiological characteristics, and disease severity. **Methods:** The study recruited 200 volunteers aged 18 years or older of both sexes diagnosed with COVID-19. Of the 200 volunteers initially selected, the 135 individuals who underwent serological testing for anti-SARS-CoV-2 antibodies on the first visit to the laboratory, were invited to return, after 90 days, and provide a new blood sample for a second assessment of the presence of anti-SARS-CoV-2 IgG antibody. Disease severity and longevity of symptoms were evaluated for each individual and associated with the serological profile. **Results:** Among the 135 individuals who underwent a previous serological test for anti-SARS-CoV-2 antibody, 125 showed reactivity to IgG (92.6%). Of the 125 individuals

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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with detectable IgG in the first test, 87 (69.6%) showed persistence of this antibody after 90 days and 38 (30.4%) lost IgG reactivity in the second evaluation. The frequency of all reported symptoms was higher in individuals who maintained IgG persistence after 90 days of symptoms. Symptom manifestations lasted 21 days in the group with a persistent IgG response (39.6%) and 7 days in the group with a nonpersistent IgG response (50.0%). The length of hospital stay and supplemental oxygen use were higher in individuals with a persistent IgG response. Conclusions: The results of the present study show a high frequency of loss of anti-SARS-CoV-2 IgG antibodies within 3 months after COVID-19 diagnosis in the Brazilian Amazon.

Publication Type

Journal article.

<73>

Accession Number

20210281426

Author

Jantzen, R.; Noisel, N.; Camilleri-Broet, S.; Labbe, C.; Malliard, T. de; Payette, Y.; Broet, P.

Title

Epidemiological characteristics of the COVID-19 spring outbreak in Quebec, Canada: a population-based study.

Source

BMC Infectious Diseases; 2021. 21(435):(10 May 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: By mid-July 2020, more than 108,000 COVID-19 cases had been diagnosed in Canada with more than half in the province of Quebec. In this context, we launched a study to analyze the epidemiological characteristics and the socio-economic impact of the spring outbreak in the population. **Method:** We conducted an online survey of the participants of the CARTaGENE population-based cohort, composed of middle-aged and older adults. We collected information on socio-demographic, lifestyle, health condition, COVID-19 related symptoms and COVID-19 testing. We studied the association between these factors and two outcomes: the status of having been tested for SARS-CoV-2 and the status of having received a positive test. These associations were measured with univariate and multivariate analyses using a hybrid tree-based regression model. **Results:** Among the 8,129 respondents from the CARTaGENE cohort, 649 were tested for COVID-19 and 41 were positive. Medical workers and individuals having a contact with a COVID-19 patient had the highest probabilities of being tested (32% and 42.4%, respectively) and of being positive (17.2% and 13.0%, respectively) among those tested. Approximately 8% of the participants declared that they have experienced at least one of the four COVID-19 related symptoms chosen by the Public Health authorities (fever, cough, dyspnea, anosmia) but were not tested. Results from the tree-based model analyses adjusted on exposure factors showed that the combination of dyspnea, dry cough and fever was highly associated

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E: library@rcvsknowledge.org

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with being tested whereas anosmia, fever, and headache were the most discriminant factors for having a positive test among those tested. During the spring outbreak, more than one third of the participants have experienced a decrease in access to health services. There were gender and age differences in the socio-economic and emotional impacts of the pandemic. Conclusion: We have shown some discrepancies between the symptoms associated with being tested and being positive. In particular, the anosmia is a major discriminant symptom for positivity whereas ear-nose-throat symptoms seem not to be COVID-19 related. The results also emphasize the need of increasing the accessibility of testing for the general population.

Publication Type

Journal article.

<74>

Accession Number

20210281420

Author

Zhang HuiHui; Liu YiNi; Chen FangYao; Mi BaiBing; Zeng LingXia; Pei LeiLei

Title

The effect of sociodemographic factors on COVID-19 incidence of 342 cities in China: a geographically weighted regression model analysis.

Source

BMC Infectious Diseases; 2021. 21(428):(7 May 2021). 31 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since December 2019, the coronavirus disease 2019 (COVID-19) has spread quickly among the population and brought a severe global impact. However, considerable geographical disparities in the distribution of COVID-19 incidence existed among different cities. In this study, we aimed to explore the effect of sociodemographic factors on COVID-19 incidence of 342 cities in China from a geographic perspective. Methods: Official surveillance data about the COVID-19 and sociodemographic information in China's 342 cities were collected. Local geographically weighted Poisson regression (GWPR) model and traditional generalized linear models (GLM) Poisson regression model were compared for optimal analysis. Results: Compared to that of the GLM Poisson regression model, a significantly lower corrected Akaike Information Criteria (AICc) was reported in the GWPR model (61953.0 in GLM vs. 43218.9 in GWPR). Spatial auto-correlation of residuals was not found in the GWPR model (global Moran's I = - 0.005, p = 0.468), inferring the capture of the spatial auto-correlation by the GWPR model. Cities with a higher gross domestic product (GDP), limited health resources, and shorter distance to Wuhan, were at a higher risk for COVID-19. Furthermore, with the exception of some southeastern cities, as population density increased, the incidence of COVID-19 decreased. Conclusions: There are potential effects of the sociodemographic factors on the COVID-19 incidence. Moreover, our findings and methodology could guide other countries by helping

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them understand the local transmission of COVID-19 and developing a tailored country-specific intervention strategy.

Publication Type

Journal article.

<75>

Accession Number

20210281412

Author

Liang JingBo; Yuan HsiangYu; Wu, L.; Pfeiffer DirkUdo

Title

Estimating effects of intervention measures on COVID-19 outbreak in Wuhan taking account of improving diagnostic capabilities using a modelling approach.

Source

BMC Infectious Diseases; 2021. 21(424):(5 May 2021). 42 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Although by late February 2020 the COVID-19 epidemic was effectively controlled in Wuhan, China, estimating the effects of interventions, such as transportation restrictions and quarantine measures, on the early COVID-19 transmission dynamics in Wuhan is critical for guiding future virus containment strategies. Since the exact number of infected cases is unknown, the number of documented cases was used by many disease transmission models to infer epidemiological parameters. This means that it was possible to produce biased estimates of epidemiological parameters and hence of the effects of intervention measures, because the percentage of all cases that were documented changed during the first 2 months of the epidemic, as a consequence of a gradually improving diagnostic capability. Methods: To overcome these limitations, we constructed a stochastic susceptible-exposed-infected-quarantinedrecovered (SEIQR) model, accounting for intervention measures and temporal changes in the proportion of new documented infections out of total new infections, to characterize the transmission dynamics of COVID-19 in Wuhan across different stages of the outbreak. Pre-symptomatic transmission was taken into account in our model, and all epidemiological parameters were estimated using the Particle Markov-chain Monte Carlo (PMCMC) method. Results: Our model captured the local Wuhan epidemic pattern as two-peak transmission dynamics, with one peak on February 4 and the other on February 12, 2020. The impact of intervention measures determined the timing of the first peak, leading to an 86% drop in the R_e from 3.23 (95% CI, 2.22 to 4.20) to 0.45 (95% CI, 0.20 to 0.69). The improved diagnostic capability led to the second peak and a higher proportion of documented infections. Our estimated proportion of new documented infections out of the total new infections increased from 11% (95% CI 1- 43%) to 28% (95% CI 4-62%) after January 26 when more detection kits were released. After the introduction of a new diagnostic criterion (case definition) on February

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12, a higher proportion of daily infected cases were documented (49% (95% CI 7-79%)). Conclusions: Transportation restrictions and quarantine measures together in Wuhan were able to contain local epidemic growth.

Publication Type

Journal article.

<76>

Accession Number

20210281406

Author

Hensbergen, M. van; Heijer, C. D. J. den; Wolffs, P.; Hackert, V.; Waarbeek, H. L. G. ter; Munnink, B. B. O.; Sikkema, R. S.; Heddema, E. R.; Hoebe, C. J. P. A.

Title

COVID-19: first long-term care facility outbreak in the Netherlands following cross-border introduction from Germany, March 2020.

Source

BMC Infectious Diseases; 2021. 21(418):(4 May 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The Dutch province of Limburg borders the German district of Heinsberg, which had a large cluster of COVID-19 cases linked to local carnival activities before any cases were reported in the Netherlands. However, Heinsberg was not included as an area reporting local or community transmission per the national case definition at the time. In early March, two residents from a long-term care facility (LTCF) in Sittard, a Dutch town located in close vicinity to the district of Heinsberg, tested positive for COVID-19. In this study we aimed to determine whether cross-border introduction of the virus took place by analysing the LTCF outbreak in Sittard, both epidemiologically and microbiologically. **Methods:** Surveys and semi-structured oral interviews were conducted with all present LTCF residents by health care workers during regular points of care for information on new or unusual signs and symptoms of disease. Both throat and nasopharyngeal swabs were taken from residents suspect of COVID-19, based on regional criteria, for the detection of SARS-CoV-2 by Real-time Polymerase Chain Reaction. Additionally, whole genome sequencing was performed using a SARS-CoV-2 specific amplicon-based Nanopore sequencing approach. Moreover, twelve random residents were sampled for possible asymptomatic infections. **Results:** Out of 99 residents, 46 got tested for COVID-19. Out of the 46 tested residents, nineteen (41%) tested positive for COVID-19, including 3 asymptomatic residents. CT-values for asymptomatic residents seemed higher compared to symptomatic residents. Eleven samples were sequenced, along with three random samples from COVID-19 patients hospitalized in the regional hospital at the time of the LTCF outbreak. All samples were linked to COVID-19 cases from the cross-border region of Heinsberg, Germany. **Conclusions:** Sequencing combined

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with epidemiological data was able to virtually prove cross-border transmission at the start of the Dutch COVID-19 epidemic. Our results highlight the need for cross-border collaboration and adjustment of national policy to emerging region-specific needs along borders in order to establish coordinated implementation of infection control measures to limit the spread of COVID-19.

Publication Type

Journal article.

<77>

Accession Number

20210281405

Author

Mossong, J.; Mombaerts, L.; Veiber, L.; Pastore, J.; Coroller, G. le; Schnell, M.; Masi, S.; Huiart, L.; Wilmes, P.

Title

SARS-CoV-2 transmission in educational settings during an early summer epidemic wave in Luxembourg, 2020.

Source

BMC Infectious Diseases; 2021. 21(417):(4 May 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Following a first wave in spring and gradual easing of lockdown, Luxembourg experienced an early second epidemic wave of SARS-CoV-2 before the start of summer school holidays on 15th July. This provided the opportunity to investigate the role of school-age children and school settings for transmission. **Methods:** We compared the incidence of SARS-CoV-2 in school-age children, teachers and the general working population in Luxembourg during two epidemic waves: a spring wave from March-April 2020 corresponding to general lockdown with schools being closed and May-July 2020 corresponding to schools being open. We assessed the number of secondary transmissions occurring in schools between May and July 2020 using routine contact tracing data. **Results:** During the first wave in March-April 2020 when schools were closed, the incidence in pupils peaked at 28 per 100,000, while during the second wave in May-July 2020 when schools were open, incidence peaked 100 per 100,000. While incidence of SARS-CoV-2 was higher in adults than in children during the first spring wave, no significant difference was observed during the second wave in early summer. Between May and July 2020, we identified a total of 390 and 34 confirmed COVID-19 cases among 90,150 school-age children and 11,667 teachers, respectively. We further estimate that 179 primary cases caused 49 secondary cases in schools. While some small clusters of mainly student-to-student transmission within the same class were identified, we did not observe any large outbreaks with multiple generations of infection. **Conclusions:** Transmission of SARS-CoV-2 within Luxembourg schools was limited during an early summer epidemic wave in 2020. Precautionary measures including physical

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distancing as well as easy access to testing, systematic contact tracing appears to have been successful in mitigating transmission within educational settings.

Publication Type

Journal article.

<78>

Accession Number

20210281378

Author

LaTourrette, K.; Holste, N. M.; Rodriguez-Pena, R.; Leme, R. A.; Garcia-Ruiz, H.

Title

Genome-wide variation in betacoronaviruses.

Source

Journal of Virology; 2021. 95(15). 82 ref.

Publisher

American Society for Microbiology (ASM)

Location of Publisher

Washington, D.C.

Country of Publication

USA

Abstract

The Severe acute respiratory syndrome coronavirus (SARS-CoV) and SARS-CoV-2 originated in bats and adapted to infect humans. Several SARS-CoV-2 strains have been identified. Genetic variation is fundamental to virus evolution and, in response to selection pressure, is manifested as the emergence of new strains and species adapted to different hosts or with novel pathogenicity. The combination of variation and selection forms a genetic footprint on the genome, consisting of the preferential accumulation of mutations in particular areas. Properties of betacoronaviruses contributing to variation and the emergence of new strains and species are beginning to be elucidated. To better understand their variation, we profiled the accumulation of mutations in all species in the genus Betacoronavirus, including SARS-CoV-2 and two other species that infect humans: SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV). Variation profiles identified both genetically stable and variable areas at homologous locations across species within the genus Betacoronavirus. The S glycoprotein is the most variable part of the genome and is structurally disordered. Other variable parts include proteins 3 and 7 and ORF8, which participate in replication and suppression of antiviral defense. In contrast, replication proteins in ORF1b are the least variable. Collectively, our results show that variation and structural disorder in the S glycoprotein is a general feature of all members of the genus Betacoronavirus, including SARS-CoV-2. These findings highlight the potential for the continual emergence of new species and strains with novel biological properties and indicate that the S glycoprotein has a critical role in host adaptation. **IMPORTANCE:** Natural infection with SARS-CoV-2 and vaccines triggers the formation of antibodies against the S glycoprotein, which are detected by antibody-based diagnostic tests. Our analysis showed that variation in the S glycoprotein is a general feature of all species in the genus Betacoronavirus, including three species that infect humans: SARS-CoV, SARS-CoV-2, and MERS-CoV. The variable nature of the S glycoprotein provides an explanation for the

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emergence of SARS-CoV-2, the differentiation of SARS-CoV-2 into strains, and the probability of SARS-CoV-2 repeated infections in people. Variation of the S glycoprotein also has important implications for the reliability of SARS-CoV-2 antibody-based diagnostic tests and the design and deployment of vaccines and antiviral drugs. These findings indicate that adjustments to vaccine design and deployment and to antibody-based diagnostic tests are necessary to account for S glycoprotein variation.

Publication Type

Journal article.

<79>

Accession Number

20210281348

Author

Liu XingHua; Li Wei; Zhang Bo; Guo Yan; Hu Zhao; Peng Cao; Lei Xiao; Luo QunYing; Zhang QiOng; Deng Wei; Wang JuanJuan; Tang JianQiao; Li YunQiao; Chen JianYing

Title

Comparative study of hospitalized children with acute respiratory distress syndrome caused by SARS-CoV-2 and influenza virus.

Source

BMC Infectious Diseases; 2021. 21(412):(4 May 2021). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since the outbreak of coronavirus disease 2019 in December 2019, more than 8 million cases have occurred worldwide as of June 16, 2020. However, it is important to distinguish COVID-19 from other respiratory infectious diseases, such as influenza. Here, we comparatively described the clinical characteristics of children with COVID-19 and paediatric patients with influenza. **Methods:** In this retrospective, single-centre study, we reviewed the electronic medical records of 585 paediatric patients with COVID-19 or influenza in Wuhan Children's Hospital, China. Clinical and epidemiological characteristics, laboratory findings, and clinical outcomes were comparatively analysed. **Results:** The median ages were 6.96 years (IQR, 2-10.81) for children with confirmed COVID-19, 2.67 years (IQR, 1.03-15.25) for those with influenza A and 3.67 years (IQR, 1.62-5.54) for those with influenza B. Fever was a symptom in 84 (34.7%) COVID-19 cases, 132 (70.21%) influenza A cases and 111 (74.50%) influenza B cases. The median length of stay (LOS) was 11 (8-15) days for paediatric COVID-19 patients, 4 (3-6) days for influenza A patients and 5 (3-6) days for influenza B patients. Twenty-six (13.98%) influenza A patients and 18 (12.59%) influenza B patients presented with decreased white blood cell counts, while 13 (5.33%) COVID-19 patients presented with decreased white blood cell counts. Eight (3.28%) COVID-19 patients, 23 (12.71%) influenza A patients and 21 (14.79%) influenza B patients experienced lymphocytopenia. Acute cardiac injury occurred in 18 (7.29%) COVID-19 patients, while 37 (19.68%) influenza A and 27 (18.12%) influenza B patients had acute

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cardiac injury. Conclusion: In this study, the illnesses of children with COVID-19 were demonstrated to be less severe than those of paediatric patients with influenza, and COVID-19 patients had milder illness and fewer complications.

Publication Type

Journal article.

<80>

Accession Number

20210281347

Author

Okumus, N.; Demirturk, N.; Cetinkaya, R. A.; Guner, R.; Avci, I. Y.; Orhan, S.; Konya, P.; Saylan, B.; Karalezli, A.; Yamanel, L.; Kayaaslan, B.; Yilmaz, G.; Savasci, U.; Eser, F.; Taskin, G.

Title

Evaluation of the effectiveness and safety of adding ivermectin to treatment in severe COVID-19 patients.

Source

BMC Infectious Diseases; 2021. 21(411):(4 May 2021). 30 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background and objectives: An effective treatment option is not yet available for SARS-CoV2, which causes the COVID-19 pandemic and whose effects are felt more and more every day. Ivermectin is among the drugs whose effectiveness in treatment has been investigated. In this study; it was aimed to investigate the presence of gene mutations that alter ivermectin metabolism and cause toxic effects in patients with severe COVID-19 pneumonia, and to evaluate the effectiveness and safety of ivermectin use in the treatment of patients without mutation. **Materials and methods:** Patients with severe COVID19 pneumonia were included in the study, which was planned as a prospective, randomized, controlled, single-blind phase 3 study. Two groups, the study group and the control group, took part in the study. Ivermectin 200 mcg/kg/day for 5 days in the form of a solution prepared for enteral use added to the reference treatment protocol - hydroxychloroquine + favipiravir + azithromycin- of patients included in the study group. Patients in the control group were given only reference treatment with 3 other drugs without ivermectin. The presence of mutations was investigated by performing sequence analysis in the *mdr1/abcab1* gene with the Sanger method in patients included in the study group according to randomization. Patients with mutations were excluded from the study and ivermectin treatment was not continued. Patients were followed for 5 days after treatment. At the end of the treatment and follow-up period, clinical response and changes in laboratory parameters were evaluated. **Results:** A total of 66 patients, 36 in the study group and 30 in the control group were included in the study. Mutations affecting ivermectin metabolism was detected in genetic tests of six (16.7%) patients in the study group and they were excluded from the study. At the end of the 5-day follow-up period, the rate of clinical improvement was 73.3% (22/30) in the study group and was 53.3% (16/30) in the

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control group ($p = 0.10$). At the end of the study, mortality developed in 6 patients (20%) in the study group and in 9 (30%) patients in the control group ($p = 0.37$). At the end of the follow-up period, the average peripheral capillary oxygen saturation (SpO₂) values of the study and control groups were found to be 93.5 and 93.0%, respectively. Partial pressure of oxygen (PaO₂)/FiO₂ ratios were determined as 236.3 \pm 85.7 and 220.8 \pm 127.3 in the study and control groups, respectively. While the blood lymphocyte count was higher in the study group compared to the control group (1698 \pm 1438 and 1256 \pm 710, respectively) at the end of the follow-up period ($p = 0.24$); reduction in serum C-reactive protein (CRP), ferritin and D-dimer levels was more pronounced in the study group ($p = 0.02$, $p = 0.005$ and $p = 0.03$, respectively). Conclusions: According to the findings obtained, ivermectin can provide an increase in clinical recovery, improvement in prognostic laboratory parameters and a decrease in mortality rates even when used in patients with severe COVID-19. Consequently, ivermectin should be considered as an alternative drug that can be used in the treatment of COVID-19 disease or as an additional option to existing protocols.

Publication Type

Journal article.

<81>

Accession Number

20210281343

Author

Zhang JinJun; Yang ShiXiong; Xu Yi; Qin XinYan; Liu JiaLiang; Guo JinJun; Tian SiJia; Wang ShaoPing; Liao Kai; Zhang Ying; Ma Yu; Chen YuGuo

Title

Epidemiological and clinical characteristics of imported cases of COVID-19: a multicenter study.

Source

BMC Infectious Diseases; 2021. 21(406):(3 May 2021). 21 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 (COVID-19) pandemic continues to expand. Herein, we report the epidemiological and clinical features of 478 patients with confirmed COVID-19 from a multicenter study conducted in four cities in China excluding Wuhan. **Methods:** A total of 478 patients transferred by emergency medical services to designated hospitals in four major cities in China (Beijing, Chongqing, Jinan, and Nanning) were enrolled. We compared the characteristics of imported and indigenous cases and calculated the frequencies of fatal, severe, mild, and asymptomatic disease. The results were used to generate a pyramid of COVID-19 severity. **Results:** The mean age of patients with COVID-19 was 46.9 years and 49.8% were male. The most common symptoms at onset were fever (69.7%), cough (47.5%), fatigue (24.5%), dyspnea (8.4%), and headache (7.9%). Most cases (313, 65.5%) were indigenous, while 165 (34.5%) were imported. Imported cases dominated during the early stages of the pandemic, but decreased

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from 1 February 2020 as indigenous cases rose sharply. Compared with indigenous cases, imported cases differed significantly in terms of sex ($P = 0.002$), severity of disease ($P = 0.006$), occurrence of fever ($P < 0.001$), family clustering ($P < 0.001$), history of contact ($P < 0.001$), and primary outcome ($P < 0.001$). Conclusions: Within the population studied, imported cases had distinct characteristics from those of indigenous cases, with lower fatality rates and higher discharge rates. New infections shifted from imported cases to local infection gradually, and overall infections have declined to a low level. We suggest that preventing import of cases and controlling spread within local areas can help prevent SARS-CoV-2 infection spread.

Publication Type

Journal article.

<82>

Accession Number

20210281336

Author

Meng Mei; Chen LiMin; Zhang Sheng; Dong XuAn; Li WenZhe; Li RanRan; Deng YunXin; Wang Tao; Xu Yan; Liu Jiao; Huang YanXia; Chen YiZhu; Huang SiSi; Wen ZhenLiang; Zhang LiDi; Du HangXiang; Liu YongAn; Annane, D.; Qu JieMing; Chen DeChang

Title

Risk factors for secondary hemophagocytic lymphohistiocytosis in severe Coronavirus disease 2019 adult patients.

Source

BMC Infectious Diseases; 2021. 21(398):(29 April 2021). 29 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Secondary hemophagocytic lymphohistiocytosis (sHLH) is a life-threatening hyperinflammatory event and a fatal complication of viral infections. Whether sHLH may also be observed in patients with a cytokine storm induced by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is still uncertain. We aimed to determine the incidence of sHLH in severe COVID-19 patients and evaluate the underlying risk factors. **Method:** Four hundred fifteen severe COVID-19 adult patients were retrospectively assessed for hemophagocytosis score (HScore). A subset of 7 patients were unable to be conclusively scored due to insufficient patient data. **Results:** In 408 patients, 41 (10.04%) had an HScore ≥ 169 and were characterized as "suspected sHLH positive". Compared with patients below a HScore threshold of 98, the suspected sHLH positive group had higher D-dimer, total bilirubin, alanine aminotransferase, aspartate aminotransferase, blood urea nitrogen, serum creatinine, triglycerides, ferritin, interleukin-6, C-reactive protein, procalcitonin, lactate dehydrogenase, creatine kinase isoenzyme, troponin, Sequential Organ Failure Assessment (SOFA) score, while leukocyte, hemoglobin, platelets, lymphocyte, fibrinogen,

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pre-albumin, albumin levels were significantly lower (all $P < 0.05$). Multivariable logistic regression revealed that high ferritin (>1922.58 ng/mL), low platelets ($<101 \times 10^9/L$) and high triglycerides (>2.28 mmol/L) were independent risk factors for suspected sHLH in COVID-19 patients. Importantly, COVID-19 patients that were suspected sHLH positive had significantly more multi-organ failure. Additionally, a high HScore (>98) was an independent predictor for mortality in COVID-19. Conclusions: HScore should be measured as a prognostic biomarker in COVID-19 patients. In particular, it is important that HScore is assessed in patients with high ferritin, triglycerides and low platelets to improve the detection of suspected sHLH.

Publication Type

Journal article.

<83>

Accession Number

20210281335

Author

Zhang NanHui; Cheng YiChun; Luo Ran; Zhang ChunXiu; Ge ShuWang; Xu Gang

Title

Recovery of new-onset kidney disease in COVID-19 patients discharged from hospital.

Source

BMC Infectious Diseases; 2021. 21(397):(29 April 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) has emerged as a major global health threat with a great number of deaths worldwide. Despite abundant data on that many COVID-19 patients also displayed kidney disease, there is limited information available about the recovery of kidney disease after discharge. **Methods:** Retrospective and prospective cohort study to patients with new-onset kidney disease during the COVID-19 hospitalization, admitted between January 28 to February 26, 2020. The median follow-up was 4 months after discharge. The follow-up patients were divided into the recovery group and non-recovery group. Descriptive statistics and between-groups comparison were used. **Results:** In total, 143 discharged patients with new-onset kidney disease during the COVID-19 hospitalization were included. Patients had a median age was 64 (IQR, 51-70) years, and 59.4% of patients were men. During 4-months median follow-up, 91% (130 of 143) patients recovered from kidney disease, and 9% (13 of 143) patients haven't recovered. The median age of patients in the non-recovery group was 72 years, which was significantly higher than the median age of 62 years in the recovery group. Discharge serum creatinine was significantly higher in the non-recovery group than in the recovery group. **Conclusions:** Most of the new-onset kidney diseases during hospitalization of COVID-19 patients recovered 4 months after discharge. We recommend that COVID-19 patients with new-onset kidney disease be followed after discharge to assess kidney recovery, especially elderly patients or patients with high discharge creatinine.

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E: library@rcvsknowledge.org

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Publication Type

Journal article.

<84>

Accession Number

20210281313

Author

Thai Quang Pham; Ngoc-Anh Hoang; Ha-Linh Quach; Khanh Cong Nguyen; Colquhoun, S.; Lambert, S.; Luong Huy Duong; Quang Dai Tran; Duc Anh Ha; Dinh Cong Phung; Nghia Duy Ngu; Tu Anh Tran; Quang Ngoc La; Tai Trong Nguyen; Quynh Mai Thi Le; Duong Nhu Tran; Vogt, F.; Duc-Anh Dang

Title

Timeliness of contact tracing among flight passengers during the COVID-19 epidemic in Vietnam.

Source

BMC Infectious Diseases; 2021. 21(393):(28 April 2021). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: International air travel plays an important role in the global spread of SARS-CoV-2, and tracing of close contacts is an integral part of the public health response to COVID-19. We aimed to assess the timeliness of contact tracing among airline passengers arriving in Vietnam on flights containing COVID-19 cases and investigated factors associated with timeliness of contact tracing. Methods: We included data from 2228 passengers on 22 incoming flights between 2 and 19 March 2020. Contact tracing duration was assessed separately for the time between the date of index case confirmation and date of contact tracing initiation (interval I), and the date of contact tracing initiation and completion (interval II). We used log-rank tests and multivariable Poisson regression models to identify factors associated with timeliness. Results: The median duration of interval I and interval II was one (IQR: 1-2) and 3 days (IQR: 2-5), respectively. The contact tracing duration was shorter for passengers from flights where the index case was identified through mandatory testing directly upon arrival (median = 4; IQR: 3-5) compared to flights with index case detection through self-presentation at health facilities after arrival (median = 7; IQR: 5-8) (p-value = 0.018). Cumulative hazards for successful tracing were higher for Vietnamese nationals compared to non-Vietnamese nationals (p < 0.001). Conclusions: Contact tracing among flight passengers in the early stage of the COVID-19 epidemic in Vietnam was timely though delays occurred on high workload days. Mandatory SARS-CoV-2 testing at arrival may reduce contact tracing duration and should be considered as an integrated screening tool for flight passengers from high-risk areas when entering low-transmission settings with limited contact tracing capacity. We recommend a standardized risk-based contact tracing approach for flight passengers during the ongoing COVID-19 epidemic.

Publication Type

Journal article.

<85>

Accession Number

20210281309

Author

Meenagh, D.; Minford, P.

Title

A structural model of coronavirus behaviour for testing on data behaviour.

Source

Applied Economics; 2021. 53(30):3515-3534. 13 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

We fit the logistic function, the reduced form of epidemic behaviour, to the data for deaths from Covid-19, for a wide variety of countries, with a view to estimating a causal model of the Covid virus' progression. We then set up a structural model of the Covid virus behaviour based on evolutionary biology and social household behaviour; we estimated and tested this by indirect inference, matching its simulated logistic behaviour to that found in the data. In our model, the virus' progression depends on the interaction of strategies by household agents, the government and the virus itself as programmed by evolution. Within these interactions, it turns out that there is substitution between government topdown direction (such as lockdown) and social reaction to available information on the virus' behaviour. We also looked at the experience of second waves, where we found that countries successfully limited second waves when they had had longer first waves and followed policies of localized reaction in the second.

Publication Type

Journal article.

<86>

Accession Number

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20210281307

Author

Navlakha, S.; Morjaria, S.; Perez-Johnston, R.; Zhang, A.; Taur, Y.

Title

Projecting COVID-19 disease severity in cancer patients using purposefully-designed machine learning.

Source

BMC Infectious Diseases; 2021. 21(391):(4 May 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Accurately predicting outcomes for cancer patients with COVID-19 has been clinically challenging. Numerous clinical variables have been retrospectively associated with disease severity, but the predictive value of these variables, and how multiple variables interact to increase risk, remains unclear. Methods: We used machine learning algorithms to predict COVID-19 severity in 348 cancer patients at Memorial Sloan Kettering Cancer Center in New York City. Using only clinical variables collected on or before a patient's COVID-19 positive date (time zero), we sought to classify patients into one of three possible future outcomes: Severe-early (the patient required high levels of oxygen support within 3 days of being tested positive for COVID-19), Severe-late (the patient required high levels of oxygen after 3 days), and Non-severe (the patient never required oxygen support). Results: Our algorithm classified patients into these classes with an area under the receiver operating characteristic curve (AUROC) ranging from 70 to 85%, significantly outperforming prior methods and univariate analyses. Critically, classification accuracy is highest when using a potpourri of clinical variables - including basic patient information, pre-existing diagnoses, laboratory and radiological work, and underlying cancer type - suggesting that COVID-19 in cancer patients comes with numerous, combinatorial risk factors. Conclusions: Overall, we provide a computational tool that can identify high-risk patients early in their disease progression, which could aid in clinical decision-making and selecting treatment options.

Publication Type

Journal article.

<87>

Accession Number

20210281287

Author

Wang LiuLin; Cheng XiaoBin; Dong QiuFen; Zhou ChenLiang; Wang YeMing; Song Bin; Li WeiNan; Wang Min; Qin Rui; Long Qi; Liu Juan; Li Jing; Li Dan; Li Gang; Ba YuanMing

Title

The characteristics of laboratory tests at admission and the risk factors for adverse clinical outcomes of severe and critical COVID-19 patients.

Source

BMC Infectious Diseases; 2021. 21(371):(20 April 2021). 30 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The current coronavirus disease 2019 (COVID-19) is a public health emergency. In this study, we aimed to evaluate the risk factors for mortality in severe and critical COVID-19 patients. **Methods:** We performed a retrospective study of patients diagnosed with severe and critical COVID-19 from four hospitals in Wuhan, China, by evaluating the clinical characteristics and laboratory results, and using Cox proportional hazards model to assess the risk factors involved in disease progression. **Results:** In total, 446 patients with COVID-19 were enrolled. The study indicated a high mortality rate (20.2%) in severe and critical COVID-19 patients. At the time of admission, all patients required oxygen therapy, and 52 (12%) required invasive mechanical ventilation, of which 50 (96%) died. The univariate Cox proportional hazards model showed a white blood cell count of more than $10 \times 10^9/L$ (HR 3.993, 95%CI 2.469 to 6.459) that correlated with an increased mortality rate. The multivariable Cox proportional hazards model demonstrated that older age (HR 1.066, 95% CI 1.043 to 1.089) and higher white blood cell count (HR 1.135, 95% CI 1.080 to 1.192) were independent risk factors for determining COVID-19 associated mortality. **Conclusions:** COVID-19 is associated with a significant risk of morbidity and mortality in the population. Older age and higher white blood cell count were found to be independent risk factors for mortality.

Publication Type

Journal article.

<88>

Accession Number

20210281283

Author

Trnacevic, A.; Mujkanovic, A.; Noura Al-Salloum; Sakusic, A.; Trnacevic, E.; Jusufovic, E.; Hukic, F.; Jahic, R.; Stratton, R.

Title

COVID-19 in Northeast Bosnia and Herzegovina and patient's length of hospitalization.

Source

BMC Infectious Diseases; 2021. 21(367):(19 April 2021). 23 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since the outbreak of COVID-19 pandemic, clinical data from various parts of the world have been reported. Up till now, there has been no clinical data with regards to COVID-19 from Bosnia and Herzegovina (B&H). The aim was to report on the first cohort of patients from B&H and to analyze factors that influence COVID-19 patient's length of hospitalization (LOH). Methods: This retrospective cohort study was conducted at Tuzla University Clinical Center (UKC), B&H. It involved 25 COVID-19 positive patients that needed hospitalisation between March 28th and April 27th 2020. The LOH was measured from the time of admission to discharge. Factors analyzed induced age, BMI, presence of known comorbidities, serum creatinine and O2 saturation upon admission. Results: The mean age was 52.92 +- 19.15 years and BMI 28.80 +- 4.22. LOH for patients with BMI < 25 was 9 +- SE2.646 days (CI 95% 3.814-14.816) vs 14.182 +- SE .937 (CI 95% 12.346-16.018 p < 0.05; HR 5.148 CI95% 1.217 to 21.772 p = 0.026) for 25 BMI. The mean LOH of patients with normal levels of O2 95% was 11.667 +- SE1.202 (CI95% 8.261 to 13.739; p = 0.046), while LOH for patients with < 95% was 14.625 +- SE 1.231 (CI95% 12.184 to 16.757 p = 0.042; HR 3.732 CI95% 1.137-12.251 p = 0.03). Patients without known comorbidities had a mean LOH of 11.700 +- SE1.075 (CI 95% 9.592-13.808), while those with comorbidities had a mean of 14.8 +- 1.303 (CI 95% 12.247-17.353; p = 0.029) with HR2.552. Conclusion: LOH varied among COVID-19 patients and was prolonged when analyzed for BMI 25, comorbidities, elevated creatinine, and O2 saturation < 95%. Furthermore, risk factors for COVID-19 patients in B&H do not deviate from those reported in other countries.

Publication Type

Journal article.

<89>

Accession Number

20210281281

Author

Liang Feng; Wang XianFeng; Shao JianBo; Chen Jun; Liu Lei; Li Hui; Xu Yi; He LiYa; Liang HuiYing; Li KuanRong; Gong SiTang; Xia HuiMin

Title

Comparison of clinical features on admission between coronavirus disease 2019 and influenza a among children: a retrospective study in China.

Source

BMC Infectious Diseases; 2021. 21(365):(17 April 2021). 37 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) share similar symptoms with influenza A (IA), but it is more worthwhile to understand the disparities of the two infections regarding their clinical characteristics on admission. Methods: A total of 71 age-matched pediatric IA and COVID-19 patient pairs were formed and their clinical data on admission were compared. Results: Fever, cough, nasal congestion and nausea/vomiting were the most common symptoms on admission for both infections but occurred less often in COVID-19. The IA patients were more likely to have lower-than-normal levels of lymphocyte count and percentage and to have higher-than-normal levels of activated partial thromboplastin time, prothrombin time, serum C-reactive protein, and serum procalcitonin, while the COVID-19 patients had higher odds of having lower-than-normal levels of neutrophil count and percentage. Conclusions: This study suggests that influenza A is more symptomatic than COVID-19 for children and might be an overall more severe infection at the time of admission.

Publication Type

Journal article.

<90>

Accession Number

20210281276

Author

Mahmoud, S. A.; Ibrahim, E.; Thakre, B.; Teddy, J. G.; Raheja, P.; Ganesan, S.; Zaher, W. A.

Title

Evaluation of pooling of samples for testing SARS-CoV- 2 for mass screening of COVID-19.

Source

BMC Infectious Diseases; 2021. 21(360):(17 April 2021). 27 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The current pandemic of the SARS-CoV-2 virus, widely known as COVID-19, has affected millions of people around the world. The World Health Organization (WHO) has recommended vigorous testing to differentiate SARS-CoV-2 from other respiratory infections to aid in guiding appropriate care and

management. Situations like this have demanded robust testing strategies and pooled testing of samples for SARS-CoV-2 virus has provided the solution to mass screening of people for COVID-19. A pooled testing strategy can be very effective in testing when resources are limited, yet it comes with its own limitations. These benefits and limitations need critical consideration when it comes to testing highly infectious diseases like COVID-19. Methods: This study evaluated the pooled testing of nasopharyngeal swabs for SARS-COV-2 by comparing the sensitivity of individual sample testing with 4-and 8-pool sample testing. Median cycle threshold (Ct) values were compared, and the precision of pooled testing was assessed through an inter- and intra-assay of pooled samples. Coefficient of variance was calculated for inter- and intra-assay variability. Results: The sensitivity becomes considerably lower when the samples are pooled. There is a high percentage of false negative reports with larger sample pool size and when the patient viral load is low or weak positive samples. High variability was seen in the intra- and inter-assay, especially among weak positive samples and when more number of samples are pooled together. Conclusion: As COVID - 19 infection numbers and need for testing remain high, we must meticulously evaluate the testing strategy for each country depending on its testing capacity, infrastructure, economic strength, and need to determine the optimal balance on the cost-effective strategy of resource saving and risk/cost of missing positive patients.

Publication Type

Journal article.

<91>

Accession Number

20210281198

Author

Huang Deli; Tran, J. T.; Peng LingHang; Yang LinLin; Suhandynata, R. T.; Hoffman, M. A.; Zhao FangZhu; Song Ge; He WanTing; Limbo, O.; Callaghan, S.; Landais, E.; Andrabi, R.; Sok, D.; Jardine, J. G.; Burton, D. R.; Voss, J. E.; Fitzgerald, R. L.; Nemazee, D.

Title

A rapid assay for SARS-CoV-2 neutralizing antibodies that is insensitive to antiretroviral drugs.

Source

Journal of Immunology; 2021. 207(1):344-351. 21 ref.

Publisher

American Association of Immunologists

Location of Publisher

Bethesda

Country of Publication

USA

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike pseudotyped virus (PSV) assays are widely used to measure neutralization titers of sera and of isolated neutralizing Abs (nAbs). PSV neutralization assays are safer than live virus neutralization assays and do not require access to biosafety level 3 laboratories. However, many PSV assays are nevertheless somewhat challenging and require at least 2 d to carry out. In this study, we report a rapid (<30 min), sensitive, cell-free, off-the-shelf, and accurate assay for receptor binding domain nAb detection. Our proximity-based luciferase assay takes

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advantage of the fact that the most potent SARS-CoV-2 nAbs function by blocking the binding between SARS-CoV-2 and angiotensin-converting enzyme 2. The method was validated using isolated nAbs and sera from spike-immunized animals and patients with coronavirus disease 2019. The method was particularly useful in patients with HIV taking antiretroviral therapies that interfere with the conventional PSV assay. The method provides a cost-effective and point-of-care alternative to evaluate the potency and breadth of the predominant SARS-CoV-2 nAbs elicited by infection or vaccines.

Publication Type

Journal article.

<92>

Accession Number

20210281188

Author

Dahal, S.; Banda, J. M.; Bento, A. I.; Mizumoto, K.; Chowell, G.

Title

Characterizing all-cause excess mortality patterns during COVID-19 pandemic in Mexico.

Source

BMC Infectious Diseases; 2021. 21(432):(7 May 2021). many ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Low testing rates and delays in reporting hinder the estimation of the mortality burden associated with the COVID-19 pandemic. During a public health emergency, estimating all cause excess deaths above an expected level of death can provide a more reliable picture of the mortality burden. Here, we aim to estimate the absolute and relative mortality impact of COVID-19 pandemic in Mexico. **Methods:** We obtained weekly mortality time series due to all causes for Mexico, and by gender, and geographic region from 2015 to 2020. We also compiled surveillance data on COVID-19 cases and deaths to assess the timing and intensity of the pandemic and assembled weekly series of the proportion of tweets about 'death' from Mexico to assess the correlation between people's media interaction about 'death' and the rise in pandemic deaths. We estimated all-cause excess mortality rates and mortality rate ratio increase over baseline by fitting Serfling regression models and forecasted the total excess deaths for Mexico for the first 4 weeks of 2021 using the generalized logistic growth model. **Results:** We estimated the all-cause excess mortality rate associated with the COVID-19 pandemic in Mexico in 2020 at 26.10 per 10,000 population, which corresponds to 333,538 excess deaths. Males had about 2-fold higher excess mortality rate (33.99) compared to females (18.53). Mexico City reported the highest excess death rate (63.54) and RR (2.09) compared to rest of the country (excess rate = 23.25, RR = 1.62). While COVID-19 deaths accounted for only 38.64% of total excess deaths in Mexico, our forecast estimate that Mexico has accumulated a total of ~ 61,610 [95% PI: 60,003, 63,216] excess deaths in the first 4 weeks of 2021. Proportion of tweets was

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significantly correlated with the excess mortality ($p = 0.508$ [95% CI: 0.245, 0.701], p -value = 0.0004). Conclusion: The COVID-19 pandemic has heavily affected Mexico. The lab-confirmed COVID-19 deaths accounted for only 38.64% of total all cause excess deaths (333,538) in Mexico in 2020. This reflects either the effect of low testing rates in Mexico, or the surge in number of deaths due to other causes during the pandemic. A model-based forecast indicates that an average of 61,610 excess deaths have occurred in January 2021.

Publication Type

Journal article.

<93>

Accession Number

20210281187

Author

Hasan, M. J.; Raihan Rabbani; Anam, A. M.; Huq, S. M. R.; Polash, M. M. I.; Nessa, S. S. T.; Bachar, S. C.

Title

Impact of high dose of baricitinib in severe COVID-19 pneumonia: a prospective cohort study in Bangladesh.

Source

BMC Infectious Diseases; 2021. 21(427):(7 May 2021). 27 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Purpose: Hyperinflammation in severe COVID-19 infection increases the risk of respiratory failure and one of the cogent reasons of mortality associated with COVID-19. Baricitinib, a janus kinases inhibitor, can potentially suppress inflammatory cascades in severe COVID-19 pneumonia. **Methods:** The objective of this study was to compare the clinical outcomes of high dose of baricitinib with its usual dose in patients with severe COVID-19 pneumonia. This prospective cohort study was conducted on 238 adult patients with severe COVID-19 pneumonia. Eight milligram and 4 mg of baricitinib was given orally to 122 patients in the high dose (HD) group and 116 patients the usual dose (UD) group, respectively daily for 14 days, and clinical outcomes were compared among the groups. **Results:** Blood oxygen saturation level was stabilized (94% on room air) earlier in the HD group compared to the UD group [5 (IQR: 4-5)/8 (IQR: 6-9), $P < 0.05$]. Patients in the HD group required intensive care unit (ICU) and intubation supports more in the UD group than that in patients of the HD group [17.2%/9%, $P < 0.05$; 11.2%/4.1%, $P > 0.05$; $N = 116/122$, respectively]. The 30-day mortality and 60-day rehospitalization rate were higher in the UD group than the HD group [6%/3.3%, $P < 0.01$; 11.9%/7.6%, $P > 0.05$; $N = 116/122$, respectively]. **Conclusion:** The daily high dose of baricitinib in severe COVID-19 results in early stabilization of the respiratory functions, declined requirements of critical care supports, reduced rehospitalization with mortality rate compared to its daily usual dose.

Publication Type

Journal article.

<94>

Accession Number

20210281185

Author

Sirijatuphat, R.; Suputtamongkol, Y.; Angkasekwinai, N.; Horthongkham, N.; Chayakulkeeree, M.; Rattanaumpawan, P.; Koomanachai, P.; Assanasen, S.; Rongrungruang, Y.; Chierakul, N.; Ratanarat, R.; Jitmuang, A.; Wangchinda, W.; Kantakamalakul, W.

Title

Epidemiology, clinical characteristics, and treatment outcomes of patients with COVID-19 at Thailand's university-based referral hospital.

Source

BMC Infectious Diseases; 2021. 21(382):(26 April 2021). 17 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The epidemiology and outcomes of COVID-19 patients in Thailand are scarce. **Methods:** This retrospective cohort study included adult hospitalized patients who were diagnosed with COVID-19 at Siriraj Hospital during February 2020 to April 2020. **Results:** The prevalence of COVID-19 was 7.5% (107 COVID-19 patients) among 1409 patients who underwent RT-PCR for SARS-CoV-2 detection at our hospital during the outbreak period. Patients with COVID-19 presented with symptoms in 94.4%. Among the 104 patients who were treated with antiviral medications, 78 (75%) received 2-drug regimen (lopinavir/ritonavir or darunavir/ritonavir plus chloroquine or hydroxychloroquine), and 26 (25%) received a 3-drug regimen with favipiravir added to the 2-drug regimen. Disease progression was observed in 18 patients (16.8%). All patients with COVID-19 were discharged alive. **Conclusions:** The prevalence of COVID-19 was 7.5% among patients who underwent RT-PCR testing, and 10% among those having risk factors for COVID-19 acquisition. Combination antiviral therapies for COVID-19 patients were well-tolerated and produced a favorable outcome.

Publication Type

Journal article.

<95>

Accession Number

20210281119

Author

Werku Etafa; Gosa Gadisa; Shibiru Jabessa; Tagay Takele

Title

Healthcare workers' compliance and its potential determinants to prevent COVID-19 in public hospitals in western Ethiopia.

Source

BMC Infectious Diseases; 2021. 21(454):(19 May 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Globally, Coronavirus disease-19 has created unprecedented challenges to public health. Healthcare workers (HCWs) are at risk of COVID-19 because of their profession. There are limited studies conducted in Ethiopia among HCWs regarding their compliance with COVID-19 preventive measures. Therefore, this study intended to assess HCWs' compliance with measures to prevent COVID-19, and its potential determinants in public hospitals in western Ethiopia. Methods: A self-administered, multicenter hospital-based cross-sectional survey was proposed to 422 randomly selected HCWs working in seven public hospitals in western Ethiopia identified as COVID-19 referral centers. Data were entered into Epi Data version 3.1 and analyzed using SPSS version 24. Binary logistic regression was used to identify potential determinants of outcome variables at p-value < 0.05. Results: Out of 422 completed questionnaires, the overall HCWs' compliance with COVID-19 prevention is 22% (n = 404). In multivariate regression analysis, factors such as spending most of caring time at bedside (AOR = 1.94, 95%CI, 1.06-3.55), receiving training on infection prevention/COVID-19 (AOR = 1.86, 95%CI, 1.04-3.33), reading materials on COVID-19 (AOR = 2.04, 95%CI, 1.14-3.63) and having support from hospital management (AOR = 2.09, 95%CI, 1.20-3.64) were found to be significantly associated with COVID-19 preventive measures. Furthermore, inadequate supplies of appropriate personal protective equipment (83.2%), insufficient supportive medications (78.5%), and lack of provision of adequate ventilation (77.7%) were the barriers to COVID-19 prevention most frequently mentioned by participants. Conclusion: Our findings highlight HCWs' poor compliance with COVID-19 preventive measures. Providing information and refreshing training to improve the level of healthcare workers' adherence with COVID-19 prevention is as imperative as increasing staff commitment to supply resources necessary to protect HCWs and to reduce healthcare-associated infections transmission of SARS-COV-2.

Publication Type

Journal article.

<96>

Accession Number

20210281118

Author

Caulley, L.; Shaw, J.; Corsten, M.; Hua, N.; Angel, J. B.; Poliquin, G.; Whelan, J.; Antonation, K.; Johnson-Obaseki, S.

Title

Salivary testing of COVID-19: evaluation of serological testing following positive salivary results.

Source

BMC Infectious Diseases; 2021. 21(410):(4 May 2021). 13 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Salivary detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been proposed as an alternative to nasopharyngeal or oropharyngeal swab testing. Our group previously published a study demonstrating that both testing methods identified SARS-CoV-2 using polymerase chain reaction (PCR)-based detection methodology. We therefore conducted a follow-up study using antibody testing to evaluate the accuracy of saliva versus swabs for COVID-19 detection and the durability of antibody response. Methods: Venous blood samples were collected from consenting participants and the presence of serum antibodies for SARS-CoV-2 was evaluated on a large, automated immunoassay platform by the Roche anti-SARS-CoV-2 qualitative assay (Roche Diagnostics, Laval Quebec). Individuals with a serum antibody cut-off index (COI) 1.0 were considered positive. Results: In asymptomatic and mildly symptomatic patients with a previously positive standard swab and/or saliva SARS-CoV-2 PCR-test, 42 demonstrated antibodies with 13 patients positive by swab alone, and 8 patients positive by saliva alone. Conclusions: Despite their status as 'current standard' for COVID-19 testing, these findings highlight limitations of PCR-based tests.

Publication Type

Journal article.

<97>

Accession Number

20210281115

Author

Zeng ZhiYong; Wu ChaoHui; Lin Zhenlv; Ye Yong; Feng ShaoDan; Fang YingYing; Huang YanMei; Li MinHua; Du DeBing; Chen GongPing; Kang DeZhi

Title

Development and validation of a simple-to-use nomogram to predict the deterioration and survival of patients with COVID-19.

Source

BMC Infectious Diseases; 2021. 21(356):(16 April 2021). 19 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 pandemic has forced physicians to quickly determine the patient's condition and choose treatment strategies. This study aimed to build and validate a simple tool that can quickly predict the deterioration and survival of COVID-19 patients. Methods: A total of 351 COVID-19 patients admitted to the Third People's Hospital of Yichang between 9 January to 25 March 2020 were retrospectively analyzed. Patients were randomly grouped into training (n = 246) or a validation (n = 105) dataset. Risk factors associated with deterioration were identified using univariate logistic regression and least absolute shrinkage and selection operator (LASSO) regression. The factors were then incorporated into the nomogram. Kaplan-Meier analysis was used to compare the survival of patients between the low- and high-risk groups divided by the cut-off point. Results: The least absolute shrinkage and selection operator (LASSO) regression was used to construct the nomogram via four parameters (white blood cells, C-reactive protein, lymphocyte $0.8 \times 10^9/L$, and lactate dehydrogenase 400 U/L). The nomogram showed good discriminative performance with the area under the receiver operating characteristic (AUROC) of 0.945 (95% confidence interval: 0.91-0.98), and good calibration (P = 0.539). Besides, the nomogram showed good discrimination performance and good calibration in the validation and total cohorts (AUROC = 0.979 and AUROC = 0.954, respectively). Decision curve analysis demonstrated that the model had clinical application value. Kaplan-Meier analysis illustrated that low-risk patients had a significantly higher 8-week survival rate than those in the high-risk group (100% vs 71.41% and P < 0.0001). Conclusion: A simple-to-use nomogram with excellent performance in predicting deterioration risk and survival of COVID-19 patients was developed and validated. However, it is necessary to verify this nomogram using a large-scale multicenter study.

Publication Type

Journal article.

<98>

Accession Number

20210281063

Author

Das, J. K.; Swarup Roy

Title

Comparative analysis of human coronaviruses focusing on nucleotide variability and synonymous codon usage patterns.

Source

Genomics (San Diego); 2021. 113(4):2177-2188. 70 ref.

Publisher

Elsevier Science

Location of Publisher

San Diego

Country of Publication

USA

Abstract

The prevailing COVID-19 pandemic has drawn the attention of the scientific community to study the evolutionary origin of Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2). This study is a comprehensive quantitative analysis of the protein-coding sequences of seven human coronaviruses (HCoVs) to decipher the nucleotide sequence variability and codon usage patterns. It is essential to understand the survival ability of the viruses, their adaptation to hosts, and their evolution. The current analysis revealed a high abundance of the relative dinucleotide (odds ratio), GC and CT pairs in the first and last two codon positions, respectively, as well as a low abundance of the CG pair in the last two positions of the codon, which might be related to the evolution of the viruses. A remarkable level of variability of GC content in the third position of the codon among the seven coronaviruses was observed. Codons with high RSCU values are primarily from the aliphatic and hydroxyl amino acid groups, and codons with low RSCU values belong to the aliphatic, cyclic, positively charged, and sulfur-containing amino acid groups. In order to elucidate the evolutionary processes of the seven coronaviruses, a phylogenetic tree (dendrogram) was constructed based on the RSCU scores of the codons. The severe and mild categories CoVs were positioned in different clades. A comparative phylogenetic study with other coronaviruses depicted that SARS-CoV-2 is close to the CoV isolated from pangolins (*Manis javanica*, Pangolin-CoV) and cats (*Felis catus*, SARS(r)-CoV). Further analysis of the effective number of codon (ENC) usage bias showed a relatively higher bias for SARS-CoV and MERS-CoV compared to SARS-CoV-2. The ENC plot against GC3 suggested that the mutational bias might have a role in determining the codon usage variation among candidate viruses. A codon adaptability study on a few human host parasites (from different kingdoms), including CoVs, showed a diverse adaptability pattern. SARS-CoV-2 and SARS-CoV exhibit relatively lower but similar codon adaptability compared to MERS-CoV.

Publication Type

Journal article.

<99>

Accession Number

20210281029

Author

Jahad Alghamdi; Manal Alaamery; Tlili Barhoumi; Mamoon Rashid; Hala Alajmi; Nasser Aljasser; Yaseen Alhendi; Hind Alkhalaf; Hanadi Alqahtani; Omer Algablan; Alshaya, A. I.; Nabiha Tashkandi; Salam

Massadeh; Bader Almuzzaini; Ehaideb, S. N.; Mohammad Bosaeed; Kamal Ayoub; Saber Yezli; Anas Khan; Ahmed Alaskar; Abderrezak Bouchama

Title

Interferon-induced transmembrane protein-3 genetic variant rs12252 is associated with COVID-19 mortality.

Source

Genomics (San Diego); 2021. 113(4):1733-1741. 35 ref.

Publisher

Elsevier Science

Location of Publisher

San Diego

Country of Publication

USA

Abstract

Interferon-induced membrane proteins (IFITM) 3 gene variants are known risk factor for severe viral diseases. We examined whether IFITM3 variant may underlie the heterogeneous clinical outcomes of SARS-CoV-2 infection-induced COVID-19 in large Arab population. We genotyped 880 Saudi patients; 93.8% were PCR-confirmed SARS-CoV-2 infection, encompassing most COVID-19 phenotypes. Mortality at 90 days was 9.1%. IFITM3-SNP, rs12252-G allele was associated with hospital admission (OR = 1.65 [95% CI; 1.01-2.70], P = 0.04) and mortality (OR = 2.2 [95% CI; 1.16-4.20], P = 0.01). Patients less than 60 years old had a lower survival probability if they harbor this allele (log-rank test P = 0.002). Plasma levels of IFNP were significantly lower in a subset of patients with AG/GG genotypes than patients with AA genotype (P = 0.00016). Early identification of these individuals at higher risk of death may inform precision public health response.

Publication Type

Journal article.

<100>

Accession Number

20210281018

Author

Rhee, M. S. M.; Lindquist, C. D.; Silvestrini, M. T.; Chan, A. C.; Ong, J. J. Y.; Sharma, V. K.

Title

Carbon dioxide increases with face masks but remains below short-term NIOSH limits.

Source

BMC Infectious Diseases; 2021. 21(354):(16 April 2021). 21 ref.

Publisher

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Location of Publisher

London

Country of Publication

UK

Abstract

Background and purpose: COVID-19 pandemic led to wide-spread use of face-masks, respirators and other personal protective equipment (PPE) by healthcare workers. Various symptoms attributed to the use of PPE are believed to be, at least in part, due to elevated carbon-dioxide (CO₂) levels. We evaluated concentrations of CO₂ under various PPE. **Methods:** In a prospective observational study on healthy volunteers, CO₂ levels were measured during regular breathing while donning (1) no mask, (2) JustAirR powered air purifying respirator (PAPR), (3) KN95 respirator, and (4) valved-respirator. Serial CO₂ measurements were taken with a nasal canula at a frequency of 1-Hz for 15-min for each PPE configuration to evaluate whether National Institute for Occupational Safety and Health (NIOSH) limits were breached. **Results:** The study included 11 healthy volunteers, median age 32 years (range 16-54) and 6 (55%) men. Percent mean (SD) changes in CO₂ values for no mask, JustAirR PAPR, KN95 respirator and valve respirator were 0.26 (0.12), 0.59 (0.097), 2.6 (0.14) and 2.4 (0.59), respectively. Use of face masks (KN95 and valved-respirator) resulted in significant increases in CO₂ concentrations, which exceeded the 8-h NIOSH exposure threshold limit value-weighted average (TLV-TWA). However, the increases in CO₂ concentrations did not breach short-term (15-min) limits. Importantly, these levels were considerably lower than the long-term (8-h) NIOSH limits during donning JustAirR PAPR. There was a statistically significant difference between all pairs ($p < 0.0001$), except KN95 and valved-respirator ($p = 0.25$). However, whether increase in CO₂ levels are clinically significant remains debatable. **Conclusion:** Although, significant increase in CO₂ concentrations are noted with routinely used face-masks, the levels still remain within the NIOSH limits for short-term use. Therefore, there should not be a concern in their regular day-to-day use for healthcare providers. The clinical implications of elevated CO₂ levels with long-term use of face masks needs further studies. Use of PAPR prevents relative hypercapnoea. However, whether PAPR should be advocated for healthcare workers requiring PPE for extended hours needs to be evaluated in further studies.

Publication Type

Journal article.

<101>

Accession Number

20210281017

Author

Dentone, C.; Vena, A.; Loconte, M.; Grillo, F.; Brunetti, I.; Barisione, E.; Tedone, E.; Mora, S.; Biagio, A. di; Orsi, A.; Maria, A. de; Nicolini, L.; Ball, L.; Giacobbe, D. R.; Magnasco, L.; Delfino, E.; Mastracci, L.; Mangerini, R.; Taramasso, L.; Sepulcri, C.; Pincino, R.; Bavastro, M.; Cerchiaro, M.; Mikulska, M.; Bruzzone, B.; Icardi, G.; Frisoni, P.; Gratarola, A.; Patroniti, N.; Pelosi, P.; Bassetti, M.

Title

Bronchoalveolar lavage fluid characteristics and outcomes of invasively mechanically ventilated patients with COVID-19 pneumonia in Genoa, Italy.

Source

BMC Infectious Diseases; 2021. 21(353):(15 April 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The primary objective of the study is to describe the cellular characteristics of bronchoalveolar lavage fluid (BALF) of COVID-19 patients requiring invasive mechanical ventilation; the secondary outcome is to describe BALF findings between survivors vs non-survivors. Materials and methods: Patients positive for SARS-CoV-2 RT PCR, admitted to ICU between March and April 2020 were enrolled. At ICU admission, BALF were analyzed by flow cytometry. Univariate, multivariate and Spearman correlation analyses were performed. Results: Sixty-four patients were enrolled, median age of 64 years (IQR 58-69). The majority cells in the BALF were neutrophils (70%, IQR 37.5-90.5) and macrophages (27%, IQR 7-49) while a minority were lymphocytes, 1%, TCD3+ 92% (IQR 82-95). The ICU mortality was 32.8%. Non-survivors had a significantly older age ($p = 0.033$) and peripheral lymphocytes ($p = 0.012$) were lower compared to the survivors. At multivariate analysis the percentage of macrophages in the BALF correlated with poor outcome (OR 1.336, CI95% 1.014-1.759, $p = 0.039$). Conclusions: In critically ill patients, BALF cellularity is mainly composed of neutrophils and macrophages. The macrophages percentage in the BALF at ICU admittance correlated with higher ICU mortality. The lack of lymphocytes in BALF could partly explain a reduced anti-viral response.

Publication Type

Journal article.

<102>

Accession Number

20210281014

Author

Caturano, V.; Manti, B.; Carbone, F.; Lasorsa, V. A.; Colicchio, R.; Capasso, M.; Leonardi, A.; Matarese, G.; Russo, T.; Salvatore, P.

Title

Estimating asymptomatic SARS-CoV-2 infections in a geographic area of low disease incidence.

Source

BMC Infectious Diseases; 2021. 21(350):(15 April 2021). 13 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The SARS-CoV-2 infection has emerged as a rapidly spreading infection. Today it is relatively easy to isolate Covid-19 symptomatic cases, while remains problematic to control the disease spread by infected but symptom-free individuals. The control of this possible path of contagion requires drastic measures of social distancing, which imply the suspension of most activities and generate economic and social issues. This study is aimed at estimating the percentage of asymptomatic SARS-CoV-2 infection in a geographic area with relatively low incidence of Covid-19. **Methods:** Blood serum samples from 388 healthy volunteers were analyzed for the presence of anti-SARS-CoV-2 IgG by using an ELISA assay based on recombinant viral nucleocapsid protein. **Results:** We found that 7 out of 388 healthy volunteers, who declared no symptoms of Covid-19, like fever, cough, fatigue etc., in the preceding 5 months, have bona fide serum anti-SARS-CoV-2 IgG, that is 1.8% of the asymptomatic population (95% confidence interval: 0.69-2.91%). **Conclusions:** The estimated range of asymptomatic individuals with anti-SARS-CoV-2 IgG should be between 26,565 and 112,350. In the same geographic area, there are 4665 symptomatic diagnosed cases.

Publication Type

Journal article.

<103>

Accession Number

20210281007

Author

Guru Vasishtha; Mohanty, S. K.; Mishra, U. S.; Manisha Dubey; Umakanta Sahoo

Title

Impact of COVID-19 infection on life expectancy, premature mortality, and DALY in Maharashtra, India.

Source

BMC Infectious Diseases; 2021. 21(343):(12 April 2021). 41 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 infections and deaths have largely been uneven within and between countries. With 17% of the world's population, India has so far had 13% of global COVID-19 infections and 8.5% of deaths. Maharashtra accounting for 9% of India's population, is the worst affected state, with 19% of infections and 33% of total deaths in the country until 23rd December 2020. Though a number of studies have examined the vulnerability to and spread of COVID-19 and its effect on mortality, no attempt has been made to understand its impact on mortality in the states of India. **Method:** Using data from multiple sources and under the assumption that COVID-19 deaths are additional deaths in the population, this paper

examined the impact of the disease on premature mortality, loss of life expectancy, years of potential life lost (YPLL), and disability-adjusted life years (DALY) in Maharashtra. Descriptive statistics, a set of abridged life tables, YPLL, and DALY were used in the analysis. Estimates of mortality indices were compared pre- and during COVID-19. Result: COVID-19 attributable deaths account for 5.3% of total deaths in the state and have reduced the life expectancy at birth by 0.8 years, from 73.2 years in the pre-COVID-19 period to 72.4 years by the end of 2020. If COVID-19 attributable deaths increase to 10% of total deaths, life expectancy at birth will likely reduce by 1.4 years. The probability of death in 20-64 years of age (the prime working-age group) has increased from 0.15 to 0.16 due to COVID-19. There has been 1.06 million additional loss of years (YPLL) in the state, and DALY due to COVID-19 has been estimated to be 6 per thousand. Conclusion: COVID-19 has increased premature mortality, YPLL, and DALY and has reduced life expectancy at every age in Maharashtra.

Publication Type

Journal article.

<104>

Accession Number

20210281006

Author

Flook, M.; Jackson, C.; Vasileiou, E.; Simpson, C. R.; Muckian, M. D.; Agrawal, U.; McCowan, C.; Jia, Y.; Murray, J. L. K.; Ritchie, L. D.; Robertson, C.; Stock, S. J.; Wang, X.; Woolhouse, M. E. J.; Sheikh, A.; Stagg, H. R.

Title

Informing the public health response to COVID-19: a systematic review of risk factors for disease, severity, and mortality.

Source

BMC Infectious Diseases; 2021. 21(342):(12 April 2021). 64 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Severe Acute Respiratory Syndrome coronavirus-2 (SARS-CoV-2) has challenged public health agencies globally. In order to effectively target government responses, it is critical to identify the individuals most at risk of coronavirus disease-19 (COVID-19), developing severe clinical signs, and mortality. We undertook a systematic review of the literature to present the current status of scientific knowledge in these areas and describe the need for unified global approaches, moving forwards, as well as lessons learnt for future pandemics. Methods: Medline, Embase and Global Health were searched to the end of April 2020, as well as the Web of Science. Search terms were specific to the SARS-CoV-2 virus and COVID-19. Comparative studies of risk factors from any setting, population group and in any language were included. Titles, abstracts and full texts were screened by two reviewers and extracted in duplicate into a

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standardised form. Data were extracted on risk factors for COVID-19 disease, severe disease, or death and were narratively and descriptively synthesised. Results: One thousand two hundred and thirty-eight papers were identified post-deduplication. Thirty-three met our inclusion criteria, of which 26 were from China. Six assessed the risk of contracting the disease, 20 the risk of having severe disease and ten the risk of dying. Age, gender and co-morbidities were commonly assessed as risk factors. The weight of evidence showed increasing age to be associated with severe disease and mortality, and general comorbidities with mortality. Only seven studies presented multivariable analyses and power was generally limited. A wide range of definitions were used for disease severity. Conclusions: The volume of literature generated in the short time since the appearance of SARS-CoV-2 has been considerable. Many studies have sought to document the risk factors for COVID-19 disease, disease severity and mortality; age was the only risk factor based on robust studies and with a consistent body of evidence. Mechanistic studies are required to understand why age is such an important risk factor. At the start of pandemics, large, standardised, studies that use multivariable analyses are urgently needed so that the populations most at risk can be rapidly protected.

Publication Type

Journal article.

<105>

Accession Number

20210281005

Author

Tong XunLiang; Xu XiaoMao; Lv GuoYue; Wang He; Cheng AnQi; Wang DingYi; Fan GuoHui; Zhang Yue; Li YanMing

Title

Clinical characteristics and outcome of influenza virus infection among adults hospitalized with severe COVID-19: a retrospective cohort study from Wuhan, China.

Source

BMC Infectious Diseases; 2021. 21(341):(12 April 2021). 29 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) is an emerging infectious disease that rapidly spreads worldwide and co-infection of COVID-19 and influenza may occur in some cases. We aimed to describe clinical features and outcomes of severe COVID-19 patients with co-infection of influenza virus. Methods: Retrospective cohort study was performed and a total of 140 patients with severe COVID-19 were enrolled in designated wards of Sino-French New City Branch of Tongji Hospital between Feb 8th and March 15th in Wuhan city, Hubei province, China. The demographic, clinical features, laboratory indices, treatment and outcomes of these patients were collected. Results: Of 140 severe COVID-19 hospitalized patients, including 73 patients (52.14%) with median age 62 years were influenza virus IgM-positive and 67 patients (47.86%)

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with median age 66 years were influenza virus IgM-negative. 76 (54.4%) of severe COVID-19 patients were males. Chronic comorbidities consisting mainly of hypertension (45.3%), diabetes (15.8%), chronic respiratory disease (7.2%), cardiovascular disease (5.8%), malignancy (4.3%) and chronic kidney disease (2.2%). Clinical features, including fever (38 degrees C), chill, cough, chest pain, dyspnea, diarrhea and fatigue or myalgia were collected. Fatigue or myalgia was less found in COVID-19 patients with IgM-positive (33.3% vs 50/7%, P = 0.0375). Higher proportion of prolonged activated partial thromboplastin time (APTT) > 42 s was observed in COVID-19 patients with influenza virus IgM-negative (43.8% vs 23.6%, P = 0.0127). Severe COVID-19 Patients with influenza virus IgM positive have a higher cumulative survivor rate than that of patients with influenza virus IgM negative (Log-rank P = 0.0308). Considering age is a potential confounding variable, difference in age was adjusted between different influenza virus IgM status groups, the HR was 0.29 (95% CI, 0.081-1.100). Similarly, difference in gender was adjusted as above, the HR was 0.262 (95% CI, 0.072-0.952) in the COX regression model. Conclusions: Influenza virus IgM positive may be associated with decreasing in-hospital death.

Publication Type

Journal article.

<106>

Accession Number

20210281003

Author

Kelly, B. J.; Southwell, B. G.; McCormack, L. A.; Bann, C. M.; MacDonald, P. D. M.; Frasier, A. M.; Bevc, C. A.; Brewer, N. T.; Squiers, L. B.

Title

Predictors of willingness to get a COVID-19 vaccine in the U.S.

Source

BMC Infectious Diseases; 2021. 21(338):(12 April 2021). 19 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: As COVID-19 vaccine distribution efforts continue, public health workers can strategize about vaccine promotion in an effort to increase willingness among those who may be hesitant. **Methods:** In April 2020, we surveyed a national probability sample of 2279 U.S. adults using an online panel recruited through address-based sampling. Households received a computer and internet access if needed to participate in the panel. Participants were invited via e-mail and answered online survey questions about their willingness to get a novel coronavirus vaccine when one became available. The survey was completed in English and Spanish. We report weighted percentages. **Results:** Most respondents were willing to get the vaccine for themselves (75%) or their children (73%). Notably, Black respondents were less willing than White respondents (47% vs. 79%, p < 0.001), while Hispanic respondents were more willing than White

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respondents (80% vs. 75%, $p < 0.003$). Females were less likely than males (72% vs. 79%, $p < 0.001$). Those without insurance were less willing than the insured (47% vs. 78%, $p < 0.001$). Willingness to vaccinate was higher for those age 65 and older than for some younger age groups (85% for those 65 and older vs. 75% for those 50-64, $p < 0.017$; 72% for those 35-49, $p < 0.002$; 70% for those 25-34, $p = \text{NS}$ and 75% for ages 18-24, $p = \text{NS}$), but other groups at increased risk because of underlying medical conditions or morbid obesity were not more willing to get vaccinated than their lower risk counterparts. Conclusions: Most Americans were willing to get a COVID-19 vaccine, but several vulnerable populations reported low willingness. Public health efforts should address these gaps as national implementation efforts continue.

Publication Type

Journal article.

<107>

Accession Number

20210281002

Author

Ranjbar, K.; Moghadami, M.; Mirahmadizadeh, A.; Fallahi, M. J.; Khaloo, V.; Shahriarirad, R.; Erfani, A.; Khodamoradi, Z.; Saadi, M. H. G.

Title

Methylprednisolone or dexamethasone, which one is superior corticosteroid in the treatment of hospitalized COVID-19 patients: a triple-blinded randomized controlled trial.

Source

BMC Infectious Diseases; 2021. 21(337):(10 April 2021). 46 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Although almost a year has passed since the Coronavirus disease 2019 (COVID-19) outbreak and promising reports of vaccines have been presented, we still have a long way until these measures are available for all. Furthermore, the most appropriate corticosteroid and dose in the treatment of COVID-19 have remained uncertain. We conducted a study to assess the effectiveness of methylprednisolone treatment versus dexamethasone for hospitalized COVID-19 patients. **Methods:** In this prospective triple-blinded randomized controlled trial, we enrolled 86 hospitalized COVID-19 patients from August to November 2020, in Shiraz, Iran. The patients were randomly allocated into two groups to receive either methylprednisolone (2 mg/kg/day; intervention group) or dexamethasone (6 mg/day; control group). Data were assessed based on a 9-point WHO ordinal scale extending from uninfected (point 0) to death (point 8). **Results:** There were no significant differences between the groups on admission. However, the intervention group demonstrated significantly better clinical status compared to the control group at day 5 (4.02 vs. 5.21, $p = 0.002$) and day 10 (2.90 vs. 4.71, $p = 0.001$) of admission. There was also a significant difference in the

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overall mean score between the intervention group and the control group, (3.909 vs. 4.873 respectively, $p = 0.004$). The mean length of hospital stay was 7.43 +or- 3.64 and 10.52 +or- 5.47 days in the intervention and control groups, respectively ($p = 0.015$). The need for a ventilator was significantly lower in the intervention group than in the control group (18.2% vs 38.1% $p = 0.040$). Conclusion: In hospitalized hypoxic COVID-19 patients, methylprednisolone demonstrated better results compared to dexamethasone.

Publication Type

Journal article.

<108>

Accession Number

20210281000

Author

Jackson, M. L.; Hart, G. R.; McCulloch, D. J.; Adler, A.; Brandstetter, E.; Fay, K.; Han, P.; Lacombe, K.; Lee, J.; Sibley, T. R.; Nickerson, D. A.; Rieder, M. J.; Starita, L.; Englund, J. A.; Bedford, T.; Chu, H.; Famulare, M.

Title

Effects of weather-related social distancing on city-scale transmission of respiratory viruses: a retrospective cohort study.

Source

BMC Infectious Diseases; 2021. 21(335):(9 April 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Unusually high snowfall in western Washington State in February 2019 led to widespread school and workplace closures. We assessed the impact of social distancing caused by this extreme weather event on the transmission of respiratory viruses. Methods: Residual specimens from patients evaluated for acute respiratory illness at hospitals in the Seattle metropolitan area were screened for a panel of respiratory viruses. Transmission models were fit to each virus to estimate the magnitude reduction in transmission due to weather-related disruptions. Changes in contact rates and care-seeking were informed by data on local traffic volumes and hospital visits. Results: Disruption in contact patterns reduced effective contact rates during the intervention period by 16 to 95%, and cumulative disease incidence through the remainder of the season by 3 to 9%. Incidence reductions were greatest for viruses that were peaking when the disruption occurred and least for viruses in an early epidemic phase. Conclusion: High-intensity, short-duration social distancing measures may substantially reduce total incidence in a respiratory virus epidemic if implemented near the epidemic peak. For SARS-CoV-2, this suggests that, even when SARS-CoV-2 spread is out of control, implementing short-term disruptions can prevent COVID-19 deaths.

Publication Type

Journal article.

<109>

Accession Number

20210280998

Author

Rong Yan; Wang Fei; Tian JinFei; Liang XinHua; Wang Jing; Li XiaoLi; Zhang DanDan; Liu Jing; Zeng HuaDong; Zhou Yang; Shi Yi

Title

Clinical and CT features of mild-to-moderate COVID-19 cases after two sequential negative nucleic acid testing results: a retrospective analysis.

Source

BMC Infectious Diseases; 2021. 21(333):(8 April 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The clinical and imaging features of patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections that progressed to coronavirus disease 2019 (COVID-19) have been explored in numerous studies. However, little is known about these features in patients who received negative respiratory nucleic acid test results after the infections resolved. In this study, we aim to describe these features in a group of Chinese patients. Methods: This retrospective study includes 51 patients with mild-to-moderate COVID-19 (median age: 34.0 years and 47.1% male) between January 31 and February 28, 2020. Demographic, clinical, laboratory, and computed tomography (CT) imaging data were collected before and after two consecutive negative respiratory SARS-CoV-2 tests. Results: Following a negative test result, the patients' clinical symptoms continued to recover, but abnormal imaging findings were observed in all moderate cases. Specifically, 77.4% of patients with moderate COVID-19 exhibited multi-lobar lung involvement and lesions were more frequently observed in the lower lobes. The most common CT imaging manifestations were ground-glass opacities (51.6%) and fibrous stripes (54.8%). Twelve of the 31 patients with moderate COVID-19 underwent repeated chest CT scans after a negative SARS-CoV-2 test. Among them, the ground-glass opacities decreased by > 60% within 1 week in seven patients (58.3%), but by < 5% in four patients (13.8%). Conclusions: Following a positive and subsequent negative SARS-CoV-2 tests, patients with COVID-19 continued to recover despite exhibiting persistent clinical symptoms and abnormal imaging findings.

Publication Type

Journal article.

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<110>

Accession Number

20210280990

Author

Shah, J.; Liu Song; Potula, H. H.; Bhargava, P.; Cruz, I.; Force, D.; Bazerbashi, A.; Ramasamy, R.

Title

IgG and IgM antibody formation to spike and nucleocapsid proteins in COVID-19 characterized by multiplex immunoblot assays.

Source

BMC Infectious Diseases; 2021. 21(325):(7 April 2021). 21 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Rapid and simple serological assays for characterizing antibody responses are important in the current COVID-19 pandemic caused by SARS-CoV-2. Multiplex immunoblot (IB) assays termed COVID-19 IB assays were developed for detecting IgG and IgM antibodies to SARS-CoV-2 virus proteins in COVID-19 patients. Methods: Recombinant nucleocapsid protein and the S1, S2 and receptor binding domain (RBD) of the spike protein of SARS-CoV-2 were used as target antigens in the COVID-19 IBs. Specificity of the IB assay was established with 231 sera from persons with allergy, unrelated viral infections, autoimmune conditions and suspected tick-borne diseases, and 32 goat antisera to human influenza proteins. IgG and IgM COVID-19 IBs assays were performed on 84 sera obtained at different times after a positive RT-qPCR test from 37 COVID-19 patients with mild symptoms. Results: Criteria for determining overall IgG and IgM antibody positivity using the four SARS-CoV-2 proteins were developed by optimizing specificity and sensitivity in the COVID-19 IgG and IgM IB assays. The estimated sensitivities and specificities of the COVID-19 IgG and IgM IBs for IgG and IgM antibodies individually or for either IgG or IgM antibodies meet the US recommendations for laboratory serological diagnostic tests. The proportion of IgM-positive sera from the COVID-19 patients following an RT-qPCR positive test was maximal at 83% before 10 days and decreased to 0% after 100 days, while the proportions of IgG-positive sera tended to plateau between days 11 and 65 at 78-100% and fall to 44% after 100 days. Detection of either IgG or IgM antibodies was better than IgG or IgM alone for assessing seroconversion in COVID-19. Both IgG and IgM antibodies detected RBD less frequently than S1, S2 and N proteins. Conclusions: The multiplex COVID-19 IB assays offer many advantages for simultaneously evaluating antibody responses to different SARS-CoV-2 proteins in COVID-19 patients.

Publication Type

Journal article.

<111>

Accession Number

20210280863

Author

Cousijn, J.; Kuhns, L.; Larsen, H.; Kroon, E.

Title

For better or for worse? A pre-post exploration of the impact of the COVID-19 lockdown on cannabis users.

Source

Addiction; 2021. 116(8):2104-2115. 35 ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background and aims: Lockdown measures aimed at limiting the number of infections and deaths from the coronavirus disease 2019 (COVID-19) have introduced substantial psychosocial stressors in everyday life. We aimed to investigate the influence of the Dutch lockdown on cannabis use and cannabis use disorder (CUD) and investigate relations with change in mental wellbeing and experienced psychosocial stressors during the lockdown. Design: Explorative longitudinal baseline-, pre- and during lockdown survey study. Setting: The Netherlands, on-line between January 2019 and May 2020. Participants: Community sample of 120 monthly to daily cannabis users and reference group of 63 non-using controls. Measurements: Change in cannabis use and CUD symptom severity from baseline to pre- to post-lockdown. Change in cannabis use motives, mental health, quality of social relationships and job status from pre- to post-lockdown. Findings: In cannabis users, lockdown related to increased cannabis use [B = 1.96, 95% confidence interval (CI) = 0.26-3.66, P = 0.024], but not CUD symptom severity. Cannabis users experienced 30% job loss and increased loneliness [P < 0.001, Bayes factor (BF)₁₀ > 100], while contact with partners (P = 0.005, BF₁₀ = 8.21) and families improved (P < 0.001, BF₁₀ = 19.73), with no differences between cannabis users and control. Generally, mental health problems (all P s > 0.277, all BF₁₀ < 0.139) did not change, but individual differences were significant and severity of cannabis use pre-lockdown, COVID-19-related worries, change in anxiety, expansion motives, social motives and family contact all uniquely related to variance in change in cannabis use or CUD. Conclusions: While cannabis use among daily cannabis users in the Netherlands increased at the group level during the period of COVID-19 lockdown, the effect of the first months of lockdown on cannabis use disorder severity and mental wellbeing varied significantly among individual daily cannabis users.

Publication Type

Journal article.

<112>

Accession Number

20210280826

Author

Peng Chi; Wang Hao; Guo YuFeng; Qi GeYao; Zhang ChenXu; Chen Ting; He Jia; Jin ZhiChao

Title

Calcium channel blockers improve prognosis of patients with Coronavirus disease 2019 and hypertension.

Source

Chinese Medical Journal (Beijing); 2021. 134(13):1602-1609.

Publisher

Chinese Medical Association Publishing House Co., Ltd

Location of Publisher

Beijing

Country of Publication

China

Abstract

Background: Hypertension is considered an important risk factor for the coronavirus disease 2019 (COVID-19). The commonly anti-hypertensive drugs are the renin-angiotensin-aldosterone system (RAAS) inhibitors, calcium channel blockers (CCBs), and beta-blockers. The association between commonly used anti-hypertensive medications and the clinical outcome of COVID-19 patients with hypertension has not been well studied. Methods: We conducted a retrospective cohort study that included all patients admitted with COVID-19 to Huo Shen Shan Hospital and Guanggu District of the Maternal and Child Health Hospital of Hubei Province, Wuhan, China. Clinical and laboratory characteristics were extracted from electronic medical records. Hypertension and anti-hypertensive treatment were confirmed by medical history and clinical records. The primary clinical endpoint was all-cause mortality. Secondary endpoints included the rates of patients in common wards transferred to the intensive care unit and hospital stay duration. Logistic regression was used to explore the risk factors associated with mortality and prognosis. Propensity score matching was used to balance the confounders between different anti-hypertensive treatments. Kaplan-Meier curves were used to compare the cumulative recovery rate. Log-rank tests were performed to test for differences in Kaplan-Meier curves between different groups. Results: Among 4569 hospitalized patients with COVID-19, 31.7% (1449/4569) had a history of hypertension. There were significant differences in mortality rates between hypertensive patients with CCBs (7/359) and those without (21/359) (1.95% vs. 5.85%, risk ratio [RR]: 0.32, 95% confidence interval [CI]: 0.13-0.76, $X^2 = 7.61$, $P = 0.0058$). After matching for confounders, the mortality rates were similar between the RAAS inhibitor (4/236) and non-RAAS inhibitor (9/236) cohorts (1.69% vs. 3.81%, RR: 0.43, 95% CI: 0.13-1.43, $X^2 = 1.98$, $P = 0.1596$). Hypertensive patients with beta-blockers (13/340) showed no statistical difference in mortality compared with those without (11/340) (3.82% vs. 3.24%, RR: 1.19, 95% CI: 0.53-2.69, $X^2 = 0.17$, $P = 0.6777$). Conclusions: In our study, we did not find any positive or negative effects of RAAS inhibitors or beta-blockers in COVID-19 patients with hypertension, while CCBs could improve prognosis.

Publication Type

Journal article.

<113>

Accession Number

20210280569

Author

Gathiram, P.; Moodley, J.; Khaliq, O. P.

Title

COVID-19 pandemic: perspectives on management.

Source

Journal of Reproductive Immunology; 2021. 146.

Publisher

Elsevier Science Ireland Ltd.

Location of Publisher

Shannon

Country of Publication

Irish Republic

Abstract

The pandemic COVID-19 presents a major challenge to identify effective drugs for treatment. Clinicians need evidence based on randomized trials regarding effective medical treatments for this infection. Currently no effective therapies exist for the progression of the mild forms to severe disease. Knowledge however is rapidly expanding. Remdesivir, an anti- retroviral agent has in vitro activity against this virus and has shown to decrease the duration of ICU care in patients with severe disease, while low dose dexamethasone also showed a decrease in the duration of stay in cases of severe disease requiring assisted ventilation. At the time of writing this article, two mRNA-based vaccines have shown an approximate 95% efficacy in preventing infection in large clinical trials. At least one of these drugs has regulatory permission for vaccination in high-income countries. Low and middle-income countries may have difficulties in initiating vaccine programs on large scales because of availability, costs, refrigeration and dissemination. Adequately powered randomized trials are required for drugs with in vitro activity against the virus. Supportive care should be provided for stable, hypoxia and pneumonia free patients on imaging. Vaccines are of obvious benefit and given the preliminary evidence of the efficacy of over 95%, Low and middle-income countries must develop links with the WHO COVAX program to ensure global distribution of vaccines.

Publication Type

Journal article.

<114>

Accession Number

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20210280209

Author

Thacker, V. V.; Sharma, K.; Dhar, N.; Mancini, G. F.; Sordet-Dessimoz, J.; McKinney, J. D.

Title

Rapid endotheliitis and vascular damage characterize SARS-CoV-2 infection in a human lung-on-chip model.

Source

EMBO Reports; 2021. 22(6). 78 ref.

Publisher

Wiley

Location of Publisher

Weinheim

Country of Publication

Germany

Abstract

Severe cases of SARS-CoV-2 infection are characterized by hypercoagulopathies and systemic endotheliitis of the lung microvasculature. The dynamics of vascular damage, and whether it is a direct consequence of endothelial infection or an indirect consequence of an immune cell-mediated cytokine storm remain unknown. Using a vascularized lung-on-chip model, we find that infection of alveolar epithelial cells leads to limited apical release of virions, consistent with reports of monoculture infection. However, viral RNA and proteins are rapidly detected in underlying endothelial cells, which are themselves refractory to apical infection in monocultures. Although endothelial infection is unproductive, it leads to the formation of cell clusters with low CD31 expression, a progressive loss of barrier integrity and a pro-coagulatory microenvironment. Viral RNA persists in individual cells generating an inflammatory response, which is transient in epithelial cells but persistent in endothelial cells and typified by IL-6 secretion even in the absence of immune cells. Inhibition of IL-6 signalling with tocilizumab reduces but does not prevent loss of barrier integrity. SARS-CoV-2-mediated endothelial cell damage thus occurs independently of cytokine storm.

Publication Type

Journal article.

<115>

Accession Number

20210280166

Author

Kemmler, W.; Hettchen, M.; Kohl, M.; Murphy, M.; Bragonzoni, L.; Julin, M.; Risto, T.; Stengel, S. von

Title

Detraining effects on musculoskeletal parameters in early postmenopausal osteopenic women: 3-month follow-up of the randomized controlled ACTLIFE study.

Source

Calcified Tissue International; 2021. 109(1):1-11. 52 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

Periods of absence from supervised group exercise while maintaining physical activity might be a frequent pattern in adults' exercise habits. The aim of the present study was to determine detraining effects on musculoskeletal outcomes after a 3-month detraining period in early post-menopausal, osteopenic women. Due to the COVID-19 pandemic, we terminated the 18-month randomized controlled ACTLIFE exercise intervention immediately after the 13-month follow-up assessment. This put an abrupt stop to the high-intensity aerobic and resistance group exercise sessions undertaken three times per week by the exercise group (EG: n = 27) and the gentle exercise program performed once per week for the attention control group (CG: n = 27); but both groups were permitted to conduct individual outdoor activity for the 3-month lock-down period. Study endpoints were lean body mass (LBM), bone mineral density (BMD) at the lumbar spine (LS), maximum hip-/leg extension strength and power. Detraining-induced reductions of LBM, hip/leg strength and power (but not BMD-LS) were significantly greater ($p < 0.001$ to $p = 0.044$) compared with the CG. Significant exercise effects, i.e. differences between EG and CG, present after 13 months of exercise, were lost after 3 months of detraining for LBM ($p = 0.157$) and BMD-LS ($p = 0.065$), but not for strength ($p < 0.001$) and power ($p < 0.001$). Of note, self-reported individual outdoor activities and exercise increased by about 40% in both groups during the lock-down period. Three months' absence from a supervised group exercise protocol resulted in considerable detraining effects for musculoskeletal parameters. Thus, exercise programs for adults should be continuous rather than intermittent.

Publication Type

Journal article.

<116>

Accession Number

20210280141

Author

Gupta, R.; Kumaran, M.; Rali, P.

Title

Common and uncommon chest computed tomography findings at hospital admission with COVID-19 pneumonia.

Source

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Lung India; 2021. 38(7 (Suppl.)):S101-S104. 8 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 pneumonia is a serious health issue in the current pandemic caused by SARS-CoV-2. PCR testing is limited due to a number of factors and imaging has role in decision-making for many of these patients. We present computed tomography chest images of patients hospitalized with suspicion of COVID-19 pneumonia and point out the common and uncommon features on imaging to assist management of these patients.

Publication Type

Journal article.

<117>

Accession Number

20210280140

Author

Iyengar, K. P.; Rakesh Garg; Jain, V. K.; Nipun Malhotra; Pranav Ish

Title

Electronic intensive care unit: a perspective amid the COVID-19 era - need of the day!

Source

Lung India; 2021. 38(7 (Suppl.)):S97-S100. 11 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

The COVID-19 pandemic has awakened the need for telemedicine and teleconsultation to continue medical care while maintaining social distancing for safety against infection. The concept of the electronic intensive care unit (e-ICU) is evolving rapidly in developed nations. e-ICU in developing countries like India not only

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has great potential but also has many roadblocks. This article showcases the concept, advantages, and challenges of e-ICU in India, with a glimpse of the future.

Publication Type

Journal article.

<118>

Accession Number

20210280136

Author

Alkhatami, M. G.; Advani, S. M.; Abalkhail, A. A.; Alkhatami, F. M.; Alshehri, M. K.; Albeashy, E. E.; Alsalamah, J. A.

Title

Prevalence and mortality of lung comorbidities among patients with COVID-19: a systematic review and meta-analysis.

Source

Lung India; 2021. 38(7 (Supl.)):S31-S40. 59 ref.

Publisher

Medknow Publications

Location of Publisher

Mumbai

Country of Publication

India

Abstract

COVID-19 infections are seen across all age groups, but they have shown to have a predisposition for the elderly and those with underlying comorbidities. Patients with severe COVID-19 infections and comorbidities are more prone to respiratory distress syndrome, mechanical ventilator use, and ultimately succumb to these complications. Little evidence exists of the prevalence of underlying lung comorbidities among COVID-19 patients and associated mortality. We performed a systematic review of the literature including PubMed (Medline), Embase (Ovid), Google Scholar, and Cochrane Library. The last date for our search was April 29, 2020. We included all original research articles on COVID-19 and calculated prevalence of chronic lung disease patients among COVID-19 patients using random effects model. Further, we assessed for mortality rates among COVID-19 patients associated with these lung comorbidities. The authors identified 29 articles that reported prevalence of chronic lung conditions among COVID-19 patients. Among those, 26 were from China and 3 from the United States. The pooled prevalence of lung comorbidities including asthma, chronic obstructive pulmonary disease (COPD), and lung cancer was 3% (95% confidence interval [CI] = 0%-14%), 2.2% (95% CI = 0.02%-0.03%), and 2.1% (95% CI = 0.00%-0.21%), respectively. Mortality rates associated with these comorbidities was 30% (41/137) for COPD and 19% (7/37) for lung cancer respectively. No mortality rates were reported for patients with asthma. This study offers latest evidence of prevalence of chronic lung conditions among patients with COVID-19. Asthma, followed by COPD and lung cancer, was the most common lung comorbidity associated with COVID-19, while the higher mortality rate was found in

COPD. Future studies are needed to assess other lung comorbidities and associated mortality among patients diagnosed with COVID-19.

Publication Type

Journal article.

<119>

Accession Number

20210280131

Author

Li XinYu; Cai YuFeng; Ding YingHe; Li JiaDa; Huang GuoQing; Liang Ye; Xu LinYong

Title

Discrete simulation analysis of COVID-19 and prediction of isolation bed numbers.

Source

PeerJ; 2021. 9(11629). 34 ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: The outbreak of COVID-19 has been defined by the World Health Organization as a pandemic, and containment depends on traditional public health measures. However, the explosive growth of the number of infected cases in a short period of time has caused tremendous pressure on medical systems. Adequate isolation facilities are essential to control outbreaks, so this study aims to quickly estimate the demand and number of isolation beds. Methods: We established a discrete simulation model for epidemiology. By adjusting or fitting necessary epidemic parameters, the effects of the following indicators on the development of the epidemic and the occupation of medical resources were explained: (1) incubation period, (2) response speed and detection capacity of the hospital, (3) disease healing time, and (4) population mobility. Finally, a method for predicting the number of isolation beds was summarized through multiple linear regression. This is a city level model that simulates the epidemic situation from the perspective of population mobility. Results: Through simulation, we show that the incubation period, response speed and detection capacity of the hospital, disease healing time, degree of population mobility, and infectivity of cured patients have different effects on the infectivity, scale, and duration of the epidemic. Among them, (1) incubation period, (2) response speed and detection capacity of the hospital, (3) disease healing time, and (4) population mobility have a significant impact on the demand and number of isolation beds ($P < 0.05$), which agrees with the following regression equation: $N = P \times (-0.273 + 0.009I + 0.234M + 0.012T1 + 0.015T2) \times (1 + V)$.

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Journal article.

<120>

Accession Number

20210280119

Author

Lyu Yong; Wang DanNi; Li XiuDe; Gong TianQi; Xu PengPeng; Liu Lei; Sun Jie

Title

Continued nucleic acid tests for SARS-CoV-2 following discharge of patients with COVID-19 in Lu'an, China.

Source

PeerJ; 2021. 9(11617). 28 ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: Studies have shown that discharged Coronavirus disease 2019 (COVID-19) patients have retested positive for SARS-CoV-2 during a follow-up RT-PCR test. We sought to assess the results of continued nucleic acid testing for SARS-CoV-2 patients in COVID-19 patients after they were discharged in Lu'an, China. Methods: We conducted RT-PCR tests on sputum, throat swabs, fecal or anal swabs, and urine samples collected from 67 COVID-19 patients following discharge. Samples were collected on the 7th and 14th days following discharge. Patients testing positive on the 7th or 14th day were retested after 24 hours until they tested negative twice. Results: Seventeen (17/67, 25.4%) discharged COVID-19 patients had a positive RT-PCR retest for SARS-CoV-2. Among them, 14 (82.4%) were sputum positive, five (29.4%) were throat swab positive, seven (41.2%) were fecal or anal swab positive, one (5.9%) was urine sample positive, five (29.4%) were both sputum and throat swab positive, four (23.5%) were both sputum and fecal test positive, and one (5.9%) was positive of all four specimens. The shortest period of time between discharge and the last positive test was 7 days, the longest was 48 days, and the median was 16 days. The proportion of positive fecal or anal swab tests increased from the third week. The median Cq cut-off values after onset were 26.7 after the first week, 37.7 the second to sixth week, and 40 after the sixth week. There were no significant differences between the RT-PCR retest positive group and the unrecovered positive group. Conclusions: There was a high proportion of patients who retested positive for COVID-19. Discharge criteria have remained fairly consistent so we encourage regions affected by COVID-19 to appropriately amend their current criteria.

Publication Type

Journal article.

<121>

Accession Number

20210280087

Author

Lee, K. K.; Doudesis, D.; Ross, D. A.; Bularga, A.; MacKintosh, C. L.; Koch, O.; Johannessen, I.; Templeton, K.; Jenks, S.; Chapman, A. R.; Shah, A. S. V.; Anand, A.; Perry, M. R.; Mills, N. L.

Title

Diagnostic performance of the combined nasal and throat swab in patients admitted to hospital with suspected COVID-19.

Source

BMC Infectious Diseases; 2021. 21(318):(6 April 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Accurate diagnosis in patients with suspected coronavirus disease 2019 (COVID-19) is essential to guide treatment and limit spread of the virus. The combined nasal and throat swab is used widely, but its diagnostic performance is uncertain. **Methods:** In a prospective, multi-centre, cohort study conducted in secondary and tertiary care hospitals in Scotland, we evaluated the combined nasal and throat swab with reverse transcriptase-polymerase chain reaction (RT-PCR) for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) in consecutive patients admitted to hospital with suspected COVID-19. Diagnostic performance of the index and serial tests was evaluated for a primary outcome of confirmed or probable COVID-19, and a secondary outcome of confirmed COVID-19 on serial testing. The diagnosis was adjudicated by a panel, who recorded clinical, laboratory and radiological features blinded to the test results. **Results:** We enrolled 1368 consecutive patients (median age 68 [interquartile range, IQR 53-80] years, 47% women) who underwent a total of 3822 tests (median 2 [IQR 1-3] tests per patient). The primary outcome occurred in 36% (496/1368), of whom 65% (323/496) and 35% (173/496) had confirmed and probable COVID-19, respectively. The index test was positive in 255/496 (51%) patients with the primary outcome, giving a sensitivity and specificity of 51.4% (95% confidence interval [CI] 48.8 to 54.1%) and 99.5% (95% CI 99.0 to 99.8%). Sensitivity increased in those undergoing 2, 3 or 4 tests to 60.1% (95% CI 56.7 to 63.4%), 68.3% (95% CI 64.0 to 72.3%) and 77.6% (95% CI 72.7 to 81.9%), respectively. The sensitivity of the index test was 78.9% (95% CI 74.4 to 83.2%) for the secondary outcome of confirmed COVID-19 on serial testing. **Conclusions:** In patients admitted to hospital, a single combined nasal and throat swab with RT-PCR for SARS-CoV-2 has excellent specificity, but limited diagnostic sensitivity for COVID-19. Diagnostic performance is significantly improved by repeated testing.

Publication Type

Journal article.

<122>

Accession Number

20210280076

Author

Sabaka, P.; Koscalova, A.; Straka, I.; Hodosy, J.; Liptak, R.; Kmotorkova, B.; Kachlikova, M.; Kusnirova, A.

Title

Role of interleukin 6 as a predictive factor for a severe course of Covid-19: retrospective data analysis of patients from a long-term care facility during Covid-19 outbreak.

Source

BMC Infectious Diseases; 2021. 21(308):(29 March 2021). 30 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Covid-19 is a disease with high morbidity and mortality among elderly residents of long-term care facilities (LTCF). During an outbreak of SARS-CoV-2 infection in the LTCF an effective screening tool is essential to identify the patients at risk for severe disease. We explored the role of interleukin 6 (IL-6) as a predictor for severe disease during the outbreak of Covid-19 in one LTCF in Slovakia. Methods: We conducted a retrospective data analysis of cases of COVID-19, diagnosed during the outbreak in one LTCF in Slovakia between April 11, 2020, and May 5, 2020. Within 24 h after the diagnosis of Covid-19, clinical and laboratory screening was performed in the LTCF to identify patients in need of hospitalization. Patients with oxygen saturation below 90% were immediately referred to the hospital. Patients staying in the LTCF were monitored daily and those that developed hypoxemia were transferred to the hospital. We analyzed the association between the IL-6 at the initial assessment and development of hypoxemia during follow up and determined the cut-off of the IL-6 able to predict the development of hypoxemia requiring oxygen therapy. Results: Fifty-three patients (11 men, 42 women) with diagnosed Covid-19 were included in the analysis. 19 (53%) patients developed hypoxemia during the disease. Patients with hypoxemia had significantly higher concentrations of IL-6, C-reactive protein, procalcitonin, fibrinogen, total bilirubin, aspartate aminotransferase and alanine aminotransferase at initial screening. ROC analyses identified IL-6 as the most robust predictor of hypoxemia. The concentration of IL-6 > 24 pg/mL predicted the development of hypoxemia with the sensitivity of 100% and specificity of 88.9%. The positive and negative predictive values were 76.9, and 100% respectively. Conclusions: The concentration of IL-6 > 24 pg/mL at initial assessment predicted the development of hypoxemia requiring hospitalization with excellent sensitivity and good specificity. IL-6 appears as a potential predictor for the development of the severe Covid-19 and might serve for early identification of patients in need of hospitalization. Further studies are needed to evaluate the robustness of the use of IL-6 as an effective screening tool for the severe course of Covid-19.

Publication Type

Journal article.

<123>

Accession Number

20210280072

Author

Osikomaiya, B.; Erinoso, O.; Wright, K. O.; Odusola, A. O.; Thomas, B.; Adeyemi, O.; Bowale, A.; Adejumo, O.; Falana, A.; Abdus-Salam, I.; Ogboye, O.; Osibogun, A.; Abayomi, A.

Title

'Long COVID': persistent COVID-19 symptoms in survivors managed in Lagos state, Nigeria.

Source

BMC Infectious Diseases; 2021. 21(304):(25 March 2021). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease once thought to be a respiratory infection is now recognised as a multi-system disease affecting the respiratory, cardiovascular, gastrointestinal, neurological, immune, and hematopoietic systems. An emerging body of evidence suggests the persistence of COVID-19 symptoms of varying patterns among some survivors. This study aimed to describe persistent symptoms in COVID-19 survivors and investigate possible risk factors for these persistent symptoms. Methods: The study used a retrospective study design. The study population comprised of discharged COVID-19 patients. Demographic information, days since discharge, comorbidities, and persistent COVID-19 like symptoms were assessed in patients attending the COVID-19 outpatient clinic in Lagos State. Statistical analysis was done using STATA 15.0 software (StataCorp Texas) with significance placed at p-value < 0.05. Results: A total of 274 patients were enrolled in the study. A majority were within the age group > 35 to 49 years (38.3%), and male (66.1%). More than one-third (40.9%) had persistent COVID-19 symptoms after discharge, and 19.7% had more than three persistent COVID-like symptoms. The most persistent COVID-like symptoms experienced were easy fatigability (12.8%), headaches (12.8%), and chest pain (9.8%). Symptomatic COVID-19 disease with moderate severity compared to mild severity was a predictor of persistent COVID-like symptoms after discharge (p < 0.05). Conclusion: Findings from this study suggests that patients who recovered from COVID-19 disease may still experience COVID-19 like symptoms, particularly fatigue and headaches. Therefore, careful monitoring should be in place after discharge to help mitigate the effects of these symptoms and improve the quality of life of COVID-19 survivors.

Publication Type

Journal article.

<124>

Accession Number

20210280067

Author

Li GuiLing; Du Li; Cao XiaoLing; Wei XiuQi; Jiang Yao; Lin YuQi; Nguyen, V.; Tan WenBin; Wang Hui

Title

Follow-up study on serum cholesterol profiles and potential sequelae in recovered COVID-19 patients.

Source

BMC Infectious Diseases; 2021. 21(299):(24 March 2021). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 patients develop hypolipidemia. However, it is unknown whether lipid levels have improved and there are potential sequelae in recovered patients. Background: In this follow-up study, we evaluated serum lipidemia and various physiopathological laboratory values in recovered patients. Methods: A 3-6 month follow-up study was performed between June 15 and September 3, 2020, to examine serum levels of laboratory values in 107 discharged COVID-19 patients (mild = 59; severe/critical = 48; diagnoses on admission). Sixty-one patients had a revisit chest CT scan. A Wilcoxon signed-rank test was used to analyze changes in laboratory values at admission and follow-up. Results: LDL-c and HDL-c levels were significantly higher at follow-up than at admission in severe/critical cases ($p < 0.05$). LDL-c levels were significantly higher at follow-up than at admission in mild cases ($p < 0.05$). Coagulation and liver functional values were significantly improved at follow-up than at admission for patients ($p < 0.05$). Increases in HDL-c significantly correlated with increases in numbers of white blood cells ($p < 0.001$) during patients' recovery. With exclusion of the subjects taking traditional Chinese medicines or cholesterol-lowering drugs, LDL-c and HDL-c levels were significantly increased at follow-up than at admission in severe/critical cases ($p < 0.05$). Residue lesions were observed in CT images in 72% (44 of 61) of follow-up patients. Conclusions: Improvements of LDL-c, HDL-c, liver functions, and incomplete resolution of lung lesions were observed at 3-6 month follow-up for recovered patients, indicating that a long-term recovery process could be required and the development of sequelae such as pulmonary fibrosis could be expected in some patients.

Publication Type

Journal article.

<125>

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E: library@rcvsknowledge.org

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116

Accession Number

20210280066

Author

Werner, J.; Reichen, I.; Huber, M.; Abela, I. A.; Weller, M.; Jelcic, I.

Title

Subacute cerebellar ataxia following respiratory symptoms of COVID-19: a case report.

Source

BMC Infectious Diseases; 2021. 21(298):(24 March 2021). 35 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Severe acute respiratory syndrome virus 2 (SARS-CoV-2) is spreading globally and causes most frequently fever and respiratory symptoms, i.e. Coronavirus disease 2019 (COVID-19), however, distinct neurological syndromes associated with SARS-CoV-2 infection have been described. Among SARS-CoV-2-infections-associated neurological symptoms fatigue, headache, dizziness, impaired consciousness and anosmia/ageusia are most frequent, but less frequent neurological deficits such as seizures, Guillain-Barre syndrome or ataxia may also occur. Case presentation: Herein we present a case of a 62-year-old man who developed a subacute cerebellar syndrome with limb-, truncal- and gait ataxia and scanning speech 1 day after clinical resolution of symptomatic SARS-CoV-2 infection of the upper airways. Apart from ataxia, there were no signs indicative of opsoclonus myoclonus ataxia syndrome or Miller Fisher syndrome. Cerebral magnetic resonance imaging showed mild cerebellar atrophy. SARS-CoV-2 infection of the cerebellum was excluded by normal cerebrospinal fluid cell counts and, most importantly, absence of SARS-CoV-2 RNA or intrathecal SARS-CoV-2-specific antibody production. Other causes of ataxia such as other viral infections, other autoimmune and/or paraneoplastic diseases or intoxication were ruled out. The neurological deficits improved rapidly after high-dose methylprednisolone therapy. Conclusions: The laboratory and clinical findings as well as the marked improvement after high-dose methylprednisolone therapy suggest a post-infectious, immune-mediated cause of ataxia. This report should make clinicians aware to consider SARS-CoV-2 infection as a potential cause of post-infectious neurological deficits with an atypical clinical presentation and to consider high-dose corticosteroid treatment in case that a post-infectious immune-mediated mechanism is assumed.

Publication Type

Journal article.

<126>

Accession Number

20210280065

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Author

Firozabad, A. R.; Meybodi, Z. A.; Mousavinasab, S. R.; Sahebnasagh, A.; Jelodar, M. G.; Karimzadeh, I.; Habtemariam, S.; Saghafi, F.

Title

Efficacy and safety of levamisole treatment in clinical presentations of non-hospitalized patients with COVID-19: a double-blind, randomized, controlled trial.

Source

BMC Infectious Diseases; 2021. 21(297):(24 March 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Levamisole has shown clinical benefits in the management of COVID-19 via its immunomodulatory effect. However, the exact role of Levamisole effect in clinical status of COVID-19 patients is unknown. We aimed to evaluate the efficacy of Levamisole on clinical status of patients with COVID-19 during their course of the disease. Methods: This prospective, double-blind, randomized controlled clinical trial was performed in adult patients with mild to moderate COVID-19 (room-air oxygen saturation > 94%) from late April 2020 to mid-August 2020. Patients were randomly assigned to receive a 3-day course of Levamisole or placebo in combination with routine standard of care. Results: With 25 patients in each arm, 50 patients with COVID-19 were enrolled in the study. Most of the study participants were men (60%). On days 3 and 14, patients in Levamisole group had significantly better cough status distribution when compared to the placebo group (P-value = 0.034 and 0.005, respectively). Moreover, there was significant differences between the two groups in dyspnea at follow-up intervals of 7 (P-value = 0.015) and 14 (P-value = 0.010) days after receiving the interventions. However, no significant difference in fever status was observed on days 1, 3, 7, and 14 in both groups (P-value > 0.05). Conclusion: The results of the current study suggest that Levamisole may improve most of clinical status of patients with COVID-19. The patients receiving Levamisole had significantly better chance of clinical status including cough and dyspnea on day 14 when compared to the placebo. However, the effect-size of this finding has uncertain clinical importance.

Publication Type

Journal article.

<127>

Accession Number

20210280004

Author

Dewi, I. M. W.; Janssen, N. A. F.; Rosati, D.; Bruno, M.; Netea, M. G.; Bruggemann, R. J. M.; Verweij, P. E.; Veerdonk, F. L. van de

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Title

Invasive pulmonary aspergillosis associated with viral pneumonitis.

Source

Current Opinion in Microbiology; 2021. 62:21-27. 79 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The occurrence of invasive pulmonary aspergillosis (IPA) in critically ill patients with viral pneumonitis has increasingly been reported in recent years. Influenza-associated pulmonary aspergillosis (IAPA) and COVID-19-associated pulmonary aspergillosis (CAPA) are the two most common forms of this fungal infection. These diseases cause high mortality in patients, most of whom were previously immunocompetent. The pathogenesis of IAPA and CAPA is still not fully understood, but involves viral, fungal and host factors. In this article, we discuss several aspects regarding IAPA and CAPA, including their possible pathogenesis, the use of immunotherapy, and future challenges.

Publication Type

Journal article.

<128>

Accession Number

20210279872

Author

Neill, R.; Hasan, M. Z.; Das, P.; Vasuki Venugopal; Nishant Jain; Arora, D.; Gupta, S.

Title

Evidence of integrated health service delivery during COVID-19 in low and lower-middle-income countries: protocol for a scoping review.

Source

BMJ Open; 2021. 11(5). 38 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: The importance of integrated, peoplecentred health systems has been recognised as a central component of Universal Health Coverage. Integration has also been highlighted as a critical element for building resilient health systems that can withstand the shock of health emergencies. However, there is a dearth of research and systematic synthesis of evidence on the synergistic relationship between integrated health services and pandemic preparedness, response, and recovery in lowincome and lower-middle-income countries (LMICs). Thus, the authors are organising a scoping review aiming to explore the application of integrated health service delivery approaches during the emerging COVID-19 pandemic in LMICs. **Methods and analysis:** This scoping review adheres to the six steps for scoping reviews from Arksey and O'Malley. Peer-reviewed scientific literature will be systematically assembled using a standardised and replicable search strategy from seven electronic databases, including PubMed, Embase, Scopus, Web of Science, CINAHL Plus, the WHO's Global Research Database on COVID-19 and LitCovid. Initially, the title and abstract of the collected literature, published in English from December 2019 to June 2020, will be screened for inclusion which will be followed by a full-text review by two independent reviewers. Data will be charted using a data extraction form and reported in narrative format with accompanying data matrix. **Ethics and dissemination:** No ethical approval is required for the review. The study will be conducted from June 2020 to May 2021. Results from this scoping review will provide a snapshot of the evidence currently being generated related to integrated health service delivery in response to the COVID-19 pandemic in LMICs. The findings will be developed into reports and a peer-reviewed article and will assist policy-makers in making pragmatic and evidence-based decisions for current and future pandemic responses.

Publication Type

Journal article.

<129>

Accession Number

20210279868

Author

Rubeis, V. de; Lee Jinhee; Anwer, M. S.; Yoshida-Montezuma, Y.; Andreacchi, A. T.; Stone, E.; Iftikhar, S.; Morgenstern, J. D.; Rebinsky, R.; Neil-Sztramko, S. E.; Alvarez, E.; Apatu, E.; Anderson, L. N.

Title

Impact of disasters, including pandemics, on cardiometabolic outcomes across the life-course: a systematic review.

Source

BMJ Open; 2021. 11(5). 81 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

UK

Abstract

Background: Disasters are events that disrupt the daily functioning of a community or society, and may increase long-term risk of adverse cardiometabolic outcomes, including cardiovascular disease, obesity and diabetes. The objective of this study was to conduct a systematic review to determine the impact of disasters, including pandemics, on cardiometabolic outcomes across the life-course. **Design:** A systematic search was conducted in May 2020 using two electronic databases, EMBASE and Medline. All studies were screened in duplicate at title and abstract, and full-text level. Studies were eligible for inclusion if they assessed the association between a population-level or community disaster and cardiometabolic outcomes 1 month following the disaster. There were no restrictions on age, year of publication, country or population. Data were extracted on study characteristics, exposure (eg, type of disaster, region, year), cardiometabolic outcomes and measures of effect. Study quality was evaluated using the Joanna Briggs Institute critical appraisal tools. **Results:** A total of 58 studies were included, with 24 studies reporting the effects of exposure to disaster during pregnancy/childhood and 34 studies reporting the effects of exposure during adulthood. Studies included exposure to natural (n=35; 60%) and human-made (n=23; 40%) disasters, with only three (5%) of these studies evaluating previous pandemics. Most studies reported increased cardiometabolic risk, including increased cardiovascular disease incidence or mortality, diabetes and obesity, but not all. Few studies evaluated the biological mechanisms or high-risk subgroups that may be at a greater risk of negative health outcomes following disasters. **Conclusions:** The findings from this study suggest that the burden of disasters extend beyond the known direct harm, and attention is needed on the detrimental indirect long-term effects on cardiometabolic health. Given the current COVID-19 pandemic, these findings may inform public health prevention strategies to mitigate the impact of future cardiometabolic risk.

Publication Type

Journal article.

<130>

Accession Number

20210279866

Author

Pei HanJun; Wang Ying; Zhang Xinghui; Luo WenLong; Zhou Chenghui

Title

Association of frailty status with adverse clinical outcomes in patients with COVID-19: protocol for a systematic review and dose-response meta-analysis.

Source

BMJ Open; 2021. 11(5). 29 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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www.rcvsknowledge.org

Abstract

Introduction: Frailty status has been recognised as an important prognostic factor of adverse clinical outcomes in various clinical settings. Recently, the role of frailty status in adverse clinical outcomes for COVID-19-infected patients has received increasing attention with controversial results. Hence, we will conduct a comprehensive dose-response meta-analysis to quantitatively evaluate the association between frailty status and adverse clinical outcomes in patients with COVID-19. **Methods:** The researchers will systematically search PubMed, EMBase, Cochrane Library, ISI Knowledge via Web of Science and MedRxiv or BioRxiv databases (from inception until December 2020) to identify all retrospective and prospective cohort studies. All-cause mortality during hospitalisation will be set as the primary outcome. Univariable or multivariable meta-regression and subgroup analyses will be conducted for the comparison between frail versus non-frail categories. Sensitivity analyses will be used to assess the robustness of our results by removing each included study one at a time to obtain and evaluate the remaining overall estimates of all-cause mortality. To conduct a dose-response meta-analysis for the potential linear or restricted cubic spline regression relationship between frailty status and all-cause mortality, studies with three or more categories will be included. **Ethics and dissemination:** In accordance with the Institutional Review Board/Independent Ethics Committee of the First Affiliated Hospital of Baotou Medical College, ethical approval is not an essential element for the systematic review protocol. This meta-analysis will be disseminated through publication in a peer-reviewed journal.

Publication Type

Journal article.

<131>

Accession Number

20210279863

Author

Rao, H.; Mancini, D.; Tong, A.; Khan, H.; Gutierrez, B. S.; Mundo, W.; Collings, A.; Cervantes, L.

Title

Frontline interdisciplinary clinician perspectives on caring for patients with COVID-19: a qualitative study.

Source

BMJ Open; 2021. 11(5). 56 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To describe the drivers of distress and motivations faced by interdisciplinary clinicians who were on the frontline caring for patients with COVID-19. **Design** 50 semistructured interviews. Transcripts were analysed using qualitative thematic analysis. **Setting:** A safety-net hospital in Denver, Colorado. **Participants**

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Interdisciplinary frontline clinicians including physicians, advance practice providers, nurses, respiratory therapists and paramedics providing inpatient hospital care to patients hospitalised for COVID-19. Results Fifty clinicians (32 women and 18 men) participated. Five themes with respective subthemes (in parentheses) were identified: depersonalisation and barriers to care (impeding rapport and compassion, focusing on infection risk at the expense of high-quality care, grief from witnessing patients suffer in isolation), powerless in uncertainty (inescapable awareness of personal risk, therapeutic doubt in a void of evidence, confronting ethical dilemmas, struggling with dynamic and unfamiliar challenges), overwhelmed and exhausted (burden of personal protective equipment (PPE), information overload and confusion, overstretched by additional responsibilities at work, compounded by personal life stressors, feeling vulnerable and dispensable, compassion fatigue, distress from the disproportionate impact on socially oppressed communities), bolstering morale and confidence (motivated by community and family support, equipped with data), and driven by moral duty (responsibility to patient care and community, collegial solidarity and collaboration, contributing to the greater good). Conclusion: Frontline clinicians reported distress due to the challenges of PPE, uncertainty and powerlessness, new responsibilities at work and home, losing control of their schedules, grief from witnessing patients suffer in isolation and witnessing healthcare disparities exacerbated by this pandemic. Clinicians feel supported by their colleagues, families, and community and were driven by a sense of moral duty. Healthcare system should adopt strategies to minimise distress faced by interdisciplinary clinicians on the frontline of COVID-19.

Publication Type

Journal article.

<132>

Accession Number

20210279859

Author

Castro, M. C.; Gurzenda, S.; Macario, E. M.; Franca, G. V. A.

Title

Characteristics, outcomes and risk factors for mortality of 522 167 patients hospitalised with COVID-19 in Brazil: a retrospective cohort study.

Source

BMJ Open; 2021. 11(5). 27 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To provide a comprehensive description of demographic, clinical and radiographic characteristics; treatment and case outcomes; and risk factors associated with in-hospital death of patients hospitalised with COVID-19 in Brazil. **Design:** Retrospective cohort study of hospitalised patients diagnosed

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with COVID-19. Setting: Data from all hospitals across Brazil. Participants: 522 167 hospitalised patients in Brazil by 14 December 2020 with severe acute respiratory illness, and a confirmed diagnosis for COVID-19. Primary and secondary outcome measures: Prevalence of symptoms and comorbidities was compared by clinical outcomes and intensive care unit (ICU) admission status. Survival was assessed using Kaplan Meier survival estimates. Risk factors associated with in-hospital death were evaluated with multivariable Cox proportional hazards regression. Results: Of the 522 167 patients included in this study, 56.7% were discharged, 0.002% died of other causes, 30.7% died of causes associated with COVID-19 and 10.2% remained hospitalised. The median age of patients was 61 years (IQR, 47-73), and of non-survivors 71 years (IQR, 60-80); 292 570 patients (56.0%) were men. At least one comorbidity was present in 64.5% of patients and in 76.8% of non-survivors. From illness onset, the median times to hospital and ICU admission were 6 days (IQR, 3-9) and 7 days (IQR, 3-10), respectively; 15 days (IQR, 9-24) to death and 15 days (IQR, 11-20) to hospital discharge. Risk factors for in-hospital death included old age, Black/Brown ethnoracial self-classification, ICU admission, being male, living in the North and Northeast regions and various comorbidities. Age had the highest HRs of 5.51 (95% CI: 4.91 to 6.18) for patients⁸⁰, compared with those 20. Conclusions: Characteristics of patients and risk factors for in-hospital mortality highlight inequities of COVID-19 outcomes in Brazil. As the pandemic continues to unfold, targeted policies that address those inequities are needed to mitigate the unequal burden of COVID-19.

Publication Type

Journal article.

<133>

Accession Number

20210279858

Author

McEvoy, D.; McAloon, C.; Collins, A.; Hunt, K.; Butler, F.; Byrne, A.; Casey-Bryars, M.; Barber, A.; Griffin, J.; Lane, E. A.; Wall, P.; More, S. J.

Title

Relative infectiousness of asymptomatic SARS-CoV-2 infected persons compared with symptomatic individuals: a rapid scoping review.

Source

BMJ Open; 2021. 11(5). 20 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: The aim of this study was to determine the relative infectiousness of asymptomatic SARS-CoV-2 infected persons compared with symptomatic individuals based on a scoping review of available literature. **Design:** Rapid scoping review of peer-reviewed literature from 1 January to 5 December 2020 using the

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LitCovid database and the Cochrane library. Setting: International studies on the infectiousness of individuals infected with SARS-CoV-2. Participants: Studies were selected for inclusion if they defined asymptomatics as a separate cohort distinct from presymptomatics and if they provided a quantitative measure of the infectiousness of asymptomatics relative to symptomatics. Primary outcome measures: PCR result (PCR studies), the rate of infection (mathematical modelling studies) and secondary attack rate (contact tracing studies) - in each case from asymptomatic in comparison with symptomatic individuals. Results: There are only a limited number of published studies that report estimates of relative infectiousness of asymptomatic compared with symptomatic individuals. 12 studies were included after the screening process. Significant differences exist in the definition of infectiousness. PCR studies in general show no difference in shedding levels between symptomatic and asymptomatic individuals; however, the number of study subjects is generally limited. Two modelling studies estimate relative infectiousness to be 0.43 and 0.57, but both of these were more reflective of the infectiousness of undocumented rather than asymptomatic cases. The results from contact tracing studies include estimates of relative infectiousness of 0, but with insufficient evidence to conclude that it is significantly different from 1. Conclusions: There is considerable heterogeneity in estimates of relative infectiousness highlighting the need for further investigation of this important parameter. It is not possible to provide any conclusive estimate of relative infectiousness, as the estimates from the reviewed studies varied between 0 and 1.

Publication Type

Journal article.

<134>

Accession Number

20210279845

Author

Souza, R. de; Sharayu Mhatre; Burhanuddin Qayyumi; Garvit Chitkara; Tushar Madke; Mohan Joshi; Ramesh Bharmal; Asgaonkar, D. S.; Prem Lakhani; Sudeep Gupta; Pankaj Chaturvedi; Rajesh Dikshit; Rajendra Badwe

Title

Clinical course and outcome of patients with COVID-19 in Mumbai City: an observational study.

Source

BMJ Open; 2021. 11(5). 20 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To understand the outcome of hospitalised patients from Mumbai City, which had the highest number of COVID-19 cases in India. **Design:** Observational study with follow-up. **Setting:** Data extraction from medical records of patients with COVID-19 admitted to Nair Hospital & TN Medical College, Mumbai,

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India. Participants: 689 patients with COVID-19 were admitted in the hospital from 26 March 2020 to 11 May 2020. Primary and secondary outcome measures: In-hospital mortality; joint effect of comorbidity and age on the risk of dying. Results: A total of 689 patients (median age 44 years) admitted with RT-PCR- confirmed COVID-19 were included in the study. Of these, 77.36% of patients were discharged alive while 22.64% died. 11.61% required some kind of oxygen support while 2.8% of patients required intensive care unit admissions. Older age (HR 2.88, 95% CI 2.09 to 3.98), presence of comorbidities (HR 2.56, 95% CI 1.84 to 3.55), history of hypertension (HR 3.19, 95% CI 1.67 to 6.08), and presence of symptoms at the time of admission (HR 3.21, 95% CI 1.41 to 7.26) were associated with increased risk of in-hospital mortality. Treatment with a combination of azithromycin with hydroxychloroquine, antiviral or steroid compared with no treatment did not alter the disease course and in-hospital mortality. The combined effect of old age and presence of comorbid conditions was more pronounced in women than men. Conclusions: In-hospital patients were younger, less symptomatic with lesser need of ventilators and oxygen support as compared with many western countries.

Publication Type

Journal article.

<135>

Accession Number

20210279842

Author

Masarone, M.; Vaccaro, E.; Sciorio, R.; Torre, P.; Vecchia, A. della; Aglitti, A.; Caliulo, R.; Borrelli, A.; Persico, M.

Title

Characterisation of asymptomatic patients and efficacy of preventive measures for SARS-CoV-2 infection in a large population of southern Italy: a cohort study.

Source

BMJ Open; 2021. 11(5). 30 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The SARS-CoV-2 pandemic has infected millions of people and has caused more than 2.30 million deaths worldwide to date. Several doubts arise about the role of asymptomatic carriers in virus transmission. During the first epidemic outbreak in Italy a large screening with nasopharyngeal swab (NS) was performed in those who were considered 'suspect' for infection. **Aims:** To report the results of the SARS-CoV-2 screening in a province in Southern Italy and to provide data on the COVID-19 epidemic and the burden of asymptomatic subjects. **Patients and methods:** A retrospective cohort study was set up in all healthcare facilities of the province (12 hospitals and 13 sanitary districts: primary, secondary and tertiary

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centres) with the aim to analyse the results of NS performed on all subjects suspected to be infected with SARS-CoV-2, either because they presented symptoms suggestive of SARS-CoV-2 infection, they were 'contacts' of positive subjects, they came from areas with high prevalence or they were healthcare workers. NS were performed and managed as indicated by international guidelines. The specimens were processed for SARS-CoV-2 detection by real-time PCR. Results: A total of 20 325 NS were performed from 13 March to 9 May 2020. Of these, 638 (3.14%) were positive. 470 were asymptomatic, or 75.3% of persons who were positive. They were mostly among 'contacts' of symptomatic cases (428 of 470, 91%) and were in domiciliary isolation. Expression of three SARSCoV-2 genes did not differ between asymptomatic and symptomatic subjects. The strict measures with regard to social distancing led to a continuous decrease in cases during phase 1. Conclusions: In a large area in Southern Italy, 3.14% (638 of 20 325) of the total subjects tested were positive for SARS-CoV-2. Most of them were asymptomatic (470 of 624, 75.3%), and of these 91% (428 of 470) were 'close contacts' of symptomatic subjects. The combination of social distancing together with the systematic screening of close contacts of COVID-19-positive symptomatic subjects seems to be an efficacious approach to limit the spread of the epidemic.

Publication Type

Journal article.

<136>

Accession Number

20210279836

Author

Al-Aamri, A. K.; Al-Harrasi, A. A.; Aal-Abdulsalam, A. K.; Al-Maniri, A. A.; Padmadas, S. S.

Title

Forecasting the SARS COVID-19 pandemic and critical care resources threshold in the Gulf Cooperation Council (GCC) countries: population analysis of aggregate data.

Source

BMJ Open; 2021. 11(5). 33 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To generate cross-national forecasts of COVID-19 trajectories and quantify the associated impact on essential critical care resources for disease management in Gulf Cooperation Council (GCC) countries. **Design:** Population-level aggregate analysis. **Setting:** Bahrain, Kuwait, Oman, Qatar, United Arab Emirates (UAE) and Saudi Arabia. **Methods:** We applied an extended time-dependent SEICRD compartmental model to predict the flow of people between six states, susceptible-exposed-infected- critical-recovery-death, accounting for community mitigation strategies and the latent period between exposure and infected and contagious states. Then, we used the WHO Adaptt Surge Planning Tool to predict intensive

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care unit (ICU) and human resources capacity based on predicted daily active and cumulative infections from the SEICRD model. Main outcome measures: Predicted COVID-19 infections, deaths, and ICU and human resources capacity for disease management. Results: COVID-19 infections vary daily from 498 per million in Bahrain to over 300 per million in UAE and Qatar, to 9 per million in Saudi Arabia. The cumulative number of deaths varies from 302 per million in Oman to 89 in Qatar. UAE attained its first peak as early as 21 April 2020, whereas Oman had its peak on 29 August 2020. In absolute terms, Saudi Arabia is predicted to have the highest COVID-19 mortality burden, followed by UAE and Oman. The predicted maximum number of COVID-19-infected patients in need of oxygen therapy during the peak of emergency admissions varies between 690 in Bahrain, 1440 in Oman and over 10 000 in Saudi Arabia. Conclusion: Although most GCC countries have managed to flatten the epidemiological curve by August 2020, trends since November 2020 show potential increase in new infections. The pandemic is predicted to recede by August 2021, provided the existing infection control measures continue effectively and consistently across all countries. Current health infrastructure including the provision of ICUs and nursing staff seem adequate, but health systems should keep ICUs ready to manage critically ill patients.

Publication Type

Journal article.

<137>

Accession Number

20210279831

Author

Castro-Avila, A. C.; Jefferson, L.; Dale, V.; Bloor, K.

Title

Support and follow-up needs of patients discharged from intensive care after severe COVID-19: a mixed-methods study of the views of UK general practitioners and intensive care staff during the pandemic's first wave.

Source

BMJ Open; 2021. 11(5). 27 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To identify follow-up services planned for patients with COVID-19 discharged from intensive care unit (ICU) and to explore the views of ICU staff and general practitioners (GPs) regarding these patients' future needs and care coordination. **Design:** This is a sequential mixed-methods study using online surveys and semistructured interviews. Interview data were inductively coded and thematically analysed. Survey data were descriptively analysed. **Setting:** GP surgeries and acute National Health Service Trusts in the UK. **Participants:** GPs and clinicians leading care for patients discharged from ICU. **Primary and**

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secondary outcomes: Usual follow-up practice after ICU discharge, changes in follow-up during the pandemic, and GP awareness of follow-up and support needs of patients discharged from ICU. Results: We obtained 170 survey responses and conducted 23 interviews. Over 60% of GPs were unaware of the follow-up services generally provided by their local hospitals and whether or not these were functioning during the pandemic. Eighty per cent of ICUs reported some form of follow-up services, with 25% of these suspending provision during the peak of the pandemic and over half modifying their provision (usually to provide the service remotely). Common themes relating to barriers to provision of follow-up were funding complexities, remit and expertise, and communication between ICU and community services. Discharge documentation was described as poor and lacking key information. Both groups mentioned difficulties accessing services in the community and lack of clarity about who was responsible for referrals and follow-up. Conclusions: The pandemic has highlighted long-standing issues of continuity of care and complex funding streams for post-ICU follow-up care. The large cohort of ICU patients admitted due to COVID-19 highlights the need for improved follow-up services and communication between specialists and GPs, not only for patients with COVID-19, but for all those discharged from ICU.

Publication Type

Journal article.

<138>

Accession Number

20210279830

Author

Guo Xin; McCutcheon, R.; Pillinger, T.; Arumuham, A.; Chen JianHua; Ma SiMeng; Yang Jun; Wang Ying; Hu ShaoHua; Wang GaoHua; Liu ZhongChun

Title

Acute psychological impact of coronavirus disease 2019 outbreak among psychiatric professionals in China: a multicentre, cross-sectional, web-based study.

Source

BMJ Open; 2021. 11(5). 23 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To assess the magnitude of mental health outcomes and associated factors among psychiatric professionals in mental health services during COVID-19 in China. **Design, setting and participants:** This cross-sectional, survey-based, region-stratified study collected demographic data and mental health measurements from psychiatric professionals in 34 hospitals between 29 January and 7 February 2020, in China. Hospitals equipped with fever clinics or deployed on wards for patients with COVID-19 were eligible. **Primary outcome and measures:** The severity of symptoms of depression, anxiety, insomnia and distress

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were assessed by the Chinese versions of 9-item Patient Health Questionnaire, 7-item Generalised Anxiety Disorder, 7-item Insomnia Severity Index and 22-item Impact of Event Scale-Revised, respectively. Multivariable logistic regression and structural equation modelling was performed to identify factors associated with mental health outcomes. Results: A total of 610 psychiatric professionals were included. 29.8% were employed in Wuhan, and 22.5% were frontline workers. A considerable proportion of participants reported symptoms of depression (461 (75.6%)), anxiety (282 (46.2%)), insomnia (336 (55.1%)) and mental stress (481 (78.9%)). Psychiatric symptoms were associated with worrying about infection (eg, OR 2.36 (95% CI 1.27 to 4.39) for anxiety), risks of exposure to COVID-19 (eg, having inadequate personal protection equipment, OR 2.43 (1.32 to 4.47) for depression) and self-perceived physical health (eg, OR 3.22 (2.24 to 4.64) for mental stress). Information sources of COVID-19 were also found to be both positively (eg, information from relatives, OR 2.16 (1.46 to 3.21) for mental stress) and negatively (eg, information from TV, OR 0.52 (0.35 to 0.77) for mental stress) associated with mental stress. There is preliminary evidence that mental health might benefit from greater availability of mental healthcare services. The structural equation model analysis indicated that worrying about infection may be the primary mediator via which risk of exposure to COVID-19 pandemic affects the mental health of psychiatric professionals. Conclusions: The current findings demonstrate several pathways via which the COVID-19 pandemic may have negatively affected the mental health of psychiatric professionals in China.

Publication Type

Journal article.

<139>

Accession Number

20210279822

Author

Wingert, A.; Pillay, J.; Gates, M.; Guitard, S.; Rahman, S.; Beck, A.; Vandermeer, B.; Hartling, L.

Title

Risk factors for severity of COVID-19: a rapid review to inform vaccine prioritisation in Canada.

Source

BMJ Open; 2021. 11(5). 64 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Rapid review to determine the magnitude of association between potential risk factors and severity of COVID-19, to inform vaccine prioritisation in Canada. **Setting:** Ovid MEDLINE(R) ALL, Epistemonikos COVID-19 in L. OVE Platform, McMaster COVID-19 Evidence Alerts and websites were searched to 15 June 2020. **Eligible studies** were conducted in high-income countries and used multivariate analyses. **Participants:** After piloting, screening, data extraction and quality appraisal were performed by a

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single experienced reviewer. Of 3740 unique records identified, 34 were included that reported on median 596 (range 44-418 794) participants, aged 42-84 years. 19/34 (56%) were good quality. Outcomes: Hospitalisation, intensive care unit admission, length of stay in hospital or intensive care unit, mechanical ventilation, severe disease, mortality. Results: Authors synthesised findings narratively and appraised the certainty of the evidence for each risk factor-outcome association. There was low or moderate certainty evidence for a large (2-fold) magnitude of association between hospitalisation in people with COVID-19, and: obesity class III, heart failure, diabetes, chronic kidney disease, dementia, age >45 years, male gender, black race/ethnicity (vs non-Hispanic white), homelessness and low income. Age >60 and >70 years may be associated with large increases in mechanical ventilation and severe disease, respectively. For mortality, a large magnitude of association may exist with liver disease, Bangladeshi ethnicity (vs British white), age >45 years, age >80 years (vs 65-69 years) and male gender among 20-64 years (but not older). Associations with hospitalisation and mortality may be very large (5-fold) for those aged 60 years. Conclusions: Increasing age (especially >60 years) may be the most important risk factor for severe outcomes. High-quality primary research accounting for multiple confounders is needed to better understand the magnitude of associations for severity of COVID-19 with several other factors.

Publication Type

Journal article.

<140>

Accession Number

20210279819

Author

Jia YuanMin; Bao JingXian; Yi Mo; Zhang ZeYi; Wang JingJing; Wang HaiXia; Li YiZhang; Chen Ou

Title

Impact of the COVID-19 pandemic on asthma control among children: a qualitative study from caregivers' perspectives and experiences.

Source

BMJ Open; 2021. 11(5). 42 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To understand the impact of the COVID-19 epidemic on asthma control in children based on caregivers' perspectives and experiences. **Design:** This was a qualitative study deploying face-to-face, semistructured interviews. Thematic analysis was carried out to analyse the data. **Setting:** Paediatric respiratory clinics in three tertiary hospitals. **Participants:** 16 caregivers providing unpaid asthma-related care and assistance to children under 14 years who had been diagnosed with asthma for more than 1 year and were not only treated with short-acting beta2-agonists. **Results:** Six main themes were identified: (1)

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improved asthma control; (2) decreased willingness to seek medical care driven by fear; (3) increased adherence due to enhanced awareness of asthma control; (4) coping strategies for changes caused by COVID-19; (5) a new opportunity and (6) managing new challenges in asthma control. Conclusions: The COVID-19 outbreak and the measures in response to it have had significant impacts on asthma control among children. Children with asthma are advised to continue good asthma management, take their prescribed asthma medications as normal, wash their hands regularly and wear face masks. Regularly supported self-management and remote consultations should be provided during the COVID-19 pandemic. In addition, supporting people financially, providing continued medical support and alleviating any fear and anxiety should be considered. We anticipate that our findings will inform health promotion interventions.

Publication Type

Journal article.

<141>

Accession Number

20210279813

Author

He Maihong; Li XiaoXiao; Tan Qing; Chen Yong; Kong Yue; You Jianping; Lin Xian; Lin Ying; Zheng Qing

Title

Disease burden from COVID-19 symptoms among inpatients at the temporary military hospitals in Wuhan: a retrospective multicentre cross-sectional study.

Source

BMJ Open; 2021. 11(5). 42 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: We aimed to establish a set of disability weights (DWs) for COVID-19 symptoms, evaluate the disease burden of inpatients and analyse the characteristics and influencing factors of the disease. **Design:** This was a multicentre retrospective cross-sectional descriptive study. **Setting:** The medical records generated in three temporary military hospitals in Wuhan. **Participants:** Medical records of 2702 inpatients generated from 5 February to 5 April 2020 were randomly selected for this study. **Primary and secondary outcome measures:** DWs of COVID-19 symptoms were determined by the person trade-off approach. The inpatients' medical records were analysed and used to calculate the disability-adjusted life years (DALYs). The mean DALY was evaluated across sex and age groups. The relationship between DALY and age, sex, body mass index, length of hospital stay, symptom duration before admission and native place was determined by multiple linear regression. **Results:** For the DALY of each inpatient, severe expiratory dyspnoea, mild cough and sore throat had the highest (0.399) and lowest (0.004) weights, respectively. The average synthetic DALY and daily DALY were 2.29+or-1.33 and 0.18+or-0.15 days, respectively. Fever and

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fatigue contributed the most DALY at 31.36%, whereas nausea and vomiting and anxiety and depression contributed the least at 7.05%. There were significant differences between sex and age groups in both synthetic and daily DALY. Age, body mass index, length of hospital stay and symptom duration before admission were strongly related to both synthetic and daily DALY. Conclusions: Although the disease burden was higher among women than men, their daily disease burdens were similar. The disease burden in the younger population was higher than that in the older population. Treatment at the hospitals relieved the disease burden efficiently, while a delay in hospitalisation worsened it.

Publication Type

Journal article.

<142>

Accession Number

20210279812

Author

Lobelo, F.; Bienvenida, A.; Leung Serena; Mbanja, A.; Leslie, E.; Koplan, K.; Shin, S. R.

Title

Clinical, behavioural and social factors associated with racial disparities in COVID-19 patients from an integrated healthcare system in Georgia: a retrospective cohort study.

Source

BMJ Open; 2021. 11(5). 44 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To identify sociodemographic, clinical and behavioural drivers of racial disparities and their association with clinical outcomes among Kaiser Permanente Georgia (KPGA) members with COVID-19. **Design:** Retrospective cohort of patients with COVID-19 seen from 3 March to 29 October 2020. We described the distribution of underlying comorbidities, quality of care metrics, demographic and social determinants of health (SDOH) indicators across race groups. We also described clinical outcomes in hospitalised patients including length of stay, intensive care unit (ICU) admission, readmission and mortality. We performed multivariable analyses for hospitalisation risk among all patients with COVID-19 and stratified by race and sex. **Setting:** KPGA, an integrated healthcare system. **Participants:** 5712 patients who all had laboratory-confirmed COVID-19. Of them, 57.8% were female, 58.4% black, 29.5% white, 8.5% Hispanic and 3.6% Asian. **Results:** Black patients had the highest proportions of living in neighborhoods under the federal poverty line (12.4%) and in more deprived locations (neighbourhood deprivation index=0.4). Overall, 14.4% (n=827) of this cohort was hospitalised. Asian patients had the highest rates of ICU admission (53.1%) and mechanical ventilation (21.9%). Among all patients, Hispanics (adjusted 1.60, 95% CI (1.08, 2.37)), blacks (1.43 (1.13, 1.83)), age in years (1.03 (1.02, 1.04)) and living in a zip code with high unemployment (1.08

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(1.03, 1.13)) were associated with higher odds of hospitalisation. COVID-19 patients with chronic obstructive pulmonary disease (2.59 (1.67, 4.02)), chronic heart failure (1.79 (1.31, 2.45)), immunocompromised (1.77 (1.16, 2.70)), with glycated haemoglobin >8% (1.68 (1.19, 2.38)), depression (1.60 (1.24, 2.06)), hypertension (1.5 (1.21, 1.87)) and physical inactivity (1.25 (1.03, 1.51)) had higher odds of hospitalisation. Conclusions: Black and Hispanic KPGA patients were at higher odds of hospitalisation, but not mortality, compared with other race groups. Beyond previously reported sociodemographics and comorbidities, factors such as quality of care, lifestyle behaviours and SDOH indicators should be considered when designing and implementing interventions to reduce COVID-19 racial disparities.

Publication Type

Journal article.

<143>

Accession Number

20210279811

Author

Hewitt, C.; Lloyd, K. C.; Tariq, S.; Durrant, A.; Claisse, C.; Kasadha, B.; Gibbs, J.

Title

Patient-generated data in the management of HIV: a scoping review.

Source

BMJ Open; 2021. 11(5). 62 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Patient-generated data (PGData) are an emergent research area and may improve HIV care. The objectives of this scoping review were to synthesise, evaluate and make recommendations based on the available literature regarding PGData use in HIV care. **Design:** Scoping review. **Data sources:** Embase, Medline, CINAHL Plus, Web of Science, Scopus, PsycINFO and Emcare databases. **Eligibility criteria:** Studies involving PGData use within HIV care for people living with HIV and/or healthcare professionals (HCPs) published before February 2021. **Data extraction and synthesis:** Data were extracted using a table and the Mixed Methods Appraisal Tool was used to assess empirical rigour. We used thematic analysis to evaluate content. **Results:** 11 articles met the eligibility criteria. Studies were observational, predominantly concerned hypothetical or novel digital platforms, mainly conducted in high-income settings, and had small sample sizes (range=10-160). There were multiple definitions of PGData. In the majority of studies (n=9), participants were people living with HIV, with a few studies including HCPs, informatics specialists or mixed participant groups. Participants living with HIV were aged 23-78 years, mostly men, of diverse ethnicities, and had low educational, health literacy and income levels. We identified four key themes: (1) Perceptions of PGData and associated digital platforms; (2) Opportunities; (3) Anticipated barriers and (4) Potential impact

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on patient- HCP relationships. Conclusions: Use of PGData within HIV care warrants further study, especially with regard to digital inequalities, data privacy and security. There is a need for longitudinal data on use within HIV in a variety of settings with a broad range of users, including impact on clinical outcomes. This will allow greater understanding of the role of PGData use in improving the health and well-being of people living with HIV, which is increasingly pertinent as digital healthcare becomes more widespread as a result of COVID-19.

Publication Type

Journal article.

<144>

Accession Number

20210279807

Author

Watkins, J. A.; Griffiths, F.; Goudge, J.

Title

Community health workers' efforts to build health system trust in marginalised communities: a qualitative study from South Africa.

Source

BMJ Open; 2021. 11(5). 45 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Community health workers (CHWs) enable marginalised communities, often experiencing structural poverty, to access healthcare. Trust, important in all patient-provider relationships, is difficult to build in such communities, particularly when stigma associated with HIV/AIDS, tuberculosis and now COVID-19, is widespread. CHWs, responsible for bringing people back into care, must repair trust. In South Africa, where a national CHW programme is being rolled out, marginalised communities have high levels of unemployment, domestic violence and injury. Objectives: In this complex social environment, we explored CHW workplace trust, interpersonal trust between the patient and CHW, and the institutional trust patients place in the health system. Design, participants, setting: Within the observation phase of a 3-year intervention study, we conducted interviews, focus groups and observations with patients, CHWs, their supervisors and, facility managers in Sedibeng. Results: CHWs had low levels of workplace trust. They had recently been on strike demanding better pay, employment conditions and recognition of their work. They did not have the equipment to perform their work safely, and some colleagues did not trust, or value, their contribution. There was considerable interpersonal trust between CHWs and patients, however, CHWs' efforts were hampered by structural poverty, alcohol abuse and no identification documents among long-term migrants. Those supervisors who understood the extent of the poverty supported CHW efforts to help the

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community. When patients had withdrawn from care, often due to nurses' insensitive behaviour, the CHWs' attempts to repair patients' institutional trust often failed due to the vulnerabilities of the community, and lack of support from the health system. Conclusion: Strategies are needed to build workplace trust including supportive supervision for CHWs and better working conditions, and to build interpersonal and institutional trust by ensuring sensitivity to social inequalities and the effects of structural poverty among healthcare providers. Societies need to care for everyone.

Publication Type

Journal article.

<145>

Accession Number

20210279805

Author

Shi ZeYa; Qin YueLan; Chair SekYing; Liu YanHui; Tian Yu; Li Xin; Hu WanQin; Wang Qun

Title

Anxiety and depression levels of the general population during the rapid progressing stage in the coronavirus disease 2019 outbreak: a cross-sectional online investigation in China.

Source

BMJ Open; 2021. 11(5). 42 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: The outbreak of COVID-19 has major impacts on the psychological health of the public. This study aimed to investigate the anxiety and depression levels of the general population during the rapid progressing stage of COVID-19 pandemic in China and to explore the associated factors. **Design and setting:** A cross-sectional online survey. **Participants:** 2651 Chinese people. **Measures:** The Hospital Anxiety and Depression Scale was used to measure their psychological health. A structured questionnaire collected possible associated factors, including sociodemographic characteristics, health information, contact history-related information, experience and perceptions, knowledge and education and adopted precautions. Multiple linear regression was conducted to explore the factors associated with anxiety and depression. **Results:** The mean score of anxiety and depression was 4.35 and 4.38, respectively. The rates of people with anxiety and depressive symptoms (with >7 score in the subscale) were 14.15% and 17.35%, respectively. Participants without political party membership, with contact history of COVID-19, going out or gathering, taking Chinese medicine herbs, being unsatisfied with current precautions, perceiving higher risks of infection, lower knowledge and poorer health presented higher anxiety and depression levels. Moreover, those who were females, married, lived alone and wore mask were more anxious; whereas people who were younger, experienced public health crisis, did not take precautions (regular work-rest, exercise) had higher

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depression level. Conclusions: During the rapid progressing stage of COVID-19 pandemic in China, one-seventh and one-sixth respondents presented anxiety and depression symptoms, respectively. The risk factors for anxiety and depression included the following: without political party membership, with contact history of COVID-19, going out or gathering, wearing masks, taking Chinese medicine herbs, being unsatisfied with current precautions, perceiving higher susceptibility, lower knowledge and poorer health status. Extensive information and psychological support should be provided to improve the mental health of the general population.

Publication Type

Journal article.

<146>

Accession Number

20210279804

Author

Romay-Barja, M.; Pascual-Carrasco, M.; Tena-Davila, M. J. de; Falcon, M.; Rodriguez-Blazquez, C.; Forjaz, M. J.; Ayala, A.; Fuente, I. M. de la; Burgos, A.; Munoz, A.; Benito, A.

Title

How patients with COVID-19 managed the disease at home during the first wave in Spain: a cross-sectional study.

Source

BMJ Open; 2021. 11(5). 43 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: Most patients with mild COVID-19 had to stay at home trying to implement an optimal quarantine. The aim of this study was to describe the COVID-19 cases during the first wave of the pandemic in Spain, how they managed the disease at home, focusing on differences by age, as well as differences in knowledge, attitudes and preventive practices, compared with the uninfected population. **Design:** An online survey was used to conduct a cross-sectional study of individuals who were 14 years or older living in Spain during the COVID-19 lockdown. The main variable was a COVID-19 case. Logistic regression models for COVID-19 cases were obtained using a backward stepwise procedure to assess the association between social variables, disease knowledge, attitudes, prevention practices and emotional impact. **Results:** 3398 people completed the survey. Participants' mean age was 49.6 (SD=14.3). COVID-19 was significantly more prevalent among married people (5.3%) and those currently doing an on-site work (8.7%). Most of the COVID-19 cases stayed at home (84.0%) during the episode. There were significant age-based differences with regard to self-isolation conditions at home during the disease. COVID-19 cases showed better attitudes, practices and knowledge about disease symptoms and transmission than the uninfected population. COVID-

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19 cases also felt more depressed (adjusted OR: 3.46, 95% CI 1.45 to 8.26) and had better preventive behaviour than the uninfected population, such as always wearing a mask outside the home (adjusted OR 1.58, 95% CI 1.06 to 2.30). Conclusion: COVID-19 cases found it difficult to comply with recommended home self-isolation conditions, with differences by age group. COVID-19 had an important impact on care dependency in non-hospitalised patients, who were mostly dependent on their families for care. It is necessary to reinforce social and health services and to be ready to meet the care needs of populations during the different waves or in future epidemics.

Publication Type

Journal article.

<147>

Accession Number

20210279803

Author

Recchia, G.; Schneider, C. R.; Freeman, A. L. J.

Title

How do the UK public interpret COVID-19 test results? Comparing the impact of official information about results and reliability used in the UK, USA and New Zealand: a randomised controlled trial.

Source

BMJ Open; 2021. 11(5). many ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To assess the effects of different official information on public interpretation of a personal COVID-19 PCR test result. **Design:** A 5x2 factorial, randomised, between-subjects experiment, comparing four wordings of information about the test result and a control arm of no additional information; for both positive and negative test results. **Setting:** Online experiment using recruitment platform Respondi. **Participants:** UK participants (n=1744, after a pilot of n=1657) quota-sampled to be proportional to the UK national population on age and sex. **Interventions:** Participants were given a hypothetical COVID-19 PCR test result for 'John' who was presented as having a 50% chance of having COVID-19 based on symptoms alone. Participants were randomised to receive either a positive or negative result for 'John', then randomised again to receive either no more information, or text information on the interpretation of COVID-19 test results copied in September 2020 from the public websites of the UK's National Health Service, the USA's Centers for Disease Control, New Zealand's Ministry of Health or a modified version of the UK's wording. Information identifying the source of the wording was removed. **Main outcome measures:** Participants were asked 'what is your best guess as to the percent chance that John actually had COVID-19 at the time of his test, given his result?'; questions about their feelings of trustworthiness in the result, their

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perceptions of the quality of the underlying evidence and what action they felt 'John' should take in the light of his result. Results: Of those presented with a positive COVID-19 test result for 'John', the mean estimate of the probability that he had the virus was 73% (71.5%-74.5%); for those presented with a negative result, 38% (36.7%-40.0%). There was no main effect of information (wording) on these means. However, those participants given the official information from the UK website, which did not mention the possibility of false negatives or false positives, were more likely to give a categorical (100% or 0%) answer UK: 68/343, 19.8% (15.9%-24.4%); control group: 42/356, given in the text in the expected direction: there was a small main effect of wording on trust in the result ($p=0.048$), with people perceiving the test result as marginally less trustworthy after having read the NZ wording compared with the UK wording. Positive results were generally viewed as more trustworthy and as having higher quality of evidence than negative results (both $p<0.001$). Conclusions: The public's default assessment of the face value of both the positive and negative test results (control group) indicate an awareness that test results are not perfectly accurate. Compared with other messaging tested, participants shown the UK's 2020 wording about the interpretation of the test results appeared to interpret the results as more definitive than is warranted. Wording that acknowledges uncertainty can help people to have a more nuanced and realistic understanding of what a COVID-19 test result means, which supports decision making and behavioural response.

Publication Type

Journal article.

<148>

Accession Number

20210279797

Author

Moeller, A. L.; Mills, E. H. A.; Christensen, H. C.; Gnesin, F.; Blomberg, S. N. F. N.; Zyllyftari, N.; Jensen, B.; Ringgren, K. B.; Broccia, M. D.; Boggild, H.; Torp-Pedersen, C.

Title

Symptom presentation of SARS-CoV-2-positive and negative patients: a nested case-control study among patients calling the emergency medical service and medical helpline.

Source

BMJ Open; 2021. 11(5). 19 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: Currently effective symptom-based screening of patients suspected of COVID-19 is limited. We aimed to investigate age-related differences in symptom presentations of patients tested positive and negative for SARS-CoV-2. **Design Setting:** Calls to the medical helpline (1-8-1-3) and emergency number (1-1-2) in Copenhagen, Denmark. At both medical services all calls are recorded. **Participants:** We included

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calls for patients who called for help/guidance at the medical helpline or emergency number prior to receiving a test for SARS-CoV-2 between April 1st and 20th 2020 (8423 patients). Among these calls, we randomly sampled recorded calls from 350 patients who later tested positive and 250 patients tested negative and registered symptoms described in the call. Outcome Results: After exclusions, 544 calls (312 SARS-CoV-2 positive and 232 negative) were included in the analysis. Fever and cough remained the two most common of COVID-19 symptoms across all age groups and approximately 42% of SARS-CoV-2 positive and 20% of negative presented with both fever and cough. Symptoms including nasal congestion, irritation/pain in throat, muscle/joint pain, loss of taste and smell, and headache were common symptoms of COVID-19 for patients younger than 60 years; whereas loss of appetite and feeling unwell were more commonly seen among patients over 60 years. Headache and loss of taste and smell were rare symptoms of COVID-19 among patients over 60 years. Conclusion: Our study identified age-related differences in symptom presentations of SARS-CoV-2-positive patients calling for help or medical advice. The specific symptoms of loss of smell or taste almost exclusively reported by patients younger than 60 years. Differences in symptom presentation across age groups must be considered when screening for COVID-19.

Publication Type

Journal article.

<149>

Accession Number

20210279796

Author

Kong LingCai; Hu Yi; Wang Qiang; Chen XinDa; Yao Tong; Wang Yu; Jin Hui; Fan LiJun; Du Wei

Title

Could COVID-19 pandemic be stopped with joint efforts of travel restrictions and public health countermeasures? A modelling study.

Source

BMJ Open; 2021. 11(5). 30 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: We aim to explore and compare the effect of global travel restrictions and public health countermeasures in response to COVID-19 outbreak. **Design:** A data-driven spatio-temporal modelling to simulate the spread of COVID-19 worldwide for 150 days since 1 January 2020 under different scenarios. **Setting:** Worldwide. **Interventions:** Travel restrictions and public health countermeasures. **Main outcome:** The cumulative number of COVID-19 cases. **Results:** The cumulative number of COVID-19 cases could reach more than 420 million around the world without any countermeasures taken. Under timely and intensive global interventions, 99.97% of infections could be avoided comparing with non-interventions. The scenario

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of carrying out domestic travel restriction and public health countermeasures in China only could contribute to a significant decrease of the cumulative number of infected cases worldwide. Without global travel restriction in the study setting, 98.62% of COVID-19 cases could be avoided by public health countermeasures in China only compared with non-interventions at all. Conclusions: Public health countermeasures were generally more effective than travel restrictions in many countries, suggesting multinational collaborations in the public health communities in response to this novel global health challenge.

Publication Type

Journal article.

<150>

Accession Number

20210279790

Author

Zhou ChengHui; Lou BaoHui; Li Hui; Wang Xin; Ao HuShan; Duan FuJian

Title

Incidence, risk factors and prognostic effect of imaging right ventricular involvement in patients with COVID-19: a dose-response analysis protocol for systematic review.

Source

BMJ Open; 2021. 11(5). 28 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Emerging evidence has shown that COVID-19 infection may result in right ventricular (RV) disturbance and be associated with adverse clinical outcomes. The aim of this meta-analysis is to summarise the incidence, risk factors and the prognostic effect of imaging RV involvement in adult patients with COVID-19. **Methods:** A systematical search will be performed in PubMed, EMBase, ISI Knowledge via Web of Science and preprint databases (MedRxiv and BioRxiv) (until October 2021) to identify all cohort studies in adult patients with COVID-19. The primary outcome will be the incidence of RV involvement (dysfunction and/or dilation) assessed by echocardiography, CT or MRI. Secondary outcomes will include the risk factors for RV involvement and their association with all-cause mortality during hospitalisation. Additional outcomes will include the RV global or free wall longitudinal strain (RV-GLS or RV-FWLS), tricuspid annular plane systolic excursion (TAPSE), fractional area change (FAC) and RV diameter. Univariable or multivariable meta-regression and subgroup analyses will be performed for the study design and patient characteristics (especially acute or chronic pulmonary embolism and pulmonary hypertension). Sensitivity analyses will be used to assess the robustness of our results by removing each included study at one time to obtain and evaluate the remaining overall estimates of RV involvement incidence and related risk factors, association

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with all-cause mortality, and other RV parameters (RV-GLS or RV-FWLS, TAPSE, S', FAC and RV diameter). Both linear and cubic spline regression models will be used to explore the dose-response relationship between different categories (>2) of RV involvement and the risk of mortality (OR or HR). Ethics and dissemination: There was no need for ethics approval for the systematic review protocol according to the Institutional Review Board/Independent Ethics Committee of Fuwai Hospital. This meta-analysis will be disseminated through a peer-reviewed journal for publication.

Publication Type

Journal article.

<151>

Accession Number

20210279788

Author

Campbell, J.; Hobbs, M.; O'Hara, L.; Ballantyne, A.; Heywood, A.; Gray, L.

Title

Equity in vaccine trials for higher weight people? Protocol for a rapid review of inclusion and exclusion criteria for higher weight people in clinical trials for COVID-19.

Source

BMJ Open; 2021. 11(5). 29 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Vaccination is a public health strategy that aims to reduce the burden of viral illness, especially important for populations known or likely to be at increased risk for inequitable outcomes due to the disease itself or disparities in care accessed and received. The role of weight status in COVID-19 susceptibility and disease burden remains unclear. Despite this, higher weight is frequently described as a definitive risk factor for both susceptibility and disease severity. Therefore, COVID-19 vaccine trials should recruit a study group representative of the full weight spectrum, and undertake appropriate subgroup analysis by weight status to evaluate response and titrate dose regimes where indicated to ensure equitable outcomes for higher weight people. **Methods and analysis:** We aim to review inclusion and exclusion criteria of clinical trial protocols registered with ClinicalTrials.gov, ISRCTN Register, the WHO official vaccine trial register, and 'The COVID-19 Vaccine Tracker'. To determine the number of trials including higher weight (body mass index >30 kg/m²) individuals and the number of trials conducting efficacy subgroup analyses by weight status. Screening, data extraction and quality appraisal of trial protocols will be completed independently by a minimum of two reviewers. Clinical trials will be assessed for risk of bias using the Risk of Bias-2 tool. We will conduct a descriptive analysis of extracted data. The following subsets are proposed: participation of higher weight people in COVID-19 vaccine trials by trial phase, country and vaccine platform. **Ethics and dissemination:**

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Ethical approval was not required for this review. The results of this rapid review will be presented at appropriate conferences and published in a suitable peer reviewed journal.

Publication Type

Journal article.

<152>

Accession Number

20210279786

Author

Lavielle, M.; Faron, M.; Lefevre, J. H.; Zeitoun, J. D.

Title

Predicting the propagation of COVID-19 at an international scale: extension of an SIR model.

Source

BMJ Open; 2021. 11(5). 15 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Several epidemiological models have been published to forecast the spread of the COVID-19 pandemic, yet many of them have proven inaccurate for reasons that remain to be fully determined. We aimed to develop a novel model and implement it in a freely accessible web application. **Design:** We built an SIR-type compartmental model with two additional compartments: D (deceased patients); L (individuals who will die but who will not infect anybody due to social or medical isolation) and integration of a time-dependent transmission rate and a periodical weekly component linked to the way in which cases and deaths are reported. **Results:** The model was implemented in a web application (as of 2 June 2020). It was shown to be able to accurately capture the changes in the dynamics of the pandemic for 20 countries whatever the type of pandemic spread or containment measures: for instance, the model explains 97% of the variance of US data (daily cases) and predicts the number of deaths at a 2-week horizon with an error of 1%. **Conclusions:** In early performance evaluation, our model showed a high level of accuracy between prediction and observed data. Such a tool might be used by the global community to follow the spread of the pandemic.

Publication Type

Journal article.

<153>

Accession Number

20210279782

Author

Shah, R.; Ali, F. M.; Nixon, S. J.; Ingram, J. R.; Salek, S. M.; Finlay, A. Y.

Title

Measuring the impact of COVID-19 on the quality of life of the survivors, partners and family members: a cross-sectional international online survey.

Source

BMJ Open; 2021. 11(5). 30 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: This study aimed to measure the impact of COVID-19 on the quality of life (QoL) of survivors and their partners and family members. **Design and setting:** A prospective cross-sectional global online survey using social media. **Participants:** Patients with COVID-19 and partners or family members (age 18 years). **Intervention** Online survey from June to August 2020. **Main outcome measure:** The EuroQol group five dimensions three level (EQ-5D- 3L) to measure the QoL of survivors of COVID-19, and the Family Reported Outcome Measure (FROM-16) to assess the impact on their partner/family member's QoL. **Results:** The survey was completed by 735 COVID-19 survivors (mean age=48 years; females=563) at a mean of 12.8 weeks after diagnosis and by 571 partners and 164 family members (n=735; mean age=47 years; females=246) from Europe (50.6%), North America (38.5%) and rest of the world (10.9%). The EQ-5D mean score for COVID-19 survivors was 8.65 (SD=1.9, median=9; range=6-14). 81.1% (596/735) reported pain and discomfort, 79.5% (584/735) problems with usual activities, 68.7% (505/735) anxiety and depression and 56.2% (413/735) problems with mobility. Hospitalised survivors (20.1%, n=148) and survivors with existing health conditions (30.9%, n=227) reported significantly more problems with mobility and usual activities (p<0.05), with hospitalised also experiencing more impact on self-care (p0.001). Among 735 partners and family members, the mean FROM-16 score (maximum score=highest impact =32) was 15 (median=15, range=0-32). 93.6% (688/735) reported being worried, 81.7% (601/735) frustrated, 78.4% (676/735) sad, 83.3% (612/735) reported impact on their family activities, 68.9% (507/735) on sleep and 68.1% (500/735) on their sex life. **Conclusion:** COVID-19 survivors reported a major persisting impact on their physical and psychosocial health. The lives of their partners and other family members were also severely affected. There is a need for a holistic support system sensitive to the needs of COVID-19 survivors and their family members who experience a major 'secondary burden'.

Publication Type

Journal article.

<154>

Accession Number

20210279781

Author

Bakolis, I.; Stewart, R.; Baldwin, D.; Beenstock, J.; Bibby, P.; Broadbent, M.; Cardinal, R.; Chen ShanQuan; Chinnasamy, K.; Cipriani, A.; Douglas, S.; Horner, P.; Jackson, C. A.; John, A.; Joyce, D. W.; Lee SzeChim; Lewis, J.; McIntosh, A.; Nixon, N.; Osborn, D.; Phiri, P.; Rathod, S.; Smith, T.; Sokal, R.; Waller, R.; Landau, S.

Title

Changes in daily mental health service use and mortality at the commencement and lifting of COVID-19 'lockdown' policy in 10 UK sites: a regression discontinuity in time design.

Source

BMJ Open; 2021. 11(5). 39 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To investigate changes in daily mental health (MH) service use and mortality in response to the introduction and the lifting of the COVID-19 'lockdown' policy in Spring 2020. **Design:** A regression discontinuity in time (RDIT) analysis of daily service-level activity. **Setting and participants:** Mental healthcare data were extracted from 10 UK providers. **Outcome measures:** Daily (weekly for one site) deaths from all causes, referrals and discharges, inpatient care (admissions, discharges, caseloads) and community services (face-to-face (f2f)/non-f2f contacts, caseloads): Adult, older adult and child/adolescent mental health; early intervention in psychosis; home treatment teams and liaison/Accident and Emergency (A&E). **Data** were extracted from 1 Jan 2019 to 31 May 2020 for all sites, supplemented to 31 July 2020 for four sites. Changes around the commencement and lifting of COVID-19 'lockdown' policy (23 March and 10 May, respectively) were estimated using a RDIT design with a difference-in-difference approach generating incidence rate ratios (IRRs), meta-analysed across sites. **Results:** Pooled estimates for the lockdown transition showed increased daily deaths (IRR 2.31, 95% CI 1.86 to 2.87), reduced referrals (IRR 0.62, 95% CI 0.55 to 0.70) and reduced inpatient admissions (IRR 0.75, 95% CI 0.67 to 0.83) and caseloads (IRR 0.85, 95% CI 0.79 to 0.91) compared with the pre lockdown period. All community services saw shifts from f2f to non-f2f contacts, but varied in caseload changes. Lift of lockdown was associated with reduced deaths (IRR 0.42, 95% CI 0.27 to 0.66), increased referrals (IRR 1.36, 95% CI 1.15 to 1.60) and increased inpatient admissions (IRR 1.21, 95% CI 1.04 to 1.42) and caseloads (IRR 1.06, 95% CI 1.00 to 1.12) compared with the lockdown period. Site-wide activity, inpatient care and community services did not return to pre lockdown levels after lift of lockdown, while number of deaths did. Between-site heterogeneity most often indicated variation in size rather than direction of effect. **Conclusions:** MH service delivery underwent sizeable changes during the first national lockdown, with as-yet unknown and unevaluated consequences.

Publication Type

Journal article.

<155>

Accession Number

20210279775

Author

Misganu Endriyas; Aknaw Kawza; Abraham Alano; Mamush Hussen; Endashaw Shibru

Title

COVID-19 prevention practices in urban setting during early introduction of the disease: results from community survey in SNNP Region, Ethiopia.

Source

BMJ Open; 2021. 11(5). 14 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To assess community practices related to COVID-19 prevention and its associated factors during the early introduction of the disease to the study area. **Setting and participants:** A community-based cross-sectional study was conducted in Southern Nations, Nationalities and People's Region, Ethiopia. Ten zonal towns with high population density and mobility and 1239 participants were included in the study. **Outcome measure:** A semistructured questionnaire was uploaded to SurveyCTO data collection system with security patterns. Mask usage was assessed by observation, while social distancing and handwashing were assessed by interview. Data were collected by health professionals who have Bachelor of Science degree and above and analysed using SPSS V.25. Descriptive statistics and binary logistic regression were performed. **Results:** From 1239 individuals, about half, 657 (53%), of respondents were women and about two-thirds, 795 (64.2%), were married. Nearly 9 out of 10 (90.3%) and about 8 out of 10 (82.0%) respondents reported that they frequently wash hands with soap and/or use sanitiser and keep social distancing as means to prevent COVID-19, respectively. Less than three-fifths (57.8%) of respondents wore masks during the interview. In summary, about half (48.9%) of respondents were practising the three recommended methods (social distancing, handwashing and wearing masks). Sex, educational status, family size and overall knowledge about COVID-19 were associated with practising COVID-19 prevention measures. **Conclusion:** COVID-19 prevention practice was low as only about half of participants were practising social distancing, handwashing and wearing masks. Although awareness creation has been implemented through different forms of media, it should be strengthened in different local languages. Concerned government bodies should strictly follow using masks in public gatherings.

Publication Type

Journal article.

<156>

Accession Number

20210279774

Author

Mistry, S. K.; Ali, A. R. M. M.; Yadav, U. N.; Ghimire, S.; Hossain, M. B.; Saha, M.; Sompa Reza; Progati Bakshi; Bhuiyan, A. T. M. R. H.; Harris, M.

Title

Misconceptions about COVID-19 among older Rohingya (forcibly displaced Myanmar nationals) adults in Bangladesh: findings from a cross-sectional study.

Source

BMJ Open; 2021. 11(5). 47 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Due to low health literacy and adverse situation in the camps, there are possibilities of misconceptions related to COVID-19 among the older Rohingya (forcibly displaced Myanmar nationals or FDMNs) adults in Bangladesh. The present research aimed to assess the level of misconceptions and the factors associated with it among the older FDMNs in Bangladesh. **Design:** Cross-sectional. **Setting:** A selected Rohingya camp situated in Cox's Bazar, a southeastern district of Bangladesh. **Participants:** Information was collected from 416 conveniently selected FDMNs who were aged 60 years and above. **Primary and secondary outcome measures:** The primary outcome was misconceptions related to the spread, prevention and treatment of COVID-19. Information on 14 different locally relevant misconceptions was gathered, each was scored as one, and obtained a cumulative score, ranging from 0 to 14, with a higher score indicating a higher level of misconceptions. A multiple linear regression model explored the factors associated with misconceptions. **Results:** The participants had an average of five misconceptions. The most prevalent misconceptions were: everyone should wear personal protective equipment when outside (84.6%) and its prevention by nutritious food (62.5%) and drinking water (59.3%). Other notable misconceptions included the spread of COVID-19 through mosquito bites (42%) and its transmissions only to the non/less religious person (31.4%). In regression analyses, memory or concentration problems, communication frequency with social networks, pre-existing conditions and receiving information from health workers were significantly associated with higher COVID-19 misconceptions. These misconceptions were less likely among those overwhelmed by COVID-19, having COVID-19 diagnosed friends or family members and receiving information from friends and family. **Conclusions:** Overall, we found that misconceptions were prevalent among the older FDMNs in Bangladesh. The associations have important implications for programmes to prevent and manage COVID-19 in these settings. Health workers need to be adequately trained to provide clear communication and counter misconceptions.

Publication Type

Journal article.

<157>

Accession Number

20210279769

Author

Chu Qiao; Gu Tian; Li AnQi; Chen JunJie; Wang Hui; Liu NingNing; Wu RuiJun; He YaPing

Title

Perceived effectiveness of public health measures and positive attitudes during a pandemic: a large cross-sectional study in Shanghai, China.

Source

BMJ Open; 2021. 11(5). 39 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Building individuals' positive attitudes during a pandemic is essential for facilitating psychological resilience. However, little is known about how public health measures may improve people's positive attitudes during a pandemic. We investigated the potential mechanism underlying the association between individuals' perceived effectiveness of public health measures and positive attitudes towards the success of pandemic control during the COVID-19 pandemic, by examining the parallel mediating effects of three types of threat appraisals: concerns about contracting the virus, perceived impact of the pandemic on life and estimated duration of the pandemic. **Design, setting and participants:** In February 2020 when the COVID-19 infection was spreading rapidly in China, a large cross-sectional survey was conducted among 132 054 adults from the 16 districts in Shanghai, China. **Outcome measures:** Perceived effectiveness of the public health measures, positive attitudes towards the success of pandemic control and threat appraisals. **Results:** Results of structural equation modelling supported the hypothesised mediation model: perceived effectiveness of public health measures was associated with lower levels of concerns about contracting the virus ($\beta=-0.20$), perceived impact of the pandemic ($\beta=-0.13$) and perceived duration of the pandemic ($\beta=-0.20$), which were then associated with higher levels of positive attitudes towards the success of pandemic control ($\beta=-0.12$ to -0.25). **Conclusions:** The findings suggest that threat appraisals may be important pathways through which individuals' evaluations of prevention strategies may influence their attitudes towards the success of pandemic control. The health authorities should consider reducing people's inappropriate threat appraisals when designing public health policies to facilitate people's positive attitudes during a pandemic.

Publication Type

Journal article.

<158>

Accession Number

20210279768

Author

Grove, A.; Osokogu, O.; Al-Khudairy, L.; Mehrabian, A.; Zanganeh, M.; Brown, A.; Court, R.; Taylor-Phillips, S.; Uthman, O. A.; McCarthy, N.; Sudhesh Kumar; Clarke, A.

Title

Association between vitamin D supplementation or serum vitamin D level and susceptibility to SARS-CoV-2 infection or COVID-19 including clinical course, morbidity and mortality outcomes? A systematic review.

Source

BMJ Open; 2021. 11(5). 90 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objective: To systemically review and critically appraise published studies of the association between vitamin D supplementation or serum vitamin D level and susceptibility to SARS-CoV-2 infection or COVID-19, including clinical course, morbidity and mortality outcomes. **Design:** Systematic review. **Data sources:** MEDLINE (OVID), Embase (OVID), Cochrane Central Register of Controlled Trials, MedRxiv and BioRxiv preprint databases. COVID-19 databases of the WHO, Cochrane, CEBM Oxford and Bern University up to 10 June 2020. **Study selection:** Studies that assessed vitamin D supplementation and/or low serum vitamin D in patients acutely ill with, or at risk of, severe betacoronavirus infection (SARS-CoV, MERS-CoV, SARS-CoV-2). **Data extraction:** Two authors independently extracted data using a predefined data extraction form and assessed risk of bias using the Downs and Black Quality Assessment Checklist. **Results:** Searches elicited 449 papers, 59 studies were eligible full-text assessment and 4 met the eligibility criteria of this review. The four studies were narratively synthesised and included (1) a cross-sectional study (n=107) suggesting an inverse association between serum vitamin D and SARS-CoV-2; (2) a retrospective cohort study (348 598 participants, 449 cases) in which univariable analysis showed that vitamin D protects against COVID-19; (3) an ecological country level study demonstrating a negative correlation between vitamin D and COVID-19 case numbers and mortality; and (4) a case-control survey (n=1486) showing cases with confirmed/probable COVID-19 reported lower vitamin D supplementation. All studies were at high/unclear risk of bias. **Conclusion:** There is no robust evidence of a negative association between vitamin D and COVID-19. No relevant randomised controlled trials were identified and there is no robust peer-reviewed published evidence of association between vitamin D levels and severity of symptoms or mortality due to COVID-19. Guideline producers should acknowledge that benefits of vitamin D supplementation in COVID-19 are as yet unproven despite increasing interest.

Publication Type

Journal article.

<159>

Accession Number

20210279517

Author

Lundy, L.; Fatta-Kassinos, D.; Slobodnik, J.; Karaolia, P.; Cirka, L.; Kreuzinger, N.; Castiglioni, S.; Bijlsma, L.; Dulio, V.; Deviller, G.; Lai, F. Y.; Alygizakis, N.; Barneo, M.; Baz-Lomba, J. A.; Been, F.; Cichova, M.; Conde-Perez, K.; Covaci, A.; Donner, E.; Ficek, A.; Hassard, F.; Hedstrom, A.; Hernandez, F.; Janska, V.; Jellison, K.; Hofman, J.; Kelly Hill; Hong PeiYing; Kasprzyk-Hordern, B.; Kolarevic, S.; Krahulec, J.; Lambropoulou, D.; Llanos, R. de; Mackulak, T.; Martinez-Garcia, L.; Martinez, F.; Medema, G.; Micsinai, A.; Myrmel, M.; Nasser, M.; Niederstatter, H.; Nozal, L.; Oberacher, H.; Ocenaskova, V.; Ogorzaly, L.; Papadopoulos, D.; Peinado, B.; Pitkanen, T.; Poza, M.; Rumbo-Feal, S.; Sanchez, M. B.; Szekely, A. J.; Soltysova, A.; Thomaidis, N. S.; Vallejo, J.; Nuijs, A. van; Ware, V.; Viklander, M.

Title

Making waves: collaboration in the time of SARS-CoV-2 - rapid development of an international co-operation and wastewater surveillance database to support public health decision-making.

Source

Water Research (Oxford); 2021. 199.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The presence of SARS-CoV-2 RNA in wastewater was first reported in March 2020. Over the subsequent months, the potential for wastewater surveillance to contribute to COVID-19 mitigation programmes has been the focus of intense national and international research activities, gaining the attention of policy makers and the public. As a new application of an established methodology, focused collaboration between public health practitioners and wastewater researchers is essential to developing a common understanding on how, when and where the outputs of this non-invasive community-level approach can deliver actionable outcomes for public health authorities. Within this context, the NORMAN SCORE "SARS-CoV-2 in sewage" database provides a platform for rapid, open access data sharing, validated by the uploading of 276 data sets from nine countries to-date. Through offering direct access to underpinning meta-data sets (and describing its use in data interpretation), the NORMAN SCORE database is a resource for the development of recommendations on minimum data requirements for wastewater pathogen surveillance. It is also a tool to engage public health practitioners in discussions on use of the approach, providing an opportunity to build mutual understanding of the demand and supply for data and facilitate the translation of this promising research application into public health practice.

Publication Type

Journal article.

<160>

Accession Number

20210279502

Author

Yoshimoto, F. K.

Title

A biochemical perspective of the nonstructural proteins (NSPs) and the spike protein of SARS CoV-2.

Source

Protein Journal; 2021. 40(3):260-295. 106 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

The global pandemic that shut down the world in 2020 was caused by the virus, SARS CoV-2. The chemistry of the various nonstructural proteins (NSP3, NSP5, NSP12, NSP13, NSP14, NSP15, NSP16) of SARS CoV-2 is discussed. Secondly, a recent major focus of this pandemic is the variant strains of SARS CoV-2 that are increasingly occurring and more transmissible. One strain, called "D614G", possesses a glycine (G) instead of an aspartate (D) at position 614 of the spike protein. Additionally, other emerging strains called "501Y.V1" and "501Y.V2" have several differences in the receptor binding domain of the spike protein (N501Y) as well as other locations. These structural changes may enhance the interaction between the spike protein and the ACE2 receptor of the host, increasing infectivity. The global pandemic caused by SARS CoV-2 is a rapidly evolving situation, emphasizing the importance of continuing the efforts to interrogate and understand this virus.

Publication Type

Journal article.

<161>

Accession Number

20210279486

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

151

Page |

Author

Coma, E.; Mendez-Boo, L.; Mora, N.; Guiriguet, C.; Benitez, M.; Fina, F.; Fabregas, M.; Ballo, E.; Ramos, F.; Medina, M.; Argimon, J. M.

Title

Divergences on expected pneumonia cases during the COVID-19 epidemic in Catalonia: a time-series analysis of primary care electronic health records covering about 6 million people.

Source

BMC Infectious Diseases; 2021. 21(283):(20 March 2021). 26 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Pneumonia is one of the complications of COVID-19. Primary care electronic health records (EHR) have shown the utility as a surveillance system. We therefore analyse the trends of pneumonia during two waves of COVID-19 pandemic in order to use it as a clinical surveillance system and an early indicator of severity. Methods: Time series analysis of pneumonia cases, from January 2014 to December 2020. We collected pneumonia diagnoses from primary care EHR, a software system covering > 6 million people in Catalonia (Spain). We compared the trend of pneumonia in the season 2019-2020 with that in the previous years. We estimated the expected pneumonia cases with data from 2014 to 2018 using a time series regression adjusted by seasonality and influenza epidemics. Results: Between 4 March and 5 May 2020, 11,704 excess pneumonia cases (95% CI: 9909 to 13,498) were identified. Previously, we identified an excess from January to March 2020 in the population older than 15 years of 20%. We observed another excess pneumonia period from 22 October to 15 November of 1377 excess cases (95% CI: 665 to 2089). In contrast, we observed two great periods with reductions of pneumonia cases in children, accounting for 131 days and 3534 less pneumonia cases (95% CI, 1005 to 6064) from March to July; and 54 days and 1960 less pneumonia cases (95% CI 917 to 3002) from October to December. Conclusions: Diagnoses of pneumonia from the EHR could be used as an early and low cost surveillance system to monitor the spread of COVID-19.

Publication Type

Journal article.

<162>

Accession Number

20210279337

Author

Sieber, P.; Flury, D.; Gusewell, S.; Albrich, W. C.; Boggian, K.; Gardiol, C.; Schlegel, M.; Sieber, R.; Vernazza, P.; Kohler, P.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

Characteristics of patients with Coronavirus Disease 2019 (COVID-19) and seasonal influenza at time of hospital admission: a single center comparative study.

Source

BMC Infectious Diseases; 2021. 21(271):(17 March 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In the future, co-circulation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and influenza viruses A/B is likely. From a clinical point of view, differentiation of the two disease entities is crucial for patient management. We therefore aim to detect clinical differences between Coronavirus Disease 2019 (COVID-19) and seasonal influenza patients at time of hospital admission. **Methods:** In this single-center observational study, we included all consecutive patients hospitalized for COVID-19 or influenza between November 2019 and May 2020. Data were extracted from a nationwide surveillance program and from electronic health records. COVID-19 and influenza patients were compared in terms of baseline characteristics, clinical presentation and outcome. We used recursive partitioning to generate a classification tree to discriminate COVID-19 from influenza patients. **Results:** We included 96 COVID-19 and 96 influenza patients. Median age was 68 vs. 70 years ($p = 0.90$), 72% vs. 56% ($p = 0.024$) were males, and median Charlson Comorbidity Index (CCI) was 1 vs. 2 ($p = 0.027$) in COVID-19 and influenza patients, respectively. Time from symptom onset to hospital admission was longer for COVID-19 (median 7 days, IQR 3-10) than for influenza patients (median 3 days, IQR 2-5, $p < 0.001$). Other variables favoring a diagnosis of COVID-19 in the classification tree were higher systolic blood pressure, lack of productive sputum, and lack of headache. The tree classified 86/192 patients (45%) into two subsets with 80% of patients having influenza or COVID-19, respectively. In-hospital mortality was higher for COVID-19 patients (16% vs. 5%, $p = 0.018$). **Conclusion:** Discriminating COVID-19 from influenza patients based on clinical presentation is challenging. Time from symptom onset to hospital admission is considerably longer in COVID-19 than in influenza patients and showed the strongest discriminatory power in our classification tree. Although they had fewer comorbidities, in-hospital mortality was higher for COVID-19 patients.

Publication Type

Journal article.

<163>

Accession Number

20210279329

Author

Chong Yong; Tani, N.; Ikematsu, H.; Terazawa, N.; Nakashima, H.; Shimono, N.; Akashi, K.; Tanaka, Y.

Title

RCVS Knowledge is a registered Charity No. 230886. Registered as a Company limited by guarantee in England and Wales No. 598443
Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Genetic testing and serological screening for SARS-CoV-2 infection in a COVID-19 outbreak in a nursing facility in Japan.

Source

BMC Infectious Diseases; 2021. 21(263):(15 March 2021). 13 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The Pandemic of coronavirus disease (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has critically impacted the spread of infection within nursing facilities. We evaluated the usefulness of genetic and serological tests conducted during a COVID-19 outbreak in a nursing facility in Japan. **Methods:** After the first identification of SARS-CoV-2 infection, a comprehensive, facility- and/or unit-wide PCR testing from nasopharyngeal swabs was repeatedly performed in a three-unit facility including 99 residents with dementia and 53 healthcare personnel. Additionally, PCR testing was conducted separately for residents and staff with fever of 37.5 degrees C. Facility-wide serological testing, including rapid kit testing and quantitative assay, was conducted twice over 1 month apart. **Results:** A total of 322 PCR and 257 antibody tests were performed. 37 (24.3%) of the 152 individuals (25/99 residents, 25.3%; 12/53 staff, 22.6%) were identified as PCR-positive. Seven residents died with a mortality of 7.1% (7/99). Among the 37 individuals, 10 (27.0%) were asymptomatic at the time of testing. PCR positivity was concentrated on one unit (Unit 1) (20/30 residents, 66.7%; 9/14 staff, 64.3%). The other units showed a limited spread of infection. In unit-wide and separate tests, PCR positivity detection was highly prevalent (22.9 and 44.4%, respectively) in Unit 1, compared with that in the other units. Serological testing identified two additional infected residents with a negative PCR result and showed that no staff was newly identified as infected. **Conclusions:** Thorough PCR testing, in combination with comprehensive and separate tests, is critical for managing COVID-19 outbreaks in nursing facilities, particularly, in units considered an epicenter. Serological testing is also beneficial for tracing contacts, confirming the number of infected individuals, and authorizing the termination of the outbreak.

Publication Type

Journal article.

<164>

Accession Number

20210279328

Author

Haroon, S.; Anuradhaa Subramanian; Cooper, J.; Astha Anand; Krishna Gokhale; Byne, N.; Samir Dhalla; Acosta-Mena, D.; Taverner, T.; Okoth, K.; Wang JingYa; Chandan, J. S.; Sainsbury, C.; Zemedikun, D. T.; Thomas, G. N.; Parekh, D.; Marshall, T.; Sapey, E.; Adderley, N. J.; Krishnarajah Nirantharakumar

Title

Renin-angiotensin system inhibitors and susceptibility to COVID-19 in patients with hypertension: a propensity score-matched cohort study in primary care.

Source

BMC Infectious Diseases; 2021. 21(262):(15 March 2021). 36 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Renin-angiotensin system (RAS) inhibitors have been postulated to influence susceptibility to Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). This study investigated whether there is an association between their prescription and the incidence of COVID-19 and all-cause mortality. **Methods:** We conducted a propensity-score matched cohort study comparing the incidence of COVID-19 among patients with hypertension prescribed angiotensin-converting enzyme I (ACE) inhibitors or angiotensin II type-1 receptor blockers (ARBs) to those treated with calcium channel blockers (CCBs) in a large UK-based primary care database (The Health Improvement Network). We estimated crude incidence rates for confirmed/suspected COVID-19 in each drug exposure group. We used Cox proportional hazards models to produce adjusted hazard ratios for COVID-19. We assessed all-cause mortality as a secondary outcome. **Results:** The incidence rate of COVID-19 among users of ACE inhibitors and CCBs was 9.3 per 1000 person-years (83 of 18,895 users [0.44%]) and 9.5 per 1000 person-years (85 of 18,895 [0.45%]), respectively. The adjusted hazard ratio was 0.92 (95% CI 0.68 to 1.26). The incidence rate among users of ARBs was 15.8 per 1000 person-years (79 out of 10,623 users [0.74%]). The adjusted hazard ratio was 1.38 (95% CI 0.98 to 1.95). There were no significant associations between use of RAS inhibitors and all-cause mortality. **Conclusion:** Use of ACE inhibitors was not associated with the risk of COVID-19 whereas use of ARBs was associated with a statistically non-significant increase compared to the use of CCBs. However, no significant associations were observed between prescription of either ACE inhibitors or ARBs and all-cause mortality.

Publication Type

Journal article.

<165>

Accession Number

20210279323

Author

Muluneh Alene; Lelteywork Yismaw; Moges Agazhe Assemie; Daniel Bekele Ketema; Wodaje Gietaneh; Tilahun Yemanu Birhan

Title

Serial interval and incubation period of COVID-19: a systematic review and meta-analysis.

Source

BMC Infectious Diseases; 2021. 21(257):(11 March 2021). 35 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Understanding the epidemiological parameters that determine the transmission dynamics of COVID-19 is essential for public health intervention. Globally, a number of studies were conducted to estimate the average serial interval and incubation period of COVID-19. Combining findings of existing studies that estimate the average serial interval and incubation period of COVID-19 significantly improves the quality of evidence. Hence, this study aimed to determine the overall average serial interval and incubation period of COVID-19. **Methods:** We followed the PRISMA checklist to present this study. A comprehensive search strategy was carried out from international electronic databases (Google Scholar, PubMed, Science Direct, Web of Science, CINAHL, and Cochrane Library) by two experienced reviewers (MAA and DBK) authors between the 1st of June and the 31st of July 2020. All observational studies either reporting the serial interval or incubation period in persons diagnosed with COVID-19 were included in this study. Heterogeneity across studies was assessed using the I² and Higgins test. The NOS adapted for cross-sectional studies was used to evaluate the quality of studies. A random effect Meta-analysis was employed to determine the pooled estimate with 95% (CI). Microsoft Excel was used for data extraction and R software was used for analysis. **Results:** We combined a total of 23 studies to estimate the overall mean serial interval of COVID-19. The mean serial interval of COVID-19 ranged from 4.2 to 7.5 days. Our meta-analysis showed that the weighted pooled mean serial interval of COVID-19 was 5.2 (95%CI: 4.9-5.5) days. Additionally, to pool the mean incubation period of COVID-19, we included 14 articles. The mean incubation period of COVID-19 also ranged from 4.8 to 9 days. Accordingly, the weighted pooled mean incubation period of COVID-19 was 6.5 (95%CI: 5.9-7.1) days. **Conclusions:** This systematic review and meta-analysis showed that the weighted pooled mean serial interval and incubation period of COVID-19 were 5.2, and 6.5 days, respectively. In this study, the average serial interval of COVID-19 is shorter than the average incubation period, which suggests that substantial numbers of COVID-19 cases will be attributed to presymptomatic transmission.

Publication Type

Journal article.

<166>

Accession Number

20210279293

Author

Karimi, F.; Vaezi, A. A.; Qorbani, M.; Moghadasi, F.; Gelsfid, S. H.; Maghoul, A.; Mahmoodi, N.; Eskandari, Z.; Gholami, H.; Mokhames, Z.; Saleh, M.

Title

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Clinical and laboratory findings in COVID-19 adult hospitalized patients from Alborz province/Iran: comparison of rRT-PCR positive and negative.

Source

BMC Infectious Diseases; 2021. 21(256):(11 March 2021). 33 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The novel coronavirus disease 2019 (COVID-19) was emergency turned into global public health after the first patients were detected in Wuhan, China, in December 2019. The disease rapidly expanded and led to an epidemic throughout China, followed by the rising number of cases worldwide. Given the high prevalence of COVID-19, rapid and accurate diagnostic methods are immediately needed to identify, isolate and treat the patients as soon as possible, decreasing mortality rates and the risk of public contamination by severe acute respiratory syndrome coronavirus 2(SARS-CoV-2). **Methods:** This case-control study was conducted in two hospitals in Alborz Province in Iran. All recruited cases in this study were symptomatic adults hospitalized as COVID-19 patients with compatible Computed tomographic (CT) scan findings and available rRT-PCR results. The patients were recruited in this study. The patients were categorized into positive and negative rRT-PCR groups and evaluated for symptoms, initial vital signs, comorbidity, clinical and laboratory findings. Finally, the results were assessed by SPSS software. **Results:** Between March 5 to April 5, 2020, 164 symptomatic COVID-19 patients were studied. In total, there were 111 rRT-PCR positive (67.6%) and 53 rRT-PCR negative patients (32.4%). In terms of statistics, the frequency of symptoms revealed no difference, except for cough (P.V: 0.008), dizziness (PV: 0.048), and weakness (P.V: 0.022). Among initial vital signs, PR (P.V: 0.041) and O2 Saturation (PV: 0.014) were statistically different between the two groups. Evaluation of comorbidities revealed no difference except for hyperlipidemia (P.V: 0.024). In the comparison of laboratory findings, only WBC count (PV: 0.001), lymphocyte count (PV: 0.001), and Hb (P.V: 0.008) were statistically different between the two groups. **Conclusion:** In case of the negative rRT-PCR result, it is necessary to take a logical approach, and we recommended that the physician decides according to clinical manifestations, laboratory findings, and positive CT results.

Publication Type

Journal article.

<167>

Accession Number

20210279279

Author

Romero-Gameros, C. A.; Colin-Martinez, T.; Waizel-Haiat, S.; Vargas-Ortega, G.; Ferat-Osorio, E.; Guerrero-Paz, J. A.; Intriago-Alor, M.; Lopez-Moreno, M. A.; Cuevas-Garcia, C. F.; Mendoza-Zubieta, V.; Martinez-Ordaz, J. L.; Gonzalez-Virla, B.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

Diagnostic accuracy of symptoms as a diagnostic tool for SARS-CoV 2 infection: a cross-sectional study in a cohort of 2,173 patients.

Source

BMC Infectious Diseases; 2021. 21(255):(11 March 2021). 33 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The SARS-CoV-2 pandemic continues to be a priority health problem; According to the World Health Organization data from October 13, 2020, 37,704,153 confirmed COVID-19 cases have been reported, including 1,079,029 deaths, since the outbreak. The identification of potential symptoms has been reported to be a useful tool for clinical decision-making in emergency departments to avoid overload and improve the quality of care. The aim of this study was to evaluate the performances of symptoms as a diagnostic tool for SARS-CoV-2 infection. **Methods:** An observational, cross-sectional, prospective and analytical study was carried out, during the period of time from April 14 to July 21, 2020. Data (demographic variables, medical history, respiratory and non-respiratory symptoms) were collected by emergency physicians. The diagnosis of COVID-19 was made using SARS-CoV-2 RT-PCR. The diagnostic accuracy of these characteristics for COVID-19 was evaluated by calculating the positive and negative likelihood ratios. A Mantel-Haenszel and multivariate logistic regression analysis was performed to assess the association of symptoms with COVID-19. **Results:** A prevalence of 53.72% of SARS-CoV-2 infection was observed. The symptom with the highest sensitivity was cough 71%, and a specificity of 52.68%. The symptomatological scale, constructed from 6 symptoms, obtained a sensitivity of 83.45% and a specificity of 32.86%, taking 2 symptoms as a cut-off point. The symptoms with the greatest association with SARS-CoV-2 were: anosmia odds ratio (OR) 3.2 (95% CI; 2.52-4.17), fever OR 2.98 (95% CI; 2.47-3.58), dyspnea OR 2.9 (95% CI; 2.39-3.51) and cough OR 2.73 (95% CI: 2.27-3.28). **Conclusion:** The combination of 2 symptoms/signs (fever, cough, anosmia, dyspnea and oxygen saturation < 93%, and headache) results in a highly sensitivity model for a quick and accurate diagnosis of COVID-19, and should be used in the absence of ancillary diagnostic studies. Symptomatology, alone and in combination, may be an appropriate strategy to use in the emergency department to guide the behaviors to respond to the disease.

Publication Type

Journal article.

<168>

Accession Number

20210279273

Author

Tan JuenKiem; Dalleen Leong; Hemalatha Munusamy; Nor Hazwani, Z. A.; Kori, N.; Hod, R.; Periyasamy, P.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

The prevalence and clinical significance of presymptomatic COVID-19 patients: how we can be one step ahead in mitigating a deadly pandemic.

Source

BMC Infectious Diseases; 2021. 21(249):(9 March 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Presymptomatic COVID-19 patients have been identified as a major stumbling block in efforts to break the chain of transmission. Studies on temporal dynamics of its shedding suggests it peaks 1-2 days prior to any symptom onset. Therefore, a large proportion of patients are actively spreading the disease unknowingly whilst undetected. However, lengthy lockdowns and isolation leads to a host of socioeconomic issues and are impractical. Conversely, there exists no study describing this group and their clinical significance despite their key role in disease transmission. **Methods:** As a result, we devised a retrospective study to look at the prevalence of presymptomatic patients with COVID-19 from data sourced via our medical records office. Subsequently, we identify early indicators of infection through demographic information, biochemical and radiological abnormalities which would allow early diagnosis and isolation. In addition, we will look into the clinical significance of this group and their outcome; if it differs from asymptomatic or symptomatic patients. Descriptive statistics were used in addition to tabulating the variables and corresponding values for reference. Variables are compared between the presymptomatic group and others via Chi-square testing and Fisher's exact test, accepting a p value of < 0.05 as significant. **Results:** Our analysis shows a higher proportion of presymptomatic patients with atypical symptoms like chest pain while symptomatic patients commonly present with respiratory symptoms like cough and shortness of breath. Besides that, there were more females presenting as presymptomatic patients compared to males ($p = 0.019$) and these group of patients were likely to receive treatment ($p < 0.001$). Otherwise, we were not able to identify other statistically significant markers suggesting a patient is presymptomatic. **Conclusion:** As we have little means of identifying these silent spreaders, it highlights further the importance of general measures implemented to stop COVID-19 transmission like social distancing, face mask, and widespread testing.

Publication Type

Journal article.

<169>

Accession Number

20210279269

Author

Zhao QingLong; Wang Yao; Yang Meng; Li MeiNa; Zhao ZeYu; Lu XinRong; Shen Bo; Luan Bo; Zhao YiFei; Cao BoNan; Yao LaiShun; Zhao BenHua; Su YanHua; Chen TianMu

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

Evaluating the effectiveness of measures to control the novel coronavirus disease 2019 in Jilin Province, China.

Source

BMC Infectious Diseases; 2021. 21(245):(6 March 2021). 44 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Based on differences in populations and prevention and control measures, the spread of new coronary pneumonia in different countries and regions also differs. This study aimed to calculate the transmissibility of coronavirus disease 2019 (COVID-19), and to evaluate the effectiveness of measures to control the disease in Jilin Province, China. **Methods:** The data of reported COVID-19 cases were collected, including imported and local cases from Jilin Province as of March 14, 2020. A Susceptible-Exposed-Infectious-Asymptomatic-Recovered/Removed (SEIAR) model was developed to fit the data, and the effective reproduction number (R_{eff}) was calculated at different stages in the province. Finally, the effectiveness of the measures was assessed. **Results:** A total of 97 COVID-19 infections were reported in Jilin Province, among which 45 were imported infections (including one asymptomatic infection) and 52 were local infections (including three asymptomatic infections). The model fit the reported data well ($R^2 = 0.593$, $P < 0.001$). The R_{eff} of COVID-19 before and after February 1, 2020 was 1.64 and 0.05, respectively. Without the intervention taken on February 1, 2020, the predicted cases would have reached a peak of 177,011 on October 22, 2020 (284 days from the first case). The projected number of cases until the end of the outbreak (on October 9, 2021) would have been 17,129,367, with a total attack rate of 63.66%. Based on the comparison between the predicted incidence of the model and the actual incidence, the comprehensive intervention measures implemented in Jilin Province on February 1 reduced the incidence of cases by 99.99%. Therefore, according to the current measures and implementation efforts, Jilin Province can achieve good control of the virus's spread. **Conclusions:** COVID-19 has a moderate transmissibility in Jilin Province, China. The interventions implemented in the province had proven effective; increasing social distancing and a rapid response by the prevention and control system will help control the spread of the disease.

Publication Type

Journal article.

<170>

Accession Number

20210279267

Author

Eskandari, E.; Marzaleh, M. A.; Roudgari, H.; Farahani, R. H.; Nezami-Asl, A.; Laripour, R.; Aliyazdi, H.; Moghaddam, A. D.; Zibaseresht, R.; Akbarialiabadi, H.; Zoshk, M. Y.; Shiri, H.; Shiri, M.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

Sniffer dogs as a screening/diagnostic tool for COVID-19: a proof of concept study.

Source

BMC Infectious Diseases; 2021. 21(243):(5 March 2021). 39 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Sniffer dogs are able to detect certain chemical particles and are suggest to be capable of helping diagnose some medical conditions and complications, such as colorectal cancer, melanoma, bladder cancer, and even critical states such as hypoglycemia in diabetic patients. With the global spread of COVID-19 throughout the world and the need to have a real-time screening of the population, especially in crowded places, this study aimed to investigate the applicability of sniffer dogs to carry out such a task. Methods: Firstly, three male and female dogs from German shepherd (Saray), German black (Kuzhi) and Labrador (Marco) breeds had been intensively trained throughout the classical conditioning method for 7 weeks. They were introduced to human specimens obtained from the throat and pharyngeal secretions of participants who were already reported positive or negative for SARS-COV-2 infection be RT-PCR. Each dog underwent the conditioning process for almost 1000 times. In the meantime another similar condition process was conducted on clothes and masks of COVID-19 patient using another three male and female dogs from Labrador (Lexi), Border gypsy (Sami), and Golden retriever (Zhico) breeds. In verification test for the first three dogs, 80 pharyngeal secretion samples consisting of 26 positive and 54 negative samples from different medical centers who underwent RT-PCR test were in a single-blind method. In the second verification test for the other three dogs, masks and clothes of 50 RT-PCR positive and 70 RT-PCR negative cases from different medical center were used. Results: In verification test using pharyngeal secretion, the sniffer dogs' detection capability was associated with a 65% of sensitivity and 89% of specificity and they managed to identify 17 out of the 26 positive and 48 out of the 54 true negative samples. In the next verification test using patients' face masks and clothes, 43 out of the 50 positive samples were correctly identified by the dogs. Moreover, out of the 70 negative samples, 65 samples were correctly found to be negative. The sensitivity of this test was as high as 86% and its specificity was 92.9%. In addition, the positive and negative predictive values were 89.6 and 90.3%, respectively. Conclusion: Dogs are capable of being trained to identify COVID-19 cases by sniffing their odour, so they can be used as a reliable tool in limited screening.

Publication Type

Journal article.

<171>

Accession Number

20210279262

Author

RCVS Knowledge is a registered Charity No. 230886. Registered as a Company limited by guarantee in England and Wales No. 598443
Belgravia House 62 – 64 Horseferry Road London SW1P 2AF
T: +44 (0) 20 7202 0752
E: library@rcvsknowledge.org
www.rcvsknowledge.org

Wang Li; Xu ChengDong; Wang JinFeng; Qiao JiaJun; Yan MingTao; Zhu QianKun

Title

Spatiotemporal heterogeneity and its determinants of COVID-19 transmission in typical labor export provinces of China.

Source

BMC Infectious Diseases; 2021. 21(242):(5 March 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Previous studies have indicated that the risk of infectious disease spread is greatest in locations where a population has massive and convenient access to the epicenter of an outbreak. However, the spatiotemporal variations and risk determinants of COVID-19 in typical labor export regions of China remain unclear. Understanding the geographical distribution of the disease and the socio-economic factors affecting its transmission is critical for disease prevention and control. Methods: A total of 2152 COVID-19 cases were reported from January 21 to February 24, 2020 across the 34 cities in Henan and Anhui. A Bayesian spatiotemporal hierarchy model was used to detect the spatiotemporal variations of the risk posed by COVID-19, and the GeoDetector q statistic was used to evaluate the determinant power of the potential influence factors. Results: The risk posed by COVID-19 showed geographical spatiotemporal heterogeneity. Temporally, there was an outbreak period and control period. Spatially, there were high-risk regions and low-risk regions. The high-risk regions were mainly in the southwest areas adjacent to Hubei and cities that served as economic and traffic hubs, while the low-risk regions were mainly in western Henan and eastern Anhui, far away from the epicenter. The accessibility, local economic conditions, and medical infrastructure of Wuhan in Hubei province all played an important role in the spatiotemporal heterogeneity of COVID-19 transmission. The results indicated that the q statistics of the per capita GDP and the proportion of primary industry GDP were 0.47 and 0.47, respectively. The q statistic of the population flow from Wuhan was 0.33. In particular, the results showed that the q statistics for the interaction effects between population density and urbanization, population flow from Wuhan, per capita GDP, and the number of doctors were all greater than 0.8. Conclusions: COVID-19 showed significant spatiotemporal heterogeneity in the labor export regions of China. The high-risk regions were mainly located in areas adjacent to the epicenter as well as in big cities that served as traffic hubs. Population access to the epicenter, as well as local economic and medical conditions, played an important role in the interactive effects of the disease transmission.

Publication Type

Journal article.

<172>

Accession Number

20210279261

Author

RCVS Knowledge is a registered Charity No. 230886. Registered as a Company limited by guarantee in England and Wales No. 598443
Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Yojana Gokhale; Rakshita Mehta; Uday Kulkarni; Nitin Karnik; Sushant Gokhale; Uma Sundar; Swati Chavan; Akshay Kor; Sonal Thakur; Trupti Trivedi; Naveen Kumar; Sujata Baveja; Aniket Wadal; Shaonak Kolte; Aukshan Deolankar; Sangeeta Pednekar; Lalana Kalekar; Rupal Padiyar; Charulata Londhe; Pramod Darole; Sujata Pol; Gokhe, S. B.; Namita Padwal; Dharmendra Pandey; Dhirendra Yadav; Anagha Joshi; Harshal Badgujar; Mayuri Trivedi; Priyanshu Shah; Purna Bhavsar

Title

Tocilizumab improves survival in severe COVID-19 pneumonia with persistent hypoxia: a retrospective cohort study with follow-up from Mumbai, India.

Source

BMC Infectious Diseases; 2021. 21(241):(5 March 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Cytokine storm triggered by Severe Coronavirus Disease 2019 (COVID-19) is associated with high mortality. With high Interleukin -6 (IL-6) levels reported in COVID-19 related deaths in China, IL-6 is considered to be the key player in COVID-19 cytokine storm. Tocilizumab, a monoclonal antibody against IL-6 receptor, is used on compassionate grounds for treatment of COVID-19 cytokine storm. The aim of this study was to assess effect of tocilizumab on mortality due to COVID-19 cytokine storm. **Method:** This retrospective, observational study included patients of severe COVID-19 pneumonia with persistent hypoxia (defined as saturation 94% or less on supplemental Oxygen of 15 L per minute through non-rebreathing mask or PaO₂/FiO₂ ratio of less than 200) who were admitted to a tertiary care center in Mumbai, India, between 31st March to 5th July 2020. In addition to standard care, single Inj. Tocilizumab 400 mg was given intravenously to 151 consecutive COVID-19 patients with persistent hypoxia, from 13th May to 5th July 2020. These 151 patients were retrospectively analysed and compared with historic controls, ie consecutive COVID-19 patients with persistent hypoxia, defined as stated above (N = 118, from our first COVID-19 admission on 31st March to 12th May 2020 i.e., till tocilizumab was available in hospital). Univariate and multivariate Cox regression analysis was performed for identifying predictors of survival. Statistical analysis was performed using IBM SPSS version 26. **Results:** Out of 269 (151 in tocilizumab group and 118 historic controls) patients studied from 31st March to 5th July 2020, median survival in the tocilizumab group was significantly longer than in the control group; 18 days (95% CI, 11.3 to 24.7) versus 9 days (95% CI, 5.7 to 12.3); log rank p 0.007. On multivariate Cox regression analysis, independent predictors of survival were use of tocilizumab (HR 0.621, 95% CI 0.427-0.903, P 0.013) and higher oxygen saturation. **Conclusion:** Tocilizumab may improve survival in severe COVID-19 pneumonia with persistent hypoxia. Randomised controlled trials on use of tocilizumab as rescue therapy in patients of severe COVID-19 pneumonia with hypoxia (PaO₂/FiO₂ less than 200) due to hyperinflammatory state, are warranted.

Publication Type

Journal article.

<173>

Accession Number

20210279222

Author

Bhawna Bisht; Pooja Bhatnagar; Prateek Gururani; Vinod Kumar; Tomar, M. S.; Rajat Sinhar; Nitika Rathi; Sanjay Kumar

Title

Food irradiation: effect of ionizing and non-ionizing radiations on preservation of fruits and vegetables - a review.

Source

Trends in Food Science & Technology; 2021. 114:372-385.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Food irradiation is a non-thermal, energy-efficient, non-chemical and physical method of food preservation in which the food is exposed to various ionizing and non-ionizing radiations. It is used to extend the shelf-life of a product by not adversely affecting its nutritive parameters. Scope and approach: The present review deals with the current understanding of the effect of ionizing and non-ionizing radiations on different properties of fruits and vegetables. Conclusions: Studies have revealed the positive effects of irradiation on physical and nutritional properties of different fruits and vegetables followed by significant reduction in microbial load during storage. Food irradiation can be seen as a promising, safe and well-established technology but still underutilized at large scale. The buying behaviour of consumers poses a significant challenge with innovating food processing technologies like food irradiation. Thus, on the basis of the current review, scientific proofs of irradiated food safety is still needed and work needs to be accomplished to increase technological appeal for food safety. Data collected from existing studies revealed that UV-C has the potential to be proved better than other preservation techniques at an acceptable dose that can be helpful in maintaining the desirable quality, enhancing the nutritive value of product during storage and has the efficacy of eliminating COVID-19.

Publication Type

Journal article.

<174>

Accession Number

20210279197

Author

Zhang ZhiChao; Zhang XiangChun; Bi KeYi; He YuFeng; Yan WangJun; Yang, C. S.; Zhang JinSong

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Title

Potential protective mechanisms of green tea polyphenol EGCG against COVID-19.

Source

Trends in Food Science & Technology; 2021. 114:11-24.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: The world is in the midst of the COVID-19 pandemic. In this comprehensive review, we discuss the potential protective effects of (-)-epigallocatechin-3-gallate (EGCG), a major constituent of green tea, against COVID-19. Scope and approach: Information from literature of clinical symptoms and molecular pathology of COVID-19 as well as relevant publications in which EGCG shows potential protective activities against COVID-19 is integrated and evaluated. Key findings and conclusions: EGCG, via activating Nrf2, can suppress ACE2 (a cellular receptor for SARS-CoV-2) and TMPRSS2, which mediate cell entry of the virus. Through inhibition of SARS-CoV-2 main protease, EGCG may inhibit viral reproduction. EGCG via its broad antioxidant activity may protect against SARS-CoV-2 evoked mitochondrial ROS (which promote SARS-CoV-2 replication) and against ROS burst inflicted by neutrophil extracellular traps. By suppressing ER-resident GRP78 activity and expression, EGCG can potentially inhibit SARS-CoV-2 life cycle. EGCG also shows protective effects against (1) cytokine storm-associated acute lung injury/acute respiratory distress syndrome, (2) thrombosis via suppressing tissue factors and activating platelets, (3) sepsis by inactivating redox-sensitive HMGB1, and (4) lung fibrosis through augmenting Nrf2 and suppressing NF- κ B. These activities remain to be further substantiated in animals and humans. The possible concerted actions of EGCG suggest the importance of further studies on the prevention and treatment of COVID-19 in humans. These results also call for epidemiological studies on potential preventive effects of green tea drinking on COVID-19.

Publication Type

Journal article.

<175>

Accession Number

20210279190

Author

Zhu TengYu; Qiu Huan; Cao QiQi; Duan ZiLei; Liu FengLiang; Song TianZhang; Liu Yang; Fang YaQun; Wu GuangMing; Zheng YongTang; Ding WenJun; Lai Ren; Jin Lin

Title

Particulate matter exposure exacerbates susceptibility to SARS-CoV-2 infection in humanized ACE2 mice.

Source

Zoological Research; 2021. 42(3):335-338. 9 ref.

Publisher

Kunming Institute of Zoology, Academia Sinica

Location of Publisher

Kunming

Country of Publication

China

Abstract

The global outbreak of coronavirus disease 2019 (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), as of 8 May 2021, has surpassed 150 700 000 infections and 3 279 000 deaths worldwide. Evidence indicates that SARS-CoV-2 RNA can be detected on particulate matter (PM), and COVID-19 cases are correlated with levels of air pollutants. However, the mechanisms of PM involvement in the spread of SARS-CoV-2 remain poorly understood. Here, we found that PM exposure increased the expression level of angiotensin-converting enzyme 2 (ACE2) and transmembrane serine protease 2 (TMPRSS2) in several epithelial cells and increased the adsorption of the SARS-CoV-2 spike protein. Instillation of PM in a hACE2 mouse model significantly increased the expression of ACE2 and Tmprss2 and viral replication in the lungs. Furthermore, PM exacerbated the pulmonary lesions caused by SARS-CoV-2 infection in the hACE2 mice. In conclusion, our study demonstrated that PM is an epidemiological factor of COVID-19, emphasizing the necessity of wearing anti-PM masks to cope with this global pandemic.

Publication Type

Journal article.

<176>

Accession Number

20210279079

Author

Giannitto, C.; Bonifacio, C.; Esposito, S.; Ammirabile, A.; Mercante, G.; Virgilio, A. de; Spriano, G.; Heffler, E.; Lofino, L.; Politi, L. S.; Balzarini, L.

Title

Sudden neck swelling with rash as late manifestation of COVID-19: a case report.

Source

BMC Infectious Diseases; 2021. 21(232):(27 February 2021). 11 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Although there are reports of otolaryngological symptoms and manifestations of CoronaVirus Disease 19 (COVID-19), there have been no documented cases of sudden neck swelling with rash in patients with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infection described in literature. Case presentation: We report a case of a sudden neck swelling and rash likely due to late SARS-CoV-2 in a 64-year-old woman. The patient reported COVID-19 symptoms over the previous three weeks. Computed Tomography (CT) revealed a diffuse soft-tissue swelling and edema of subcutaneous tissue, hypodermis, and muscular and deep fascial planes. All the differential diagnoses were ruled out. Both the anamnestic history of the patient's husband who had died of COVID-19 with and the collateral findings of pneumonia and esophageal wall edema suggested the association with COVID-19. This was confirmed by nasopharyngeal swab polymerase chain reaction. The patient was treated with lopinavir/ritonavir, hydroxychloroquine and piperacillin/tazobactam for 7 days. The neck swelling resolved in less than 24 h, while the erythema was still present up to two days later. The patient was discharged after seven days in good clinical condition and with a negative swab. Conclusion: Sudden neck swelling with rash may be a coincidental presentation, but, in the pandemic context, it is most likely a direct or indirect complication of COVID-19.

Publication Type

Journal article.

<177>

Accession Number

20210279076

Author

Kim JongHun; Choi WonSuk; Song JoonYoung; Yoon YoungKyung; Kim MinJa; Sohn JangWook

Title

The role of smart monitoring digital health care system based on smartphone application and personal health record platform for patients diagnosed with Coronavirus disease 2019.

Source

BMC Infectious Diseases; 2021. 21(229):(27 February 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF
T: +44 (0) 20 7202 0752
E: library@rcvsknowledge.org
www.rcvsknowledge.org

Background: The massive outbreak of the novel coronavirus disease 2019 (COVID-19) in Daegu city and Gyeongsangbuk-do, Republic of Korea (ROK), caused the exponential increase in new cases exceeding 5000 within 6 weeks. Therefore, the community treatment center (CTC) with a digital health care monitoring system based on the smartphone application and personal health record platform (PHR) was implemented. Thus, we report our experience in one of the CTCs to investigate the role of CTC and the feasibility of the digital health care monitoring system in the COVID-19 pandemic. Methods: The Gyeongbuk-Daegu 2 CTC was set up at the private residential facility. Admission criteria were (1) patients < 65 years with COVID-19, (2) patients without underlying medical comorbidities, and (3) COVID-19 disease severity of mild class. Admitted patients were placed under monitoring of vital signs and symptoms. Clinical information was collected using the smartphone application or telephone communication. Collected information was displayed on the PHR platform in a real-time fashion for close monitoring. Results: From Mar 3, 2020, to Mar 26, 2020, there was a total of 290 patients admitted to the facility. Males were 104 (35.9%). The median age was 37 years. The median time between the COVID-19 diagnosis and admission was 7 days. Five patients were identified and were transferred to the designed COVID-19 treatment hospital for their urgent medical needs. The smartphone application usage to report vital signs and symptoms was noted in 96% of the patients. There were no deaths of the patients. Conclusions: Our results suggest that implementation of the CTC using a commercial residence facility and digital health care technology may offer valuable solutions to the challenges posed by the COVID-19 outbreak.

Publication Type

Journal article.

<178>

Accession Number

20210279074

Author

Puzniak, L.; Finelli, L.; Yu, K. C.; Bauer, K. A.; Moise, P.; Anda, C. de; Vankeepuram, L.; Sepassi, A.; Vikas Gupta

Title

A multicenter analysis of the clinical microbiology and antimicrobial usage in hospitalized patients in the US with or without COVID-19.

Source

BMC Infectious Diseases; 2021. 21(227):(27 February 2021). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Past respiratory viral epidemics suggest that bacterial infections impact clinical outcomes. There is minimal information on potential co-pathogens in patients with coronavirus disease-2019 (COVID-

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

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19) in the US. We analyzed pathogens, antimicrobial use, and healthcare utilization in hospitalized US patients with and without severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2). Methods: This multicenter retrospective study included patients with > 1 day of inpatient admission and discharge/death between March 1 and May 31, 2020 at 241 US acute care hospitals in the BD Insights Research Database. We assessed microbiological testing data, antimicrobial utilization in admitted patients with 24 h of antimicrobial therapy, and length of stay (LOS). Results: A total of 141,621 patients were tested for SARS-CoV-2 (17,003 [12.0%] positive) and 449,339 patients were not tested. Most (> 90%) patients tested for SARS-CoV-2 had additional microbiologic testing performed compared with 41.9% of SARS-CoV-2-untested patients. Non-SARS-CoV-2 pathogen rates were 20.9% for SARS-CoV-2-positive patients compared with 21.3 and 27.9% for SARS-CoV-2-negative and -untested patients, respectively. Gram-negative bacteria were the most common pathogens (45.5, 44.1, and 43.5% for SARS-CoV-2-positive, -negative, and -untested patients). SARS-CoV-2-positive patients had higher rates of hospital-onset (versus admission-onset) non-SARS-CoV-2 pathogens compared with SARS-CoV-2-negative or -untested patients (42.4, 22.2, and 19.5%, respectively), more antimicrobial usage (68.0, 45.2, and 25.1% of patients), and longer hospital LOS (mean [standard deviation (SD)] of 8.6 [11.4], 5.1 [8.9], and 4.2 [8.0] days) and intensive care unit (ICU) LOS (mean [SD] of 7.8 [8.5], 3.6 [6.2], and 3.6 [5.9] days). For all groups, the presence of a non-SARS-CoV-2 pathogen was associated with increased hospital LOS (mean [SD] days for patients with versus without a non-SARS-CoV-2 pathogen: 13.7 [15.7] vs 7.3 [9.6] days for SARS-CoV-2-positive patients, 8.2 [11.5] vs 4.3 [7.9] days for SARS-CoV-2-negative patients, and 7.1 [11.0] vs 3.9 [7.4] days for SARS-CoV-2-untested patients). Conclusions: Despite similar rates of non-SARS-CoV-2 pathogens in SARS-CoV-2-positive, -negative, and -untested patients, SARS-CoV-2 was associated with higher rates of hospital-onset infections, greater antimicrobial usage, and extended hospital and ICU LOS. This finding highlights the heavy burden of the COVID-19 pandemic on healthcare systems and suggests possible opportunities for diagnostic and antimicrobial stewardship.

Publication Type

Journal article.

<179>

Accession Number

20210279073

Author

Huang LiHong; Wei LiangMin; Jiang Yue; Lin LiJuan

Title

The lab-confirmed interval of COVID-19 clusters and its application in the strength evaluation of prevention and control measures.

Source

BMC Infectious Diseases; 2021. 21(226):(27 February 2021). 23 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The lab-confirmed interval is the date from lab confirmation in a core case (infecter) to lab confirmation in a second case (infectee); however, its distribution and application are seldom reported. This study aimed to investigate the lab-confirmed interval and its application in the preliminary evaluation of the strength of disease prevention and control measures. **Methods:** Taking European countries and Chinese provinces outside Hubei as examples, we identified 63 infecter-infectee pairs from European countries from Wikipedia, and 103 infecter-infectee pairs from official public sources in Chinese provinces outside Hubei. The lab-confirmed intervals were obtained through analysis of the collected data and adopting the bootstrap method. **Results:** The mean lab-confirmed interval was 2.6 (95% CI: 2.1-3.1) days for Europe and 2.6 (95% CI: 1.9-3.3) days for China outside Hubei, which were shorter than the reported serial intervals. For index patients aged 60 years old, the lab-confirmed interval in Europe was slightly longer (mean: 2.9; 95% CI: 2.0-3.6) and obviously longer in China outside Hubei (mean: 3.8; 95% CI: 1.9-5.5) than that for patients aged < 60 years. **Conclusion:** Investigation of the lab-confirmed interval can provide additional information on the characteristics of emergent outbreaks and can be a feasible indication to evaluate the strength of prevention and control measures. When the lab-confirmed interval was shorter than the serial interval, it could objectively reflect improvements in laboratory capacity and the surveillance of close contacts.

Publication Type

Journal article.

<180>

Accession Number

20210279068

Author

Makaronidis, J.; Firman, C.; Magee, C. G.; Mok, J.; Balogun, N.; Lechner, M.; Carnemolla, A.; Batterham, R. L.

Title

Distorted chemosensory perception and female sex associate with persistent smell and/or taste loss in people with SARS-CoV-2 antibodies: a community based cohort study investigating clinical course and resolution of acute smell and/or taste loss in people with and without SARS-CoV-2 antibodies in London, UK.

Source

BMC Infectious Diseases; 2021. 21(221):(25 February 2021). 39 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Background: Loss of smell and/or taste are cardinal symptoms of COVID-19. 'Long-COVID', persistence of symptoms, affects around one fifth of people. However, data regarding the clinical resolution of loss of smell and/or taste are lacking. In this study we assess smell and taste loss resolution at 4-6 week follow-up, aim to identify risk factors for persistent smell loss and describe smell loss as a feature of long-COVID in a community cohort in London with known SARS-CoV-2 IgG/IgM antibody status. We also compare subjective and objective smell assessments in a subset of participants. Methods: Four hundred sixty-seven participants with acute loss of smell and/or taste who had undergone SARS-CoV-2 IgG/IgM antibody testing 4-6 weeks earlier completed a follow-up questionnaire about resolution of their symptoms. A subsample of 50 participants completed an objective olfactory test and results were compared to subjective smell evaluations. Results: People with SARS-CoV-2 antibodies with an acute loss of sense of smell and taste were significantly less likely to recover their sense of smell/taste than people who were seronegative (smell recovery: 57.7% vs. 72.1%, $p = 0.027$. taste recovery 66.2% vs. 80.3%, $p = 0.017$). In SARS-CoV-2 positive participants, a higher percentage of male participants reported full resolution of smell loss (72.8% vs. 51.4%; $p < 0.001$) compared to female participants, who were almost 2.5-times more likely to have ongoing smell loss after 4-6 weeks (OR 2.46, 95%CI 1.47-4.13, $p = 0.001$). Female participants with SARS-CoV-2 antibodies and unresolved smell loss and unresolved taste loss were significantly older (> 40 years) than those who reported full resolution. Participants who experienced parosmia reported lower smell recovery rates and participants with distorted taste perception lower taste recovery rates. Parosmia had a significant association to unresolved smell loss (OR 2.47, 95%CI 1.54-4.00, $p < 0.001$). Conclusion: Although smell and/or taste loss are often transient manifestations of COVID-19, 42% of participants had ongoing loss of smell, 34% loss of taste and 36% loss of smell and taste at 4-6 weeks follow-up, which constitute symptoms of 'long-COVID'. Females (particularly > 40 years) and people with a distorted perception of their sense of smell/taste are likely to benefit from prioritised early therapeutic interventions.

Publication Type

Journal article.

<181>

Accession Number

20210279064

Author

Prichard, C.; Canning, M.; McWilliam-Ross, K.; Birbari, J.; Parker, W.; Wasson, L.; Hollingsworth, J. W.

Title

Case series of acute appendicitis association with SARS-CoV-2 infection.

Source

BMC Infectious Diseases; 2021. 21(217):(25 February 2021). 7 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

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Background: Describe the indications for surgical interventions in asymptomatic patients with SARS-CoV-2. We are unaware of previous reports of an association between SARS-CoV-2 and acute appendicitis. **Methods:** We performed a single institution retrospective review of SARS-CoV-2 pre-procedure testing and indications for surgical intervention. Statistical comparisons were performed using Chi Square analysis or two-tailed Student T test. **Results:** We report a high prevalence of SARS-CoV-2 in both all testing and pre-procedure testing during the enrollment period. We observe a high prevalence of acute appendicitis among patients identified to be SARS-CoV-2 positive during pre-procedure testing and without recognized symptoms of COVID19. **Conclusion:** We report a previously unrecognized association between SARS-CoV-2 and acute appendicitis.

Publication Type

Journal article.

<182>

Accession Number

20210279061

Author

Bernadou, A.; Bouges, S.; Catroux, M.; Rigaux, J. C.; Laland, C.; Leveque, N.; Noury, U.; Larrieu, S.; Acef, S.; Hibold, D.; Cazenave-Roblot, F.; Filleul, L.

Title

High impact of COVID-19 outbreak in a nursing home in the Nouvelle-Aquitaine region, France, march to April 2020.

Source

BMC Infectious Diseases; 2021. 21(198):(22 February 2021). 20 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Elderly people in nursing homes are particularly vulnerable to COVID-19 due to their age, the presence of comorbidities, and community living. On March 14, 2020, at the beginning of the first epidemic wave of COVID-19 in France, a cluster was reported in a nursing home in the Nouvelle-Aquitaine region. We monitored the outbreak as well as the infection prevention and control (IPC) measures implemented. **Methods:** A confirmed case was defined as laboratory-confirmed COVID-19 in a resident or staff member present in the nursing home between March 7 and May 1, 2020; and a probable case as a person presenting an acute respiratory illness after contact with a confirmed case. Symptomatic inpatient residents and symptomatic staff members were systematically tested for SARS-CoV-2. In addition, two screening sessions were held on site. **Results:** We identified 109 cases (98 confirmed, 11 probable). The attack rate was 66% among residents and 45% among staff. Half of all cases were identified during the screening sessions. One-quarter of cases had minor symptoms or were asymptomatic. The case fatality rate among residents was

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29%. IPC measures were rapidly implemented such as the quarantine of residents, the reinforcement of staff personal protective equipment, and home quarantine of staff testing positive, which were supplemented in April by systematic controls at the entrance of the nursing home and the creation of additional staff break rooms. Conclusions: This outbreak confirmed the considerable health impact of SARS-CoV-2 transmission in a nursing home. In addition to the implementation of IPC measures, the early detection of cases through the screening of residents and staff is essential to identify asymptomatic and pre-symptomatic cases and limit the spread of the virus.

Publication Type

Journal article.

<183>

Accession Number

20210279059

Author

Colagrossi, L.; Antonello, M.; Renica, S.; Merli, M.; Matarazzo, E.; Travi, G.; Vecchi, M.; Colombo, J.; Muscatello, A.; Grasselli, G.; Molteni, S. N.; Scaravilli, V.; Cattaneo, E.; Fanti, D.; Vismara, C.; Bandera, A.; Gori, A.; Puoti, M.; Cento, V.; Alteri, C.; Perno, C. F.

Title

SARS-CoV-2 RNA in plasma samples of COVID-19 affected individuals: a cross-sectional proof-of-concept study.

Source

BMC Infectious Diseases; 2021. 21(184):(17 February 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Recent studies showed that plasma SARS-CoV-2 RNA seems to be associated with worse COVID-19 outcome. However, whether specific population can be at higher risk of viremia are to date unexplored. **Methods:** This cross-sectional proof-of-concept study included 41 SARS-CoV-2-positive adult individuals (six affected by haematological malignancies) hospitalized at two major hospital in Milan, for those demographic, clinical and laboratory data were available. SARS-CoV-2 load was quantified by ddPCR in paired plasma and respiratory samples. To assess significant differences between patients with and patients without viremia, Fisher exact test and Wilcoxon test were used for categorical and continuous variables, respectively. **Results:** Plasma SARS-CoV-2 RNA was found in 8 patients (19.5%), with a median (IQR) value of 694 (209-1023) copies/mL. Viremic patients were characterized by an higher mortality rate (50.0% vs 9.1%; $p = 0.018$) respect to patients without viremia. Viremic patients were more frequently affected by haematological malignancies (62.5% vs. 3.0%; $p < 0.001$), and had higher viral load in respiratory samples (9,404,000 [586,060-10,000,000] vs 1560 [312-25,160] copies/mL; $p = 0.002$).

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Conclusions: Even if based on a small sample population, this proof-of-concept study poses the basis for an early identification of patients at higher risk of SARS-CoV-2 viremia, and therefore likely to develop severe COVID-19, and supports the need of a quantitative viral load determination in blood and respiratory samples of haematologic patients with COVID-19 in order to predict prognosis and consequently to help their further management.

Publication Type

Journal article.

<184>

Accession Number

20210279029

Author

McGuffin, L. J.; Aldowsari, F. M. F.; Alharbi, S. M. A.; Adiyaman, R.

Title

ModFOLD8: accurate global and local quality estimates for 3D protein models.

Source

Nucleic Acids Research; 2021. 49(W1):W425-W430. 23 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Methods for estimating the quality of 3D models of proteins are vital tools for driving the acceptance and utility of predicted tertiary structures by the wider bioscience community. Here we describe the significant major updates to ModFOLD, which has maintained its position as a leading server for the prediction of global and local quality of 3D protein models, over the past decade (>20 000 unique external users). ModFOLD8 is the latest version of the server, which combines the strengths of multiple pure-single and quasi-single model methods. Improvements have been made to the web server interface and there has been successive increases in prediction accuracy, which were achieved through integration of newly developed scoring methods and advanced deep learning-based residue contact predictions. Each version of the ModFOLD server has been independently blind tested in the biennial CASP experiments, as well as being continuously evaluated via the CAMEO project. In CASP13 and CASP14, the ModFOLD7 and ModFOLD8 variants ranked among the top 10 quality estimation methods according to almost every official analysis. Prior to CASP14, ModFOLD8 was also applied for the evaluation of SARS-CoV-2 protein models as part of CASP Commons 2020 initiative. The ModFOLD8 server is freely available at:

<https://www.reading.ac.uk/bioinf/ModFOLD/>.

Publication Type

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E: library@rcvsknowledge.org

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Journal article.

<185>

Accession Number

20210279025

Author

Ong, E.; Cooke, M. F.; Huffman, A.; Xiang ZuoShuang; Wong, M. U.; Wang HaiHe; Meenakshi Seetharaman; Valdez, N.; He YongQun

Title

Vaxign2: the second generation of the first Web-based vaccine design program using reverse vaccinology and machine learning.

Source

Nucleic Acids Research; 2021. 49(W1):W671-W678. 40 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Vaccination is one of the most significant inventions in medicine. Reverse vaccinology (RV) is a state-of-the-art technique to predict vaccine candidates from pathogen's genome(s). To promote vaccine development, we updated Vaxign2, the first web-based vaccine design program using reverse vaccinology with machine learning. Vaxign2 is a comprehensive web server for rational vaccine design, consisting of predictive and computational workflow components. The predictive part includes the original Vaxign filtering-based method and a new machine learning-based method, Vaxign-ML. The benchmarking results using a validation dataset showed that Vaxign-ML had superior prediction performance compared to other RV tools. Besides the prediction component, Vaxign2 implemented various post-prediction analyses to significantly enhance users' capability to refine the prediction results based on different vaccine design rationales and considerably reduce user time to analyze the Vaxign/Vaxign-ML prediction results. Users provide proteome sequences as input data, select candidates based on Vaxign outputs and Vaxign-ML scores, and perform post-prediction analysis. Vaxign2 also includes precomputed results from approximately 1 million proteins in 398 proteomes of 36 pathogens. As a demonstration, Vaxign2 was used to effectively analyse SARS-CoV-2, the coronavirus causing COVID-19. The comprehensive framework of Vaxign2 can support better and more rational vaccine design. Vaxign2 is publicly accessible at <http://www.violinet.org/vaxign2>.

Publication Type

Journal article.

<186>

Accession Number

20210278909

Author

Yin TingXuan; Li YuanJun; Ying Ying; Luo ZhiJun

Title

Prevalence of comorbidity in Chinese patients with COVID-19: systematic review and meta-analysis of risk factors.

Source

BMC Infectious Diseases; 2021. 21(200):(22 February 2021). many ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) is an infectious disease characterized by cough, fever, and fatigue and 20% of cases will develop into severe conditions resulting from acute lung injury with the manifestation of the acute respiratory distress syndrome (ARDS) that accounts for more than 50% of mortality. Currently, it has been reported that some comorbidities are linked with an increased rate of severity and mortality among COVID-19 patients. To assess the role of comorbidity in COVID-19 progression, we performed a systematic review with a meta-analysis on the relationship of COVID-19 severity with 8 different underlying diseases. Methods: PubMed, Web of Science, and CNKI were searched for articles investigating the prevalence of comorbidities in severe and non-severe COVID-19 patients. A total of 41 studies comprising 12,526 patients were included. Results: Prevalence of some commodities was lower than that in general population such as hypertension (19% vs 23.2%), diabetes (9% vs 10.9%), chronic kidney disease (CKD) (2% vs 9.5%), chronic liver diseases (CLD) (3% vs 24.8%) and chronic obstructive pulmonary disease (COPD) (3% vs 8.6%), while some others including cancer (1% vs 0.6%), cardiovascular disease (6% vs 1.8%) and cerebrovascular disease (2% vs 0.9%) exhibited greater percentage in COVID-19. Cerebrovascular disease (OR = 3.70, 95%CI 2.51-5.45) was found to be the strongest risk factor in disease exacerbation, followed by CKD (OR = 3.60, 95%CI 2.18-5.94), COPD (OR = 3.14, 95% CI 2.35-4.19), cardiovascular disease (OR = 2.76, 95% CI 2.18-3.49), malignancy (OR = 2.63, 95% CI 1.75-3.95), diabetes (OR = 2.49, 95% CI 2.10-2.96) and hypertension (OR = 2.13, 95% CI 1.81-2.51). We found no correlation between CLD and increased disease severity (OR = 1.32, 95% CI 0.96-1.82). Conclusion: The impact of all eight underlying diseases on COVID-19 deterioration seemed to be higher in patients outside Hubei. Based on different comorbidities, COVID-19 patients tend to be at risk of developing poor outcomes to a varying degree. Thus, tailored infection prevention and monitoring and treatment strategies targeting these high-risk subgroups might improve prognosis during the COVID-19 pandemic.

Publication Type

Journal article.

<187>

Accession Number

20210278907

Author

Thelen, J. M.; Buenen, A. G.; Apeldoorn, M. van; Wertheim, H. F.; Hermans, M. H. A.; Wever, P. C.

Title

Community-acquired bacteraemia in COVID-19 in comparison to influenza A and influenza B: a retrospective cohort study.

Source

BMC Infectious Diseases; 2021. 21(199):(22 February 2021). 30 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: During the coronavirus disease 2019 (COVID-19) pandemic in the Netherlands it was noticed that very few blood cultures from COVID-19 patients turned positive with clinically relevant bacteria. This was particularly evident in comparison to the number of positive blood cultures during previous seasonal epidemics of influenza. This observation raised questions about the occurrence and causative microorganisms of bacteraemia in COVID-19 patients, especially in the perspective of the widely reported overuse of antibiotics and the rising rate of antibiotic resistance. **Methods:** We conducted a retrospective cohort study on blood culture results in influenza A, influenza B and COVID-19 patients presenting to two hospitals in the Netherlands. Our main outcome consisted of the percentage of positive blood cultures. The percentage of clinically relevant blood cultures, isolated bacteria and 30-day all-cause mortality served as our secondary outcomes. **Results:** A total of 1331 viral episodes were analysed in 1324 patients. There was no statistically significant difference ($p = 0.47$) in overall occurrence of blood culture positivity in COVID-19 patients (9.0, 95% CI 6.8-11.1) in comparison to influenza A (11.4, 95% CI 7.9-14.8) and influenza B patients (10.4, 95% CI 7.1-13.7.). After correcting for the high rate of contamination, the occurrence of clinically relevant bacteraemia in COVID-19 patients amounted to 1.0% (95% CI 0.3-1.8), which was statistically significantly lower ($p = 0.04$) compared to influenza A patients (4.0, 95% CI 1.9-6.1) and influenza B patients (3.0, 95% CI 1.2-4.9). The most frequently identified bacterial isolates in COVID-19 patients were *Escherichia coli* ($n = 2$) and *Streptococcus pneumoniae* ($n = 2$). The overall 30-day all-cause mortality for COVID-19 patients was 28.3% (95% CI 24.9-31.7), which was statistically significantly higher ($p < .001$) when compared to patients with influenza A (7.1, 95% CI 4.3-9.9) and patients with influenza B (6.4, 95% CI 3.8-9.1). **Conclusions:** We report a very low occurrence of community-acquired bacteraemia amongst COVID-19 patients in comparison to influenza patients. These results reinforce current clinical guidelines on antibiotic management in COVID-19, which only advise utilization of antibiotics when a bacterial co-infection is suspected.

Publication Type

Journal article.

<188>

Accession Number

20210278903

Author

Wang XingRui; Che QingLin; Ji XiaoXiao; Meng XinYi; Zhang Lang; Jia RongRong; Lyu HaiRong; Bai WeiXian; Tan LingJie; Gao YanJun

Title

Correlation between lung infection severity and clinical laboratory indicators in patients with COVID-19: a cross-sectional study based on machine learning.

Source

BMC Infectious Diseases; 2021. 21(192):(18 February 2021). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus disease 2019 (COVID-19) has caused a global pandemic that has raised worldwide concern. This study aims to investigate the correlation between the extent of lung infection and relevant clinical laboratory testing indicators in COVID-19 and to analyse its underlying mechanism. Methods: Chest high-resolution computer tomography (CT) images and laboratory examination data of 31 patients with COVID-19 were extracted, and the lesion areas in CT images were quantitatively segmented and calculated using a deep learning (DL) system. A cross-sectional study method was carried out to explore the differences among the proportions of lung lobe infection and to correlate the percentage of infection (POI) of the whole lung in all patients with clinical laboratory examination values. Results: No significant difference in the proportion of infection was noted among various lung lobes ($P > 0.05$). The POI of total lung was negatively correlated with the peripheral blood lymphocyte percentage (L%) ($r = -0.633$, $P < 0.001$) and lymphocyte (LY) count ($r = -0.555$, $P = 0.001$) but positively correlated with the neutrophil percentage (N%) ($r = 0.565$, $P = 0.001$). Otherwise, the POI was not significantly correlated with the peripheral blood white blood cell (WBC) count, monocyte percentage (M%) or haemoglobin (HGB) content. In some patients, as the infection progressed, the L% and LY count decreased progressively accompanied by a continuous increase in the N%. Conclusions: Lung lesions in COVID-19 patients are significantly correlated with the peripheral blood lymphocyte and neutrophil levels, both of which could serve as prognostic indicators that provide warning implications, and contribute to clinical interventions in patients.

Publication Type

Journal article.

<189>

Accession Number

20210278894

Author

Eyre, D. W.; Lumley, S. F.; O'Donnell, D.; Stoesser, N. E.; Matthews, P. C.; Howarth, A.; Hatch, S. B.; Marsden, B. D.; Cox, S.; James, T.; Cornall, R. J.; Stuart, D. I.; Sreaton, G.; Ebner, D.; Crook, D. W.; Conlon, C. P.; Jeffery, K.; Walker, T. M.; Peto, T. E. A.

Title

Stringent thresholds in SARS-CoV-2 IgG assays lead to under-detection of mild infections.

Source

BMC Infectious Diseases; 2021. 21(187):(18 February 2021). 24 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Thresholds for SARS-CoV-2 antibody assays have typically been determined using samples from symptomatic, often hospitalised, patients. In this setting the sensitivity and specificity of the best performing assays can both exceed 98%. However, antibody assay performance following mild infection is less clear. **Methods:** We assessed quantitative IgG responses in a cohort of healthcare workers in Oxford, UK, with a high pre-test probability of Covid-19, in particular the 991/11,475(8.6%) who reported loss of smell/taste. We use anosmia/ageusia and other risk factors as probes for Covid-19 infection potentially undiagnosed by immunoassays by investigating their relationship with antibody readings either side of assay thresholds. **Results:** The proportion of healthcare workers reporting anosmia/ageusia increased at antibody readings below diagnostic thresholds using an in-house ELISA (n = 9324) and the Abbott Architect chemiluminescent microparticle immunoassay (CMIA; n = 11,324): 426/906 (47%) reported anosmia/ageusia with a positive ELISA, 59/449 (13.1%) with high-negative and 326/7969 (4.1%) with low-negative readings. Similarly, by CMIA, 518/1093 (47.4%) with a positive result reported anosmia/ageusia, 106/686 (15.5%) with a high-negative and 358/9563 (3.7%) with a low-negative result. Adjusting for the proportion of staff reporting anosmia/ageusia suggests the sensitivity of both assays in mild infection is lower than previously reported: Oxford ELISA 89.8% (95%CI 86.6-92.8%) and Abbott CMIA 79.3% (75.9-82.7%). **Conclusion:** Following mild SARS-CoV-2 infection 10-30% of individuals may have negative immunoassay results. While lowered diagnostic thresholds may result in unacceptable specificity, our findings have implications for epidemiological analyses and result interpretation in individuals with a high pre-test probability. Samples from mild PCR-confirmed infections should be included in SARS-CoV-2 immunoassay evaluations.

Publication Type

Journal article.

<190>

Accession Number

20210278864

Author

Gregoriano, C.; Damm, D.; Kutz, A.; Koch, D.; Wolfisberg, S.; Haubitz, S.; Conen, A.; Bernasconi, L.; Hammerer-Lercher, A.; Fux, C. A.; Mueller, B.; Schuetz, P.

Title

Association of endothelial activation assessed through endothelin-i precursor peptide measurement with mortality in COVID-19 patients: an observational analysis.

Source

Respiratory Research; 2021. 22(148):(13 May 2021). 40 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) disease (COVID-19) has been linked to thrombotic complications and endothelial dysfunction. We assessed the prognostic implications of endothelial activation through measurement of endothelin-I precursor peptide (proET-1), the stable precursor protein of Endothelin-1, in a well-defined cohort of patients hospitalized with COVID-19. **Methods:** We measured proET-1 in 74 consecutively admitted adult patients with confirmed COVID-19 and compared its prognostic accuracy to that of patients with community-acquired pneumonia (n = 876) and viral bronchitis (n = 371) from a previous study by means of logistic regression analysis. The primary endpoint was all-cause 30-day mortality. **Results:** Overall, median admission proET-1 levels were lower in COVID-19 patients compared to those with pneumonia and exacerbated bronchitis, respectively (57.0 pmol/l vs. 113.0 pmol/l vs. 96.0 pmol/l, p < 0.01). Although COVID-19 non-survivors had 1.5-fold higher admission proET-1 levels compared to survivors (81.8 pmol/l [IQR: 76 to 118] vs. 53.6 [IQR: 37 to 69]), no significant association of proET-1 levels and mortality was found in a regression model adjusted for age, gender, creatinine level, diastolic blood pressure as well as cancer and coronary artery disease (adjusted OR 0.1, 95% CI 0.0009 to 14.7). In patients with pneumonia (adjusted OR 25.4, 95% CI 5.1 to 127.4) and exacerbated bronchitis (adjusted OR 120.1, 95% CI 1.9 to 7499) we found significant associations of proET-1 and mortality. **Conclusions:** Compared to other types of pulmonary infection, COVID-19 shows only a mild activation of the endothelium as assessed through measurement of proET-1. Therefore, the high mortality associated with COVID-19 may not be attributed to endothelial dysfunction by the surrogate marker proET-1.

Publication Type

Journal article.

<191>

Accession Number

20210278833

Author

Marques, P.; Piqueras, L.; Sanz, M. J.

Title

An updated overview of e-cigarette impact on human health.

Source

Respiratory Research; 2021. 22(151):(18 May 2021). 112 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

The electronic cigarette (e-cigarette), for many considered as a safe alternative to conventional cigarettes, has revolutionised the tobacco industry in the last decades. In e-cigarettes, tobacco combustion is replaced by e-liquid heating, leading some manufacturers to propose that e-cigarettes have less harmful respiratory effects than tobacco consumption. Other innovative features such as the adjustment of nicotine content and the choice of pleasant flavours have won over many users. Nevertheless, the safety of e-cigarette consumption and its potential as a smoking cessation method remain controversial due to limited evidence. Moreover, it has been reported that the heating process itself can lead to the formation of new decomposition compounds of questionable toxicity. Numerous in vivo and in vitro studies have been performed to better understand the impact of these new inhalable compounds on human health. Results of toxicological analyses suggest that e-cigarettes can be safer than conventional cigarettes, although harmful effects from short-term e-cigarette use have been described. Worryingly, the potential long-term effects of e-cigarette consumption have been scarcely investigated. In this review, we take stock of the main findings in this field and their consequences for human health including coronavirus disease 2019 (COVID-19).

Publication Type

Journal article.

<192>

Accession Number

20210278830

Author

Lohia, P.; Shweta Kapur; Pragnesh Patel; Seyoum, B.

Title

Vitamin D levels in acute illness and clinical severity in COVID-19 patients.

Source

Respiratory Research; 2021. 22(102):(9 April 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

We would like to comment on the recently published article titled: "Circulating Vitamin D levels status and clinical prognostic indices in COVID-19 patients" by Ricci et al. The authors grouped the patients into two groups according to the vitamin D levels measured at the time of admission into the hospital and reported that lower vitamin D levels are associated with elevated D-dimer and IL-6 levels, low CD4/CD8 ratio and compromised clinical findings with elevated LIPI and SOFA scores. However, review of recent literature shows this association to be debatable. The 25-hydroxyvitamin D levels in the initial phase of critical illness have been reported to drop rapidly and hence consideration of the time of measurement from symptom onset would have enhanced the clinical relevance of these findings. Inferred association between vitamin D levels and disease severity based on SOFA score in COVID-19 patients, needs to be further explored in the light of the recent literature which casts doubt on using SOFA score at admission to predict mortality in COVID-19.

Publication Type

Journal article.

<193>

Accession Number

20210278828

Author

Hattar, S.; Al-Hadidi, A.; Sawair, F. A.; Alraheam, I. A.; El-Ma'aaita, A.; Wahab, F. K.

Title

Impact of COVID-19 pandemic on dental education: online experience and practice expectations among dental students at the university of Jordan.

Source

BMC Medical Education; 2021. 21(151):(08 March 2021). 36 ref.

Publisher

BioMed Central Ltd

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The quarantine associated with the COVID-19 pandemic forced dental schools to suspend their clinical training and to shift to distant learning methods. The aim of this study is to investigate the impact of quarantine on the self-perceived preparedness of dental graduates and to explore the efficacy of online education from students' perspectives. **Methods:** The questionnaire distributed to dental students comprised of two main sections. The first part covered the online education experience, and the second part measured the level of self-perceived preparedness for a range of cognitive, communication and professional skills. **Results:** The survey yielded a response rate of 72%. The majority of students (77%) agreed that they missed educational experiences as a result of the lockdown. More than half of them felt less motivated to follow-up with distant e-learning and believed that online assessment is not a good method for evaluation. A high percentage of the students (66%) thought that online group discussions had a positive value while 67% preferred online lectures compared to theatre lectures. Majority of students particularly 5th year (78.7%) ($p < 0.001$) stated that the quarantine increased their collaboration with their colleagues. According to 87% of students, the experience most negatively affected was their clinical training. In general, students showed satisfactory self-perceived preparedness related to a range of attributes and professional skills. **Conclusions:** The data showed that students partially appreciated the online system, whereas they did not consider it a substitute for face to face clinical practice. The overall self-perceived preparedness level was promising; however students had reservations regarding independent practice following graduation.

Publication Type

Journal article.

<194>

Accession Number

20210278745

Author

Anirudh Kohli; Aditya Shetty; Anagha Joshi; Ashank Bansal

Title

Where have all the diseases gone during the COVID-19 pandemic?

Source

Indian Journal of Radiology and Imaging; 2021. 31(S 01):S119-S121. 3 ref.

Publisher

Thieme Medical Publishers, Inc.

Location of Publisher

New York

Country of Publication

USA

Abstract

This article focuses on a marked drop in volumes in the lockdown period during the COVID-19 pandemic across all modalities X-ray, sonography, CT scan and MRI scans and compares the volumes of data between a private and public hospital in Mumbai. This trend has been witnessed globally also. Even with easing of lockdown this has not reflected in an increase in numbers. Imaging volumes of a 1900-bed public hospital and a 220-bed private hospital in Mumbai were collated for all modalities, i.e., X-ray, sonography, CT and MRI for the months January, February 2020- Prelockdown, March 2020 Peri-lockdown, April, May 2020- Lockdown, June Unlock 1.0, July Unlock 2.0. The imaging volumes during lockdown, Unlock, were compared with prelockdown values. It was initially felt that this was due to a fear of visiting hospitals that are considered hotbeds of SARS-CoV-2. However, the same status has persisted over the 2 months of lockdown and the 2 months of unlocking. What is the cause of this huge drop in imaging volumes?

Publication Type

Journal article.

<195>

Accession Number

20210278741

Author

Arsh Sukhija; Mangal Mahajan; Joshi, P. C.; John Dsouza; Seth, N. D. H.; Patil, K. H.

Title

Radiographic findings in COVID-19: comparison between AI and radiologist.

Source

Indian Journal of Radiology and Imaging; 2021. 31(S 01):S87-S93. 21 ref.

Publisher

Thieme Medical Publishers, Inc.

Location of Publisher

New York

Country of Publication

USA

Abstract

Context: As the burden of COVID-19 enhances, the need of a fast and reliable screening method is imperative. Chest radiographs plays a pivotal role in rapidly triaging the patients. Unfortunately, in low-resource settings, there is a scarcity of trained radiologists. **Aim:** This study evaluates and compares the performance of an artificial intelligence (AI) system with a radiologist in detecting chest radiograph findings due to COVID-19. **Subjects and Methods:** The test set consisted of 457 CXR images of patients with suspected COVID-19 pneumonia over a period of three months. The radiographs were evaluated by a radiologist with experience of more than 13 years and by the AI system (NeuraCovid, a web application that pairs with the AI model COVID-NET). Performance of AI system and the radiologist were compared by

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calculating the sensitivity, specificity and generating a receiver operating characteristic curve. RT-PCR test results were used as the gold standard. Results: The radiologist obtained a sensitivity and specificity of 44.1% and 92.5%, respectively, whereas the AI had a sensitivity and specificity of 41.6% and 60%, respectively. The area under curve for correctly classifying CXR images as COVID-19 pneumonia was 0.48 for the AI system and 0.68 for the radiologist. The radiologist's prediction was found to be superior to that of the AI with a P VALUE of 0.005. Conclusion: The specificity and sensitivity of detecting lung involvement in COVID-19, by the radiologist, was found to be superior to that by the AI system.

Publication Type

Journal article.

<196>

Accession Number

20210278736

Author

Ramanan, R. V.; Joshi, A. R.; Akash Venkataramanan; Nambi, S. P.; Rashmi Badhe

Title

Incidental chest computed tomography findings in asymptomatic COVID-19 patients. A multicentre Indian perspective.

Source

Indian Journal of Radiology and Imaging; 2021. 31(S 01):S45-S52. 23 ref.

Publisher

Thieme Medical Publishers, Inc.

Location of Publisher

New York

Country of Publication

USA

Abstract

In December 2019, an unprecedented outbreak of pneumonia of unknown etiology emerged called COVID-19. A vast number of people affected by this disease are asymptomatic and yet contagious with up to 79% of COVID-19 infections reportedly caused by undocumented infections. Surprisingly, these asymptomatic subjects are also known to quietly harbor pneumonia changes on CT scans. RT-PCR, the definitive test for COVID-19, maybe false negative in patients with COVID-19 pneumonia on CT. Incidental findings highly suspicious of COVID-19 pneumonia on CT chest of asymptomatic patients may increase as the community transmission of the virus rises and isolation restrictions are released. It is advisable to be aware of its appearances and the challenges associated with it.

Publication Type

Journal article.

<197>

Accession Number

20210278735

Author

Chaluvashetty, S. B.; Naveen Kalra; Harish Bhujade; Keshava, S. N.; Chander Mohan

Title

Interventional radiology and COVID-19: how to face the challenge?

Source

Indian Journal of Radiology and Imaging; 2021. 31(S 01):S38-S44. 17 ref.

Publisher

Thieme Medical Publishers, Inc.

Location of Publisher

New York

Country of Publication

USA

Abstract

With the sudden outbreak of Coronavirus disease-19 (COVID-19) in China, and its rapid spread across the continents over a short period of time, healthcare workers are posed with the challenge of managing these patients as well protecting themselves from getting infected. Since interventional radiology deals with both elective and emergency services, wherein close patient contact is a norm, there is a substantial risk of acquiring and transmitting infection. Given the circumstances, it is imperative to develop broadly applicable guidelines to utilize the available resources in an optimal fashion and limit transmission of disease. This brief review deals with infection control measures within the Interventional Radiology department or section and possible recommendations that can be adopted at the institutional level.

Publication Type

Journal article.

<198>

Accession Number

20210278728

Author

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Thomsen, K.; Pedersen, H. P.; Iversen, S.; Wiese, L.; Fursted, K.; Nielsen, H. V.; Christensen, J. J. E.; Chen XiaoHui [Chen, X. H. N.]

Title

Extensive microbiological respiratory tract specimen characterization in critically ill COVID-19 patients.

Source

APMIS, Acta Pathologica, Microbiologica et Immunologica Scandinavica; 2021. 129(7):431-437. 26 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

Microbial co-infections may contribute to the pulmonary deterioration in COVID-19 patients needing intensive care treatment. The present study portrays the extent of co-infections in COVID-19 ICU patients. Conventional culture, molecular detections for atypical aetiologies, QiaStat-DxR respiratory panel V2 detecting 21 respiratory pathogens and ribosomal DNA genes 16S/18S amplicon-based microbiome analyses were performed on respiratory samples from 34 COVID-19 patients admitted to the ICU. Potential pathogens were detected in seven patients (21%) by culturing, in four patients (12%) by microbiome analysis and in one patient (3%) by respiratory panel. Among 20 patients receiving antibiotics prior to ICU admission, fungi (3 *Candida albicans*, 1 *C. tropicalis*, 1 *C. dubliniensis*) were cultured in 5 (15%) endotracheal aspirates. Among 14 patients who were antibiotic-naive at ICU admission, two patients (6%) had bacterial respiratory pathogens (*Staphylococcus aureus*, *Streptococcus pseudopneumoniae*) cultured in their endotracheal aspirates. Microbiome analysis recognized four potential respiratory pathogens (3 *Haemophilus influenzae*, 1 *Fusobacterium necrophorum*) isolated in samples from four other patients (12%). QiaStat-DxR respiratory panel V2 detected adenovirus in one patient (3%). The prevalence of pulmonary microbial co-infections is modest among COVID-19 patients upon admission to ICU. Microbiome analysis complements conventional microbial diagnostics in characterization of respiratory co-infections.

Publication Type

Journal article.

<199>

Accession Number

20210278724

Author

Kalnina, L.; Mateu-Regue, A.; Oerum, S.; Hald, A.; Gerstoff, J.; Oerum, H.; Nielsen, F. C.; Iversen, A. K. N.

Title

A simple, safe and sensitive method for SARS-CoV-2 inactivation and RNA extraction for RT-qPCR.

Source

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APMIS, Acta Pathologica, Microbiologica et Immunologica Scandinavica; 2021. 129(7):393-400. 20 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

The SARS-CoV-2 pandemic has created an urgent need for diagnostic tests to detect viral RNA. Commercial RNA extraction kits are often expensive, in limited supply, and do not always fully inactivate the virus. Together, this calls for the development of safer methods for SARS-CoV-2 extraction that utilize readily available reagents and equipment present in most standard laboratories. We optimized and simplified a RNA extraction method combining a high molar acidic guanidinium isothiocyanate (GITC) solution, phenol and chloroform. First, we determined the GITC/RNA dilution thresholds compatible with an efficient two-step RT-qPCR for B2M mRNA in nasopharyngeal (NP) or oropharyngeal (OP) swab samples. Second, we optimized a one-step RT-qPCR against SARS-CoV-2 using NP and OP samples. We furthermore tested a SARS-CoV-2 dilution series to determine the detection threshold. The method enables downstream detection of SARS-CoV-2 by RT-qPCR with high sensitivity (~4 viral RNA copies per RT-qPCR). The protocol is simple, safe, and expands analysis capacity as the inactivated samples can be used in RT-qPCR detection tests at laboratories not otherwise classified for viral work. The method takes about 30 min from swab to PCR-ready viral RNA and circumvents the need for commercial RNA purification kits.

Publication Type

Journal article.

<200>

Accession Number

20210278705

Author

Crowley, T.; Kitshoff, D.; Lange-Cloete, F. de; Baron, J.; Lange, S. de; Young, C.; Esterhuizen, T.; Couper, I.

Title

Primary care nurses' preparedness for COVID-19 in the Western Cape province, South Africa.

Source

African Journal of Primary Health Care and Family Medicine; 2021. 13(a2879). 25 ref.

Publisher

African Online Scientific Information Systems/AOSIS (Pty) Ltd

Location of Publisher

Cape Town

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E: library@rcvsknowledge.org

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Country of Publication

South Africa

Abstract

Introduction: The novel coronavirus 2019 or COVID-19 pandemic has brought about a global public health crisis. Primary care (PC) nurses render first line care, or refer for more specialised services. **Aim:** To investigate the preparedness of PC nurses for COVID-19 in the Western Cape. **Setting:** The Western Cape province of South Africa. **Methods:** We administered an online survey, with closed and open-ended questions, to 83 Stellenbosch University postgraduate PC nursing students and alumni working in the Western Cape, between 03 July and 01 September 2020. **Results:** The results indicated that 43.3% of participants were confident about the infection, prevention, and control (IPC) training they received and 56.7% felt prepared to provide direct care to suspected cases of COVID-19. Primary care nurses were more comfortable to triage (78.3%) than to manage persons with COVID-19 (42.2%), indicating that they may not be functioning to the full capacity of their education and training. Adequate infrastructure was reported by less than a third of the participants (30.1%) and 59.1% reported that personal protective equipment (PPE) was always available. Primary care nurses needed support in coping with stress (57.8%) although few (14.5%) reported access to mental health services. **Conclusion:** Primary care nurses were not prepared optimally for the COVID-19 pandemic. Challenges included adequate training, infrastructure, the availability of personal protective equipment, COVID-19 testing of health care workers and management support. Primary care nurses need comprehensive support to manage stress and anxiety.

Publication Type

Journal article.

<201>

Accession Number

20210278628

Author

Perez-Dominguez, F.; Polanco-Illabaca, F.; Pinto-Toledo, F.; Michaeli, D.; Achiardi, J.; Santana, V.; Urnelli, C.; Sawaguchi, Y.; Rodriguez, P.; Maldonado, M.; Raffeeq, Z.; Madeiros, O. de A.; Rebolledo, C.

Title

Lifestyle changes among medical students during COVID-19 pandemic: a multicenter study across nine countries.

Source

Health Education & Behavior; 2021. 48(4):446-454. 41 ref.

Publisher

Sage Publications

Location of Publisher

Thousand Oaks

Country of Publication

USA

Abstract

The global pandemic caused by coronavirus disease-2019 (COVID-19) disrupted both public and private life for many. Concerning medical students, practical teaching and classrooms were substituted with a virtual curriculum. However, how this new academic environment has affected students' health and lifestyles has yet to be studied. In this study, we surveyed 2,776 students from nine different countries about changes in their university curricula and potential alterations in their daily habits, physical health, and psychological status. We found negative changes across all countries studied, in multiple categories. We found that 99% of respondents indicated changes in their instruction delivery system, with 90% stating a transition to online education, and 93% stating a reduction or suspension of their practical activities. On average, students spent 8.7 hours a day in front of a screen, with significant differences among countries. Students reported worsened studying, sleeping, and eating habits with substantial differences in Latin American countries. Finally, the participants frequently expressed onset and increase in both mental and physical health symptoms: backache, asthenopia, irritability, and emotional instability. Altogether, these results suggest a potential risk in the health and academic performance of future doctors if these new academic modalities are maintained.

Publication Type

Journal article.

<202>

Accession Number

20210278599

Author

Wu TianZhi; Hu ErQiang; Ge Xijin; Yu GuangChuang

Title

nCov2019: an R package for studying the COVID-19 coronavirus pandemic.

Source

PeerJ; 2021. 9(11421). 29 ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background The global spreading of the COVID-19 coronavirus is still a serious public health challenge. Although there are a large number of public resources that provide statistics data, tools for retrospective historical data and convenient visualization are still valuable. To provide convenient access to data and visualization on the pandemic we developed an R package, nCov2019 (< <https://github.com/YuLab-SMU/nCov2019> >). **Methods:** We collect stable and reliable data of COVID-19 cases from multiple authoritative and up-to-date sources, and aggregate the most recent and historical data for each country or

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even province. Medical progress information, including global vaccine development and therapeutics candidates, were also collected and can be directly accessed in our package. The nCov2019 package provides an R language interfaces and designed functions for data operation and presentation, a set of interfaces to fetch data subset intuitively, visualization methods, and a dashboard with no extra coding requirement for data exploration and interactive analysis. Results: As of January 14, 2021, the global health crisis is still serious. The number of confirmed cases worldwide has reached 91,268,983. Following the USA, India has reached 10 million confirmed cases. Multiple peaks are observed in many countries. Under the efforts of researchers, 51 vaccines and 54 drugs are under development and 14 of these vaccines are already in the pre-clinical phase. Discussion: The nCov2019 package provides detailed statistics data, visualization functions and the Shiny web application, which allows researchers to keep abreast of the latest epidemic spread overview.

Publication Type

Journal article.

<203>

Accession Number

20210278576

Author

Javed, M. Q.; Chaudhary, F. A.; Mohsin, S. F.; Alattas, M. H.; Edrees, H. Y.; Habib, S. R.; Arham Riaz

Title

Dental health care providers' concerns, perceived impact, and preparedness during the COVID-19 pandemic in Saudi Arabia.

Source

PeerJ; 2021. 9(11584). 34 ref.

Publisher

PeerJ

Location of Publisher

San Francisco

Country of Publication

USA

Abstract

Background: Dental health care providers (DHCPs) are at high risk of cross-infection during clinical practice therefore, the aim of the study was to evaluate the DHCPs Covid-19 related concerns, its perceived impact, and their preparedness in Saudi Arabia. Methods: This cross-sectional study on DHCPs was carried out at five dental teaching hospitals/colleges in four provinces of Saudi Arabia from October to December 2020. A 35-item valid and reliable questionnaire was used to assess the concerns, perceived impact, and preparedness of DHCPs in the COVID-19 pandemic. Chi-square tests and logistic regression were used to compare parameters between the clinical and non-clinical staff. Results: A total of 320 DHCPs participated in this study with proportion of clinical staff (57.5%) surpassing the non-clinical staff (42.5%). The clinical DHCPs felt greater odds of falling ill with COVID-19 than non-clinical workers (OR, 2.61) and willing to look for another job (OR, 3.50). The higher proportion in both groups was worried that people close to them would

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be at higher exposure risk (96.3%) however, slightly more clinical DHCPs were concerned for their children than a non-clinical worker (OR, 3.57). The clinical DHCPs have greater odds of worrying that people would avoid them and their family members because of their job (OR, 2.75). A higher proportion in both groups (75.0%, 63.2%) felt that they would feel stress at work. More non-clinical DHCPs (94.1%) had received training for infection control than clinical (94.1% vs 63.0%: OR 0.10). Similarly, more DHCPs in the nonclinical group received adequate personal protective equipment training (88.2%; OR, 0.48). Most participants practiced self-preparation such as buying masks and disinfection (94.4%, 96.9%). Conclusion: The majority of DHCPs felt concerned about their risk of exposure and falling ill from infection and infecting friends/family. These concerns could potentially affect the working of DHCPs during this pandemic. Measures to improve protection for DHCPs, minimize psychological implications, and potential social stigmatization should be identified at the planning phase before any pandemic.

Publication Type

Journal article.

<204>

Accession Number

20210278419

Author

Mohd Norazmi Nordin; Pg Ahmad, H. P. T.; Nor'Ain Mat Talha; Esa, N. A.

Title

The nature of special education teachers post COVID 19 pandemic: a brief study from the field.

Source

International Journal of Aquatic Science; 2021. 12(1):133-139. 47 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

The Covid 19 pandemic posed a major disaster to various sectors. This pandemic attack has crippled certain sectors that have long stood firmly. With this pandemic as well, human beings are forced to live life with new norms. Constraints and challenges related to this pandemic are also felt by the education sector, especially in special education. New norms and global challenges make teaching methods and management of students with special needs more challenging. This situation has also changed the perspective and way of teachers in performing tasks. This qualitative study was conducted to explore the views of special education teachers regarding their appearance and thinking after the end of this pandemic. An online interview session was conducted with 10 fellow special education teachers in BatuPahat district, Johor, Malaysia. A thematic analysis was conducted and the results found that, special education teachers will come out of this pandemic with a new perspective, namely proficient in using gadgets, ready with alternative plans for each item and working between teachers more closely. The findings of this study are expected to help the parties involved

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in improving self-competence and hopefully be able to provide a basic overview to the next researcher to conduct further research.

Publication Type

Journal article.

<205>

Accession Number

20210278396

Author

Stern, R. A.; Koutrakis, P.; Martins, M. A. G.; Lemos, B.; Dowd, S. E.; Sunderland, E. M.; Garshick, E.

Title

Characterization of hospital airborne SARS-CoV-2.

Source

Respiratory Research; 2021. 22(73):(26 February 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The mechanism for spread of SARS-CoV-2 has been attributed to large particles produced by coughing and sneezing. There is controversy whether smaller airborne particles may transport SARS-CoV-2. Smaller particles, particularly fine particulate matter (2.5 micro m in diameter), can remain airborne for longer periods than larger particles and after inhalation will penetrate deeply into the lungs. Little is known about the size distribution and location of airborne SARS-CoV-2 RNA. Methods: As a measure of hospital-related exposure, air samples of three particle sizes (> 10.0 micro m, 10.0-2.5 micro m, and 2.5 micro m) were collected in a Boston, Massachusetts (USA) hospital from April to May 2020 (N = 90 size-fractionated samples). Locations included outside negative-pressure COVID-19 wards, a hospital ward not directly involved in COVID-19 patient care, and the emergency department. Results: SARS-CoV-2 RNA was present in 9% of samples and in all size fractions at concentrations of 5 to 51 copies m⁻³. Locations outside COVID-19 wards had the fewest positive samples. A non-COVID-19 ward had the highest number of positive samples, likely reflecting staff congregation. The probability of a positive sample was positively associated (r = 0.95, p < 0.01) with the number of COVID-19 patients in the hospital. The number of COVID-19 patients in the hospital was positively associated (r = 0.99, p < 0.01) with the number of new daily cases in Massachusetts. Conclusions: More frequent detection of positive samples in non-COVID-19 than COVID-19 hospital areas indicates effectiveness of COVID-ward hospital controls in controlling air concentrations and suggests the potential for disease spread in areas without the strictest precautions. The positive associations regarding the probability of a positive sample, COVID-19 cases in the hospital, and cases in Massachusetts suggests that hospital air sample positivity was related to community burden. SARS-CoV-2 RNA with fine particulate matter supports the possibility of airborne transmission over distances greater than six feet. The

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findings support guidelines that limit exposure to airborne particles including fine particles capable of longer distance transport and greater lung penetration.

Publication Type

Journal article.

<206>

Accession Number

20210278377

Author

Brondani, M.; Donnelly, L.

Title

A preparedness model for the provision of oral health care during unfolding threats: the case of the COVID-19 pandemic.

Source

BMC Oral Health; 2021. 21(254):(12 May 2021). 60 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The aim of this study was to appraise a recently developed preparedness model for the provision of oral health care during a threat such as the COVID-19 pandemic from the perspectives of oral health care providers, administrators/staff, and patients. **Methods:** An exploratory qualitative inquiry via at-a-distance semi-structured interviews and group discussions engaged a purposefully selected sample of oral health care workers and patients in British Columbia (BC), Canada. Participants were asked to appraise a preparedness model by considering how to prepare for oral care during a pandemic, while answering open-ended questions about the model content and visual presentation. Interviews and group discussions occurred between April 2020 and January 2021, were audio recorded, and transcribed verbatim. An inductive coding process was used to identify themes, subthemes, and categories of information until saturation was achieved. **Results:** Seventy-four participants, including 19 dentists, 15 dental hygienists, 10 certified dental assistants, 9 administrators, and 21 patients, suggested modifications to the recently developed preparedness model. Individual interviews (41 participants) and group discussions (33 participants in groups ranging from 2 to 9 attendees each) lasted for an average of 53 min. Eighty-four hours of audio recordings led to more than 1110 single-spaced pages of transcripts. The thematic analysis identified 82 codes, 12 categories, and four main themes: life-long learning, critical thinking, personal and professional risk, and patient-centred care. These themes were understood within provider characteristics and social and environmental contexts. Participants highlighted the need for the model to focus on information and communication, developing awareness and understanding, inferring risks, and performing oral health care during a threat such as a pandemic or disease outbreak. A modified portrayal of the model

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was suggested to better represent participants' perspectives. Conclusion: A recently developed preparedness model for the provision of dental care during an unfolding threat like the COVID-19 pandemic was appraised and modified by oral health care workers. Future studies are warranted to evaluate the modified model for use in the event of another unfolding threat collaboratively with providers, patients and stakeholders.

Publication Type

Journal article.

<207>

Accession Number

20210278375

Author

Meisha, D. E.; Alsolami, A. M.; Alharbi, G. M.

Title

Social determinants of seeking emergency and routine dental care in Saudi Arabia during the COVID-19 pandemic.

Source

BMC Oral Health; 2021. 21(212):(26 April 2021). 47 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Between March and June 2020, closing dental clinics during the COVID-19 pandemic except for emergency dental care was recommended. It is documented that health-seeking behaviors change during pandemics. The objective of this study was to examine social determinants associated with decisions to seek dental care in Saudi Arabia during the COVID-19 pandemic. **Methods:** A total of 4372 participants were invited to this cross-sectional web-based survey distributed from April 21 to June 20, 2020. The survey included a list of emergency, urgent, and routine dental procedures. Participants were asked if they would seek dental care for these conditions during the pandemic, and what pain severity would make them seek dental treatment. Logistic regression models were performed for predicting variables that explain the decision to go or not to go to the dental clinic during the pandemic for each dental condition. **Results:** A total of 3443 responded to this survey. The emergency dental situation participants were most willing to go to the dental clinic for was trauma involving facial bones compromising the airway (94.5%). Only 65.8% were willing to seek care for facial cellulitis compromising the airway. On average 35.2% reported seeking teleconsultation as the first step. Eighteen percent of participants were still willing to go to the dental clinic during the pandemic for routine dental procedures. Multiple logistic regression showed that females (Odds Ratio (OR): 1.6, OR 95% CI 1.3, 1.9), people who had never visited a dentist (OR: 1.8, OR 95% CI 1.3, 2.5), and people living in metropolitan regions (OR: 1.8, OR 95%: 1.4, 2.3) had higher odds for not seeking

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emergency dental care during this pandemic. The pain threshold for seeking dental care during the pandemic was 7 out of 10. Female, those who never visited a dentist, and those from urban regions reported higher pain threshold before seeking dental care (P value < 0.001). Conclusion: Social disparities were found in emergency dental care seeking decision-making in Saudi Arabia during the COVID-19 pandemic. It was alarming that some people were afraid to seek dental care for life-threatening dental emergencies as cellulitis during this pandemic. This reflects the importance of increasing public health awareness and governmental regulations.

Publication Type

Journal article.

<208>

Accession Number

20210278372

Author

Dondi, A.; Fetta, A.; Lenzi, J.; Morigi, F.; Candela, E.; Rocca, A.; Cordelli, D. M.; Lanari, M.

Title

Sleep disorders reveal distress among children and adolescents during the COVID-19 first wave: results of a large web-based Italian survey.

Source

Italian Journal of Pediatrics; 2021. 47(130):(04 June 2021). 49 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Measures to contain the Covid-19 pandemic led to significant lifestyle changes for children and adolescents mainly related to the closure of schools and recreational activities, reduced social interaction, and increased family concerns. Methods: A cross-sectional online survey of 78 questions investigating social determinants of health, mood changes, symptoms of anxiety, increase in sleep disorders and unusual repetitive movements was offered to parents living in Italy with children 18 years; including families of children with disabilities, autism spectrum disorders, chronic diseases, and specific learning disabilities. The survey was conducted on the Qualtrics platform 6 months after the beginning of the pandemic and distributed in hospitals and paediatricians' waiting rooms as well as through social networks. The primary outcomes were the increase in sleep disorders among children and adolescents. Possible risk factors were investigated through multivariable regression. Results: Six thousand two hundred ten volunteer parents responded to the questions concerning mood changes, sleep disorders and unusual repetitive movements, and were included in the present study. The majority were female (91.8%) and Italian (97.0%). 72.7% answered that their children had become more nervous, worried, or sad (80.2% in children with learning disabilities); 77.6% reported feelings of loneliness and 69.3% more difficulties in children falling

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asleep, 30.2% in staying asleep, and 18.7% an increase in nightmares and/or sleep terrors. Statistical analysis identified socioeconomic status, parent's job loss, food insecurity, family attitude toward the pandemic, and children's mood swing, feelings of loneliness, or missing outdoor activities, as major risk factors for sleep disorders. Conclusion: The first Covid-19 lockdown impacted children's and adolescents' health through an increase in sleep disorders. In the following phases of the pandemic, this evidence may be useful to investigate and treat these disorders as well as make decisions about containment health policies concerning this age group.

Publication Type

Journal article.

<209>

Accession Number

20210278289

Author

Asmarawati, T. P.; Rosyid, A. N.; Suryantoro, S. D.; Windradi, C.; Wulaningrum, P. A.; Arifijanto, M. V.; Bramantono, B.; Triyono, E. A.; Rusli, M.; Rachman, B. E.; Marfiani, E.; Endraswari, P. D.; Hadi, U.; Kuntaman, K.; Nasronudin, N.

Title

The clinical impact of bacterial co-infection among moderate, severe and critically ill COVID-19 patients in the second referral hospital in Surabaya [version 2; peer review: 2 approved].

Source

F1000Research; 2021. 10(113). 30 ref.

Publisher

Science Navigation Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Data on the prevalence of bacterial co-infections among COVID-19 patients are limited, especially in our country, Indonesia. We aimed to assess the rate of bacterial co-infections in hospitalized COVID-19 patients and report the most common microorganisms involved and the antibiotic use in these patients. **Methods:** This study is a retrospective cohort study, among COVID-19 adult patients admitted to Universitas Airlangga Hospital Surabaya from 14 March-30 September 2020. The bacterial infection is defined based on clinical assessment, laboratory parameters, and microbiology results. **Results:** A total of 218 patients with moderate to critical illness and confirmed COVID-19 were included in this study. Bacterial infection was confirmed in 43 patients (19.7%). COVID-19 patients with bacterial infections had longer hospital length of stay (17.6 +or- 6.62 vs 13.31+or-7.12), a higher proportion of respiratory failure, intensive care treatment, and ventilator use. COVID-19 patients with bacterial infection had a worse prognosis than those without bacterial infection (p<0.04). The empirical antibiotic was given to 75.2% of the patients. Gram-negative bacteria were commonly found as causative agents in this study (n = 39; 70.37%). **Conclusion:**

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COVID-19 patients with bacterial infection have a longer length of stay and worse outcomes. Healthcare-associated infections during intensive care treatment for COVID-19 patients must be carefully prevented.

Publication Type

Journal article.

<210>

Accession Number

20210278287

Author

Lincango-Naranjo, E.; Espinoza-Suarez, N.; Solis-Pazmino, P.; Vinueza-Moreano, P.; Rodriguez-Villafuerte, S.; Lincango-Naranjo, J.; Barberis-Barcia, G.; Ruiz-Sosa, C.; Rojas-Velasco, G.; Gravholt, D.; Golembiewski, E.; Soto-Becerra, P.; Khan, M.; Ortiz-Prado, E.

Title

Paradigms about the COVID-19 pandemic: knowledge, attitudes and practices from medical students.

Source

BMC Medical Education; 2021. 21(128):(24 February 2021). 34 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: As the disease caused by the novel coronavirus has spread globally, there has been significant economic instability in the healthcare systems. This reality was especially accentuated in Ecuador where, the shortage of healthcare workers combined with cultural and macroeconomic factors has led Ecuador to face the most aggressive outbreak in Latin America. In this context, the participation of final-year medical students on the front line is indispensable. Appropriate training on COVID-19 is an urgent requirement that universities and health systems must guarantee. We aimed to describe the knowledge, attitudes, and practices of Ecuadorian final-year medical students that could potentially guide the design of better medical education curricula regarding COVID-19. **Methods:** This was a cross-sectional 33-item online survey conducted between April 6 to April 2020 assessing the knowledge, attitudes, and practices toward the diagnosis, treatment, prevention, and prognosis toward COVID-19 in Ecuadorian final-year medical students. It was sent by email, Facebook, and WhatsApp. **Results:** A total of 309 students responded to the survey. Out of which 88% of students scored high (70% correct) for knowledge of the disease. The majority of students were pessimistic about possible government actions, which is reflected in the negative attitude towards the control of COVID-19 and volunteering during the outbreak in Ecuador (77%, and 58% of the students, respectively). Moreover, 91% of students said they did not have adequate protective equipment. The latter finding was significantly associated with negative attitudes. **Conclusions:** Although a large number of students displayed negative attitudes, the non-depreciable percentage of students who were willing to volunteer and the coexisting high level of knowledge displayed by students, suggests that Ecuador has a

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capable upcoming workforce that could benefit from an opportunity to strengthen, improve and advance their training in preparation for COVID-19. Not having personal protective equipment was significantly associated to negative attitudes. Providing the necessary tools and creating a national curriculum may be one of the most effective ways to ensure all students are trained, whilst simultaneously focusing on the students' most pressing concerns. With this additional training, negative attitudes will improve and students will be better qualified.

Publication Type

Journal article.

<211>

Accession Number

20210278286

Author

Byrne, M. H. V.; Ashcroft, J.; Alexander, L.; Wan, J. C. M.; Arora, A.; Brown, M. E. L.; Harvey, A.; Clelland, A.; Schindler, N.; Brassett, C.; Allan, R.

Title

COVIDReady2 study protocol: cross-sectional survey of medical student volunteering and education during the COVID-19 pandemic in the United Kingdom.

Source

BMC Medical Education; 2021. 21(211):(14 April 2021). 48 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The coronavirus disease 2019 pandemic has led to global disruption of healthcare. Many students volunteered to provide clinical support. Volunteering to work in a clinical capacity was a unique medical education opportunity; however, it is unknown whether this was a positive learning experience or which volunteering roles were of most benefit to students. **Methods:** The COVIDReady2 study is a national cross-sectional study of all medical students at medical schools in the United Kingdom. The primary outcome is to explore the experiences of medical students who volunteered during the pandemic in comparison to those who did not. We will compare responses to determine the educational benefit and issues they faced. In addition to quantitative analysis, thematic analysis will be used to identify themes in qualitative responses. **Discussion:** There is a growing body of evidence to suggest that service roles have potential to enhance medical education; yet, there is a shortage of studies able to offer practical advice for how these roles may be incorporated in future medical education. We anticipate that this study will help to identify volunteer structures that have been beneficial for students, so that similar infrastructures can be used in the future, and help inform medical education in a non-pandemic setting.

Publication Type

Journal article.

<212>

Accession Number

20210278282

Author

Yilmaz, Y.; Sarikaya, O.; Senol, Y.; Baykan, Z.; Karaca, O.; Yilmaz, N. D.; Altintas, L.; Onan, A.; Sayek, I.

Title

RE-AIMing COVID-19 online learning for medical students: a massive open online course evaluation.

Source

BMC Medical Education; 2021. 21(303):(27 May 2021). 50 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Clinical training during the COVID-19 pandemic is high risk for medical students. Medical schools in low- and middle-income countries (LMIC) have limited capacity to develop resources in the face of rapidly developing health emergencies. Here, a free Massive Open Online Course (MOOC) was developed as a COVID-19 resource for medical students working in these settings, and its effectiveness was evaluated. **Methods:** The RE-AIM (reach, effectiveness, adoption, implementation, and maintenance) framework was utilized to evaluate the effectiveness of MOOC in teaching medical students about COVID-19. The data sources included the student registration forms, metrics quantifying their interactions within the modules, students' course feedback, and free-text responses. The data were collected from the Moodle learning management system and Google analytics from May 9 to September 15, 2020. The research team analyzed the quantitative data descriptively and the qualitative data thematically. **Results:** Among the 16,237 unique visitors who accessed the course, only 6031 medical students from 71 medical schools registered, and about 4993 (83% of registrants) completed the course, indicating high levels of satisfaction ($M = 8.17$, $SD = 1.49$) on a 10-point scale. The mean scores of each assessment modules were $> 90\%$. The free-text responses from 987 unique students revealed a total of 17 themes (e.g., knowing the general information on COVID-19, process management of the pandemic in public health, online platform use, and instructional design) across the elements of the RE-AIM framework. Mainly, the students characterized the MOOC as well-organized and effective. **Conclusions:** Medical students learned about COVID-19 using a self-paced and unmonitored MOOC. MOOCs could play a vital role in the dissemination of accurate information to medical students in LMIC in future public health emergencies. The students were interested in using similar MOOCs in the future.

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Journal article.

<213>

Accession Number

20210278208

Author

Jacobis, I. T. de; Vona, R.; Cittadini, C.; Marchesi, A.; Cursi, L.; Gambardella, L.; Villani, A.; Straface, E.

Title

Clinical characteristics of children infected with SARS-CoV-2 in Italy.

Source

Italian Journal of Pediatrics; 2021. 47(90):(15 April 2021). 14 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Since December 2019 coronavirus disease (COVID-19) emerged in Wuhan and spread rapidly worldwide. Despite the high number of people affected, data on clinical features and prognostic factors in children and adolescents are limited. We propose a retrospective study aimed to evaluate clinical characteristics of children infected with SARS-CoV-2 in Italy. Methods: A pediatric population admitted with COVID-19 to Bambino Gesù Children's Hospital of Rome (Italy) in the period from the end of February to July 2020 has been studied. Medical history, comorbidities, symptoms and laboratory findings were obtained from patients' electronic medical records. Results: In 66 patients (35 males and 31 females) we found that: (i) fever and cough were the dominant symptoms, while vomit and convulsions were rare symptoms; and (ii) all ages of childhood were susceptible to COVID-19. Furthermore, we found that, compared to females, males with COVID-19, although not significantly, had higher values of inflammatory markers such as C-reactive protein (CRP) and ESR. Conversely, we found that COVID-19 positive females were older than males and required more days of hospitalization. Both males and females COVID-19 positives had procalcitonin values within the normal range and D-Dimer values slightly higher than the normal range. With regard to this latter marker, the value measured in females, although not significant, was higher than that measured in males. Interestingly, the presence of leukopenia was found in both sexes. Conclusions: Compared to the adults we found that COVID-19 infection in children is a non-severe inflammatory disease in both males and females. In any case, many detailed studies should be conducted.

Publication Type

Journal article.

<214>

Accession Number

20210277939

Author

Faisal, H. K. P.; Taufik, F. F.; Sugihen, T. T. G.; Prasenhadi; Juliani, T.; Yunus, F.

Title

Brief psychotic disorder in COVID-19 patient with no history of mental illness.

Source

Journal of Infection in Developing Countries; 2021. 15(6):787-790. 11 ref.

Publisher

Open Learning on Enteric Pathogens (OLOEP)

Location of Publisher

Sassari

Country of Publication

Italy

Abstract

Introduction: COVID-19 pandemic affects mental health globally. Reports showed the increase of mental illness as a response to the COVID-19 pandemic. However, the correlation between the COVID-19 and mental illness is not fully understood yet. Methodology: We reported a brief psychotic disorder in a COVID-19 patient with no history of mental illness who was hospitalized in Persahabatan Hospital, Jakarta, Indonesia. Results: Psychotic symptoms appeared five days after COVID-19 onset and laboratory tests showed elevated levels of d-dimer and fibrinogen. Conclusions: Elevated levels of d-dimer and fibrinogen suggest an ongoing COVID-19-associated coagulopathy that might cause a microdamage in the central nervous system. It might contribute to the manifestation of psychotic symptoms. The correlation between brief psychotic disorder and COVID-19 requires further investigation.

Publication Type

Journal article.

<215>

Accession Number

20210277938

Author

Almoayad, F. A.; Bin-Amer, L. A.; Mahboub, S.; Alrabiah, A. M.; Alhashem, A. M.

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Page |

Title

Preventive practices against COVID-19 among residents of Riyadh, Saudi Arabia.

Source

Journal of Infection in Developing Countries; 2021. 15(6):780-786. 15 ref.

Publisher

Open Learning on Enteric Pathogens (OLOEP)

Location of Publisher

Sassari

Country of Publication

Italy

Abstract

Introduction: This cross-sectional descriptive study aimed to use the knowledge, attitudes, and practices (KAP) model as a framework to assess compliance with preventive measures against COVID-19 among residents of the city of Riyadh. Methodology: In May 2020, electronic study questionnaires on Microsoft Forms were distributed to a sample of 886 Riyadh residents via social media and WhatsApp groups. Results: We found that the participants had good knowledge. However, less than half of the participants exhibited positive attitudes and good practices toward COVID-19. There was a statistically significant positive correlation between their practices, attitudes, and knowledge. The most practiced behaviours among the participants were (1) a commitment to home quarantine, (2) the use of a tissue or the inside of an elbow when coughing or sneezing, (3) hand washing for a minimum of 20 seconds, and (4) sterilization of surfaces/equipment and wearing masks in public places. Regression analysis showed that knowledge, attitudes, and age were the three factors that could predict the practices of preventive behaviours against COVID-19. Conclusions: A higher likelihood of practicing preventive measures during the COVID-19 pandemic was significantly associated with one's total knowledge and attitude scores. Future educational campaigns are recommended to focus on residents' susceptibility to COVID-19, its severity, mask wearing, and the disinfection of surfaces and appliances when targeting public audiences. In addition to raising awareness, public policies that support preventive practices would improve the likelihood of compliance.

Publication Type

Journal article.

<216>

Accession Number

20210277937

Author

Terzic-Supic, Z.; Todorovic, J.; Bajcetic, M.; Jankovic, J.; Santric-Milicevic, M.; Stamenkovic, Z.; Djikanovic, B.; Mandic-Rajcevic, S.; Piperac, P.; Jovic-Vranes, A.; Matejic, B.

Title

Knowledge, attitudes and practices and fear of COVID-19 among medical students in Serbia.

Source

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Journal of Infection in Developing Countries; 2021. 15(6):773-779. 26 ref.

Publisher

Open Learning on Enteric Pathogens (OLOEP)

Location of Publisher

Sassari

Country of Publication

Italy

Abstract

Introduction: The outbreak of the disease caused by the novel coronavirus, SARS-CoV-2 named COVID-19 has spread throughout the world. The number of registered cases is increasing and almost no country or territory worldwide has been without any COVID-19 patient. The aim of this study was to examine the level of knowledge on the SARS-CoV-2 and COVID-19 among medical students and to explore the differences in attitudes, practices and fear of COVID-19 among students with sufficient and students with insufficient knowledge. **Methodology:** The cross-sectional study among the 1,722 medical students was conducted through an online platform of the Faculty of Medicine, University of Belgrade. The instrument used was a questionnaire with sections on socio-demographic characteristics, knowledge, attitudes and practices towards COVID-19 and the Fear of COVID-19 scale. **Results:** Total of 1576 (91.50%) students were in the sufficient knowledge group. The multivariate logistic regression analysis showed that there was a significant association between the sufficient knowledge on COVID-19 and female sex (OR = 1.70, 95% CI = 1.18-2.45), age (OR = 1.10, 95% CI = 1.02-1.18), considering the preventive measures enforced in Serbia as good (OR = 2.57, 95% CI = 1.18-5.56), wearing the surgical mask outside of the household in the past 14 days (OR = 1.87, 95% CI = 1.22-2.87) and score on Fear of COVID-19 scale (OR = 0.94, 95% CI = 0.91-0.98). **Conclusions:** Medical students showed good knowledge of COVID-19 and could be a part of the promotion of health education messages as a part of preventive measures.

Publication Type

Journal article.

<217>

Accession Number

20210277936

Author

Akdogan, D.; Guzel, M.; Tosun, D.; Akpinar, O.

Title

Diagnostic and early prognostic value of serum CRP and LDH levels in patients with possible COVID-19 at the first admission.

Source

Journal of Infection in Developing Countries; 2021. 15(6):766-772. 26 ref.

Publisher

Open Learning on Enteric Pathogens (OLOEP)

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Location of Publisher

Sassari

Country of Publication

Italy

Abstract

Introduction: COVID-19 is the infection caused by the new coronavirus. Specific treatment for COVID-19 has not been established, yet. It is important to determine the disease severity of the patients at the first admission. Therefore, the exploration of biomarkers is deemed necessary. We aimed to assess the diagnostic and early prognostic value of CRP and LDH levels in possible COVID-19 patients presenting with a severe clinical picture. Methodology: We evaluated the correlations of relevant routine laboratory test results with disease severity in COVID-19 patients admitted to our infectious diseases clinic. Patients were divided into severe and non-severe disease groups based on clinical findings, oxygen saturation levels in the arterial blood, biochemical test results, and radiological findings. Differences in the findings between the two disease severity groups were examined to determine potential biomarkers. Results: Median age and the CRP and LDH levels in the severe disease group were statistically significantly higher compared to the nonsevere group ($p < 0.0001$). No other parameters statistically significant differences have been observed between the two groups ($P > 0.05$). Conclusions: CRP and LDH levels were positively correlated with lung lesions in early-stage COVID-19, potentially reflecting disease severity. Because LDH and CRP levels can potentially reflect the pulmonary function, they can be potential predictors of COVID-19- related respiratory failure. For avoiding poor prognosis; LDH and CRP should be considered as potential predictors for identifying the need for thoracic CT scans, close monitoring of pulmonary function, and aggressive supportive therapy early in the course of COVID-19.

Publication Type

Journal article.

<218>

Accession Number

20210277935

Author

Karaaslan, A.; Cetin, C.; Akin, Y.; Tekol, S. D.; Sobu, E.; Demirhan, R.

Title

Coinfection in SARS-CoV-2 infected children patients.

Source

Journal of Infection in Developing Countries; 2021. 15(6):761-765. 24 ref.

Publisher

Open Learning on Enteric Pathogens (OLOEP)

Location of Publisher

Sassari

Country of Publication

Italy

Abstract

Introduction: The aim of this study is to determine the coinfections with other respiratory pathogens in SARS-CoV-2 infected children patients in a pediatric unit in Istanbul. **Methodology:** This retrospective descriptive study was conducted in a 1000-bedded tertiary education and research hospital in Istanbul. All children hospitalized with the diagnosis of SARS-CoV-2 infection had been investigated for respiratory agents in nasopharyngeal secretions. Laboratory confirmation of SARS-CoV-2 and the other respiratory pathogens were performed using reverse transcriptase-polymerase chain reaction (RT-PCR). **Results:** A total of 209 hospitalized children with suspected SARS-CoV-2 infection between March 2020-May 2020 were enrolled in this study. Among 209 children, 93 (44.5%) were RT-PCR positive for SARS-CoV-2 infection, and 116 (55.5%) were RT-PCR negative. The most common clinical symptoms in all children with SARS-CoV-2 infection were fever (68.8%) and cough (57.0%). The other clinical symptoms in decreasing rates were headache (10.8%), myalgia (5.4%), sore throat (3.2%), shortness of breath (3.2%), diarrhea (2.2%) and abdominal pain in one child. In 7 (7.5%) patients with SARS-CoV-2 infection, coinfection was detected. Two were with rhinovirus/enterovirus, two were with Coronavirus NL63, one was with adenovirus, and one was with *Mycoplasma pneumoniae*. In one patient, two additional respiratory agents (rhinovirus/enterovirus and adenovirus) were detected. There was a significantly longer hospital stay in patients with coinfection ($p = 0.028$). **Conclusions:** Although the coinfection rate was low in SARS-CoV-2 infected patients in our study, we found coinfection as a risk factor for length of hospital stay in the coinfecting patient group.

Publication Type

Journal article.

<219>

Accession Number

20210277790

Author

Zhu ChenWei; Lv JiaXin; Liu Kun; Li QingZhou; Tang ZhiYang; Zhou Ran; Zhang Wen; Chen Ji; Liu Ke; Li XiangYou; Zeng XiaoYan

Title

Fast detection of harmful trace elements in Glycyrrhiza using standard addition and internal standard method - Laser-induced breakdown spectroscopy (SAIS-LIBS).

Source

Microchemical Journal; 2021. 168.

Publisher

Elsevier Inc

Location of Publisher

Orlando

Country of Publication

USA

Abstract

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Glycyrrhiza is traditional Chinese medicine, whose active compounds have great potential in treating COVID-19. Detecting harmful trace elements of glycyrrhiza has become essential. However, it is not easy to detect trace elements due to the complex matrix of nonstandard glycyrrhiza. Calibration-free laser-induced breakdown spectroscopy (CF-LIBS) can be used in quantitative of nonstandard, but its stability and accuracy are low. To detect trace elements of glycyrrhiza quickly and accurately, this work introduced the standard addition method and internal standard method into LIBS, namely SAIS-LIBS. SAIS-LIBS was applied to determine trace copper and manganese in glycyrrhiza. The results showed that SAIS-LIBS had higher efficiency (<0.3 h), and could be up to 3-25 times more accuracy and stability than CF-LIBS. Furthermore, SAIS-LIBS results and inductively coupled plasma-optical emission spectroscopy (ICP-OES) were very similar (p -values > 0.05). This research provided a foundation for the rapid and accurate detection of harmful trace elements in glycyrrhiza.

Publication Type

Journal article.

<220>

Accession Number

20210277705

Author

Cheng HsinChung; Lu SaoLun; Yen YuChun; Siewchaisakul, P.; Yen MingFang [Yen, M. F. A.]; Chen LiSheng [Chen, L. S. S.]

Title

Dental education changed by COVID-19: student's perceptions and attitudes.

Source

BMC Medical Education; 2021. 21(364):(03 July 2021). 27 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Dental students have encountered changes in the teaching format amid the SARS CoV-2 pandemic. This study aims to evaluate the attitudes of dental students of one medical university toward online courses and compare them with those of non-dental students amid the SARS CoV-2 pandemic. **Methods:** A cross-sectional survey with a self-report online questionnaire was conducted at the medical university in May 2020 in Taipei. Students from the School of Dentistry, School of Dental Technology, and School of Oral Hygiene Study were enrolled in our survey. **Results:** In total, 473 students responded to the survey, 318 (67.2%) of whom were dental students. Overall, 366 (77%) students agreed with the change to online learning. Only 10.4% of students thought that dental professional courses with a laboratory format could be changed to online courses. Dental students were significantly more worried than non-dental students about being infected with COVID-19 and about the COVID-19 pandemic continuing. **Conclusions:** In

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conclusion, changing to online learning seems to be perceived as feasible by students. However, more discussion about changing dental professional courses with a laboratory format to online courses considering the attitudes from students is needed.

Publication Type

Journal article.

<221>

Accession Number

20210277703

Author

Bligh, E. R.; Courtney, E.; Stirling, R.; Rajanathanan, A.

Title

Impact of the COVID-19 pandemic on UK medical school widening access schemes: disruption, support and a virtual student led initiative.

Source

BMC Medical Education; 2021. 21(344):(15 June 2021). 31 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: COVID-19 has disrupted medical education in the United Kingdom (UK). The pandemic may result in a long-term disproportionate negative impact to students applying to Medical School from a low-socioeconomic background. In addition, the upsurge in Medical School applications increases the likelihood of stricter University entry criteria over the coming years. There is no current research to determine how widening participation of Medicine to students from low-socioeconomic backgrounds can be improved virtually. The aim of this study is to establish the impact of COVID-19 on students enrolled in UK widening access schemes and the role of virtual student led initiatives in widening participation. Methods: A voluntary online survey was distributed to UK Sixth Form students (N = 31) enrolled in a widening access scheme who attended Sheffield Neuroscience Society International Virtual Conference in February 2021. The event was free to attend. The five-domain survey consisted of questions determining demographics, career aspirations, impact of COVID-19, academic skillsets and an educational manipulation check. Results: There were 30 pre-conference and 26 post-conference responses. 76.7% had work experience cancelled due to COVID-19. A total of 36.7% of participants reported participating in virtual work experience. 'Observe GP' and 'Medic Mentor' were each specified as attended virtual opportunities in 20% of answers. Post conference, students felt significantly more confident in applying to Medical School ($p = 0.008$) and more prepared to undertake a presentation ($p = 0.002$). Educational manipulation check scores increased significantly ($p = 0.003$). 100% of students felt inspired to do further CV building activities. Conclusions: COVID-19 has negatively impacted pupils enrolled in UK Medical School widening access schemes. Virtual student led initiatives can instill

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confidence in delegates from low socio-economic backgrounds, increase their career knowledge and inspire them to take part in further CV building exercises. Both Medical Schools and medical students play a key role in widening participation. This study recommends Medical Schools promote access to virtual events, urge private and state schools to declare offered opportunities and act mindfully when determining student's academic potential in the context of their socioeconomic and/or educational background.

Publication Type

Journal article.

<222>

Accession Number

20210277702

Author

Casacchia, M.; Cifone, M. G.; Giusti, L.; Fabiani, L.; Gatto, R.; Lancia, L.; Cinque, B.; Petrucci, C.; Giannoni, M.; Ippoliti, R.; Frattaroli, A. R.; Macchiarelli, G.; Roncone, R.

Title

Distance education during COVID 19: an Italian survey on the university teachers' perspectives and their emotional conditions.

Source

BMC Medical Education; 2021. 21(335):(09 June 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Following the COVID-19 pandemic, distance education (DE) replaced traditional "face-to-face" teaching and has become the main method of teaching. The aim of this study was to (1) evaluate the impact of DE by teachers in our department during the second semester of the 2019-20 academic year following the March-May 2020 Italian national lockdown and (2) evaluate the relationship between DE and the emotional well-being of teachers during the period of home confinement. Methods: Ninety-seven university teachers (51.5% women; most represented age group 60-69 years range, 40.2%) responded to an anonymous online cross-sectional survey between July 15 - September 30, 2020, on the advantages and disadvantages of DE, developed by one online teacher focus group. The emotional conditions were assessed by a short version of the Beck Depression Inventory-II (BDI-II). The internal consistency reliability survey and the 10-item BDI-II were measured by Cronbach's alpha. A correlation analysis (r-Pearson) was conducted between the overall evaluation of the experience of DE and the variables included in the study. Results: Teachers reported difficulties in technical aspects, and in psychological factors, as the discomfort of "speaking in the void" (64.7%). The absence of "face-to-face" eye contact with the students was complained by 81% of teachers. Significant impairments in sleep patterns and loss of energy were reported, with female teachers having greater difficulty concentrating than their male colleagues. A quarter of teachers showed depressive

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symptoms of varying severity. The most satisfied teachers were those most stimulated by DE ($r = 0.752$, $p < 0.000$), who showed a lower impact of depressive symptoms ($r = -0.289$, $p = 0.005$). The teaching load in hours influenced the perception of disadvantages ($r = 0.214$, $p = 0.035$) and contributed to a lower appreciation of the challenges of DE. The more significant the manifestation of depressive symptoms during the lockdown was, the greater the subjective recovery of a good emotional condition once the domestic confinement was over ($r = 0.344$, $p = 0.001$), despite maintaining DE. Conclusions: Our study highlights the impact of technical, didactic, and psychological difficulties of DE, reported by our teachers. The appreciation of their new learning promoted by DE seemed related to better emotional well-being of university teachers accepting this "challenge" in their important role in the high-education system, influencing good learning and promoting students' professional success.

Publication Type

Journal article.

<223>

Accession Number

20210277696

Author

Liyanage, G.; Dewasurendra, M.; Ashan Athapathu; Magodarathne, L.

Title

Hand hygiene behavior among Sri Lankan medical students during COVID-19 pandemic.

Source

BMC Medical Education; 2021. 21(333):(08 June 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Poor compliance with hand hygiene practices among medical students poses a risk for cross-infection. It has become more critical during the COVID-19 pandemic than ever before. This study aimed to determine the knowledge, attitudes, practices of hand hygiene among final-year medical students. It also explored reported hand hygiene behavior before the COVID-19 pandemic and the need for educational strategies to correct the deficiencies. **Methods:** A concurrent mixed-method approach was used. In the quantitative strand, a cross-sectional online survey was carried out via a Google form. Mann-Whitney U test and Chi-squared test were used for comparisons. In the qualitative strand, twelve participants were interviewed, based on a semi-structured interview guide and audio recorded. Transcribed data were evaluated with thematic content analysis. **Results:** A total of 225 final-year medical students were studied in the quantitative strand. Most were females. The mean score for knowledge was 3.35 \pm 0.795 out of six. Of them, 31.6% of participants scored below 3 points ($< 50\%$ of the total). Most (78.9%) had positive attitudes (score of $> 80\%$). Only 36.4% reported "adequate" hand hygiene performance in all eight dimensions of the

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behavior domain. Noticeably, fewer participants reported to clean their hands after checking blood pressure (55.6%), and only 66.2% stated carrying a hand sanitizer in their pocket. Significant correlations were not found between reported behavior and attitudes ($p = 0.821$) or knowledge ($p = 0.794$). The qualitative strand with 12 respondents revealed the positive influence of both hierarchical and non-hierarchical role models. Time constraints, skin irritation, and workload pressures were the main barriers. Frequent reminders, supervision, and interactive teaching were suggested as methods to improve hand hygiene compliance. They also stated that increased enthusiasm was noted on hand hygiene during the COVID-19 pandemic compared to the pre-pandemic period. Conclusions: Most of the participants had positive attitudes towards hand hygiene. Yet, a considerable gap between attitudes and knowledge and reported hand hygiene behavior was evident. Coupling educational programs that use cognitive and behavioral methods, including role modeling, supervision, and frequent reminders, is recommended to bridge the knowledge-attitude-behavior gap.

Publication Type

Journal article.

<224>

Accession Number

20210277688

Author

Holenya, P.; Lange, P. J.; Reimer, U.; Woltersdorf, W.; Panterodt, T.; Glas, M.; Wasner, M.; Eckey, M.; Drosch, M.; Hollidt, J. M.; Naumann, M.; Kern, F.; Wenschuh, H.; Lange, R.; Schnatbaum, K.; Bier, F. F.

Title

Peptide microarray-based analysis of antibody responses to SARS-CoV-2 identifies unique epitopes with potential for diagnostic test development.

Source

European Journal of Immunology; 2021. 51(7):1839-1849. 37 ref.

Publisher

Wiley

Location of Publisher

Weinheim

Country of Publication

Germany

Abstract

Humoral immunity to the Severe Adult Respiratory Syndrome (SARS) Coronavirus (CoV)-2 is not fully understood yet but is a crucial factor of immune protection. The possibility of antibody cross-reactivity between SARS-CoV-2 and other human coronaviruses (HCoVs) would have important implications for immune protection but also for the development of specific diagnostic ELISA tests. Using peptide microarrays, $n = 24$ patient samples and $n = 12$ control samples were screened for antibodies against the entire SARS-CoV-2 proteome as well as the Spike (S), Nucleocapsid (N), VME1 (V), R1ab, and Protein 3a (AP3A) of the HCoV strains SARS, MERS, OC43, and 229E. While widespread cross-reactivity was revealed across several immunodominant regions of S and N, IgG binding to several SARS-CoV-2-derived peptides

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provided statistically significant discrimination between COVID-19 patients and controls. Selected target peptides may serve as capture antigens for future, highly COVID-19-specific diagnostic antibody tests.

Publication Type

Journal article.

<225>

Accession Number

20210277622

Author

Kasai, H.; Shikino, K.; Saito, G.; Tsukamoto, T.; Takahashi, Y.; Kuriyama, A.; Tanaka, K.; Onodera, M.; Yokoh, H.; Tatusmi, K.; Yoshino, I.; Ikusaka, M.; Sakao, S.; Ito, S.

Title

Alternative approaches for clinical clerkship during the COVID-19 pandemic: online simulated clinical practice for inpatients and outpatients - a mixed method.

Source

BMC Medical Education; 2021. 21(149):(8 March 2021). 18 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic has created a need for educational materials and methods that can replace clinical clerkships (CCs) for online simulated clinical practice (online-sCP). This study evaluates the impact of using simulated electronic health records (sEHR) for inpatients, and electronic problem-based learning (e-PBL) and online virtual medical interviews (online-VMI) for outpatients, for an online-sCP using a learning management system (LMS) and online meeting system facilitated by a supervising physician. **Methods:** The sEHR was reviewed by medical students and subsequently discussed with a supervising physician using an online meeting system. In the e-PBL, medical students reviewed the simulated patients and discussed on the LMS. For the online-VMI, a faculty member acted as an outpatient and a student acted as the doctor. Small groups of students discussed the clinical reasoning process using the online meeting system. A mixed-method design was implemented. Medical students self-assessed their clinical competence before and after the online-sCP. They answered questionnaires and participated in semi-structured focus group interviews (FGIs) regarding the advantages and disadvantages of the practice. **Results:** Forty-three students completed the online-sCP during May and June 2020. All students indicated significant improvement in all aspects of self-evaluation of clinical performance after the online-sCP. Students using sEHR reported significant improvement in writing daily medical records and medical summaries. Students using e-PBL and online-VMI reported significant improvement in medical interviews and counseling. Students also indicated CCs as more useful for learning associated with medical interviews, physical examinations, and humanistic qualities like professionalism than the online-sCP. Eight FGIs were conducted

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(n = 42). The advantages of online-sCP were segregated into five categories (learning environment, efficiency, accessibility, self-paced learning, and interactivity); meanwhile, the disadvantages of online-sCP were classified into seven categories (clinical practice experience, learning environment, interactivity, motivation, memory retention, accessibility, and extraneous cognitive load). Conclusions: Online-sCP with sEHR, e-PBL, and online-VMI could be useful in learning some of the clinical skills acquired through CC. These methods can be implemented with limited preparation and resources.

Publication Type

Journal article.

<226>

Accession Number

20210277603

Author

Chowdhury, L.; Tanmoy Biswas; Ritu Ghosh; Anurag Chaudhuri

Title

Effect of counseling on the mental status of undergraduate medical students during the pandemic - a prospective quasi-experimental study at a district medical college of west bengal.

Source

Journal of the Indian Medical Association; 2021. 119(4):14-18. 14 ref.

Publisher

Indian Medical Association (IMA)

Location of Publisher

Kolkata

Country of Publication

India

Abstract

Background : Studies show that COVID-19 Pandemic has affected the mental health of all including medical students who already suffer from depression and anxiety but there are not enough studies regarding steps taken towards improving their mental health. **Methods :** In this study, undergraduate medical students were screened for depression, anxiety or stress. Counseling in the form of small group and positive motivation was started as an institutional program before the pandemic. The counseling process continued throughout the period of lock down via mobile and what's app messages. The DASS 21 score of this group in March was compared with the DASS 21 score of November and analyzed for any statistical significance. **Results :** The mean score of depression of these students was 14.46 +or- 6.351 and 8.58 +or- 6.178 after intervention, mean score of anxiety was 11.04 +or- 4.539 and at end of study 5.44 +or- 3.445, mean stress level was 15 +or- 5.299 and 8.12 +or- 5.472 at the end of study, Paired T tests showing $p < 0.0001$. **Conclusion :** The above study thus proves that counseling and positive motivation, of vulnerable students, significantly improves their mental health status in stressful situations like the Pandemic.

Publication Type

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213

Journal article.

<227>

Accession Number

20210277323

Author

Comar, M.; Benvenuto, S.; Lazzerini, M.; Fedele, G.; Barbi, E.; Amaddeo, A.; Risso, F. M.; Strajn, T.; Rocco, P. di; Stefanelli, P.; Rezza, G.

Title

Prevalence of SARS-CoV-2 infection in Italian pediatric population: a regional seroepidemiological study.

Source

Italian Journal of Pediatrics; 2021. 47(131):(5 June 2021). 11 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Data on the effective burden of the SARS-CoV-2 pandemic in pediatric population are very limited, mostly because of the higher rate of asymptomatic or paucisymptomatic cases among children. Updated data on COVID-19 prevalence are needed for their relevance in public health and for infection control policies. In this single-centre cross-sectional study we aimed to assess prevalence of SARS-CoV-2 infection through IgG antibodies detection in an Italian pediatric cohort. Methods: The study was conducted in January 2021 among both inpatients and outpatients referring to Research Institute for Maternal and Child Health "Burlo Garofolo" in Trieste, Friuli Venezia-Giulia, Italy, who needed for blood test for any reason. Collected samples were sent to Italian National Institute of Health for analysis through chemiluminescent immunoassay (CLIA). Results: One hundred sixty-nine patients were included in the study, with a median age of 10.5 +or- 4.1 years, an equal distribution for sex (49.7% female patients), and a 55.6% prevalence of comorbidities. Prevalence of anti-SARS-CoV-2 trimeric Spike protein IgG antibodies was 9.5% (n = 16), with a medium titre of 482.3 +or- 387.1 BAU/mL. Having an infected cohabitant strongly correlated with IgG positivity (OR 23.83, 95% CI 7.19-78.98, p < 0.0001), while a cohabitant healthcare worker wasn't associated with a higher risk (OR 1.53, 95% CI 0.4-5.86, p 0.46). All of the 5 patients who had previously tested positive to a nasopharyngeal swab belonged to the IgG positive group, with a 3-month interval from the infection at most. Conclusion: We assessed a 9.5% SARS-CoV-2 seroprevalence in a pediatric cohort from Friuli Venezia-Giulia region in January 2021, showing a substantial increase after the second peak of the pandemic occurred starting from October 2020, compared to 1% prevalence observed by National Institute of Statistics (ISTAT) in July 2020.

Publication Type

Journal article.

<228>

Accession Number

20210277296

Author

Weber, A. M.; Dua, A.; Chang KiTae; Jupalli, H.; Rizwan, F.; Chouthai, A.; Chen, C.

Title

An outpatient telehealth elective for displaced clinical learners during the COVID-19 pandemic.

Source

BMC Medical Education; 2021. 21(174):(20 March 2021). 10 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In response to the COVID-19 pandemic, medical schools suspended clinical rotations. This displacement of medical students from wards has limited experiential learning. Concurrently, outpatient practices are experiencing reduced volumes of in-person visits and are shifting towards virtual healthcare, a transition that comes with its own logistical challenges. This article describes a workflow that enabled medical students to engage in meaningful clinical education while helping an institution's outpatient practices implement remote telemedicine visits. **Methods:** A 4-week virtual elective was designed to allow clinical learners to participate in virtual telemedicine patient encounters. Students were prepared with EMR training and introduced to a novel workflow that supported healthcare providers in the outpatient setting. Patients were consented to telehealth services before encounters with medical students. All collected clinical information was documented in the EMR, after which students transitioned patients to a virtual Doxy.me video appointment. Surveys were used to evaluate clinical and educational outcomes of students' participation. Elective evaluations and student reflections were also collected. **Results:** Survey results showed students felt well-prepared to initiate patient encounters. They expressed comfort while engaging with patients virtually during telemedicine appointments. Students identified clinical educational value, citing opportunities to develop patient management plans consistent with in-person experiences. A significant healthcare burden was also alleviated by student involvement. Over 1000 total scheduled appointments were serviced by students who transitioned more than 80% of patients into virtual attending provider waiting rooms. **Conclusions:** After piloting this elective with fourth-year students, pre-clerkship students were also recruited to act in a role normally associated with clinical learners (e.g., elicit patient histories, conduct a review of systems, etc.). Furthermore, additional telemedicine electives are being designed so medical students can contribute to patient care without risk of exposure to COVID-19. These efforts will allow students to continue with their clinical education during the pandemic. Medical educators can adopt a similar workflow to suit evolving remote learning needs.

Publication Type

Journal article.

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<229>

Accession Number

20210277295

Author

Hayat, A. A.; Keshavarzi, M. H.; Zare, S.; Bazrafcan, L.; Rezaee, R.; Faghihi, S. A.; Amini, M.; Kojuri, J.

Title

Challenges and opportunities from the COVID-19 pandemic in medical education: a qualitative study.

Source

BMC Medical Education; 2021. 21(247):(29 April 2021). 47 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Introduction: Since the onset of the COVID-19 pandemic, many higher education and health centers have faced challenges. Educational leaders have tried to manage the new situation, but the human infrastructure was not ready for such an event. This study aims to explain the challenges and opportunities of the COVID-19 pandemic for medical education. Method: This qualitative study used conventional content analysis to collect data from face-to-face and semi-structured interviews. The interviews continued until data saturation was reached. The participants were 12 students and 14 faculty members at Shiraz University of Medical Sciences. To ensure data rigor, we used member checks, peer checks and an external observer. Results: Three main categories and 15 subcategories were extracted. The findings showed that four subcategories, e.g. perception on feasibility of e-learning, standardizing of e-learning, dedicated teaching, and networking and interdisciplinary collaborations, affected the development of medical e-learning. The main opportunities from the COVID-19 pandemic for medical education were classified into five subcategories: attitudes to e-learning and adaptability, preventing students' separation from the educational environment, documentation and monitoring education, take control of own learning, and increasing perceived usefulness. The main challenges were divided into four subcategories, e.g. noncompliance with virtual classroom etiquette, inadequate interactions, time limitations, and infrastructure defects and problems. Finally, participants believed that methods of evaluation in e-learning were more suitable for diagnosis and formative evaluations. Generally, two subcategories were extracted, e.g. formative and summative. Conclusion: Medical schools have necessarily moved towards e-learning to compensate for the interruption in classroom education, such that traditional classes have been replaced with e-learning. These rapid, extensive changes in teaching and learning approaches have consequences for medical schools.

Publication Type

Journal article.

<230>

Accession Number

20210277293

Author

Carrillo-Diaz, M.; Lacomba-Trejo, L.; Valle-Gonzalez, A. del; Romero-Maroto, M.; Gonzalez-Olmo, M. J.

Title

Anxiety and facial self-contacts: possible impact on COVID-19 transmission in dental practice.

Source

BMC Oral Health; 2021. 21(200):(20 April 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The purpose was to analyse the associations between dental and trait anxiety, fear of COVID-19 and the duration and frequency of spontaneous hand-to-face contact (self-contact). Methods: A cross-sectional design was carried out with 128 adult patients from four dental clinics in Madrid, during the confinement, from March 15 to May 15. The patients' movements in the waiting room were monitored with Microsoft Kinect Software, also completed the Trait anxiety subscale of the STAI, the COVID-19 Fear and the S-DAI questionnaire. Results: Associations were observed between the duration and frequency of facial, mask and eye contact with trait anxiety and dental fear was determined only by the frequency of this self-contact. Trait anxiety is associated with dental anxiety and with fear of COVID-19. Although facial self-contact is higher in women, it also rises in men as dental fear increases. Moreover, dental anxiety is a good predictor of trait anxiety and the incidence of facial self-contact. Conclusions: Understanding the possible associations between biopsychosocial factors, such as trait anxiety, dental anxiety and self-contact is important. It may help to prevent the spread of COVID-19 in the population as well as enabling the formulation of effective interventions to improve oral health care through the implementation of dental care programmes.

Publication Type

Journal article.

<231>

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217

Accession Number

20210277268

Author

Williams, S. V.; Vusirikala, A.; Ladhani, S. N.; Olano, E. F. R. de; Iyanger, N.; Aiano, F.; Stoker, K.; Rao, G. G.; John, L.; Bharat Patel; Andrews, N.; Dabrera, G.; Ramsay, M.; Brown, K. E.; Bernal, J. L.; Saliba, V.

Title

An outbreak caused by the SARS-CoV-2 Delta (B.1.617.2) variant in a care home after partial vaccination with a single dose of the COVID-19 vaccine Vaxzevria, London, England, April 2021.

Source

Eurosurveillance; 2021. 26(27). 18 ref.

Publisher

European Centre for Disease Prevention and Control

Location of Publisher

Stockholm

Country of Publication

Sweden

Abstract

We investigated a COVID-19 outbreak of the SARS-CoV-2 Delta variant of concern in a London care home, where 8/21 residents and 14/21 staff had received a single dose of Vaxzevria (ChAdOx1-S; AstraZeneca) vaccine. We identified 24 SARS-CoV-2 infections (16 residents, 8 staff) among 40 individuals (19 residents, 21 staff); four (3 residents, 1 staff) were hospitalised, and none died. The attack rate after one vaccine dose was 35.7% (5/14) for staff and 81.3% (13/16) for residents.

Publication Type

Journal article.

<232>

Accession Number

20210277267

Author

Dung Nguyen; Simmonds, P.; Steenhuis, M.; Wouters, E.; Desmecht, D.; Garigliany, M.; Romano, M.; Barbezange, C.; Maes, P.; Holm, B. van; Mendoza, J.; Oyonarte, S.; Fomsgaard, A.; Lassauniere, R.; Zusinaite, E.; Rus, K. R.; Avsic-Zupanc, T.; Reimerink, J. H. J.; Brouwer, F.; Hoogerwerf, M.; Reusken, C. B. E. M.; Grodeland, G.; Cam, S. le; Gallian, P.; Amroun, A.; Brisbarre, N.; Martinaud, C.; Goffart, I. L.; Schrezenmeier, H.; Feys, H. B.; Schoot, C. E. van der; Harvala, H.

Title

SARS-CoV-2 neutralising antibody testing in Europe: towards harmonisation of neutralising antibody titres for better use of convalescent plasma and comparability of trial data.

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Source

Eurosurveillance; 2021. 26(27). 18 ref.

Publisher

European Centre for Disease Prevention and Control

Location of Publisher

Stockholm

Country of Publication

Sweden

Abstract

We compared the performance of SARS-CoV-2 neutralising antibody testing between 12 European laboratories involved in convalescent plasma trials. Raw titres differed almost 100-fold differences between laboratories when blind-testing 15 plasma samples. Calibration of titres in relation to the reference reagent and standard curve obtained by testing a dilution series reduced the inter-laboratory variability ca 10-fold. The harmonisation of neutralising antibody quantification is a vital step towards determining the protective and therapeutic levels of neutralising antibodies.

Publication Type

Journal article.

<233>

Accession Number

20210277266

Author

Ito, K.; Piantham, C.; Nishiura, H.

Title

Predicted dominance of variant Delta of SARS-CoV-2 before Tokyo Olympic Games, Japan, July 2021.

Source

Eurosurveillance; 2021. 26(27). 16 ref.

Publisher

European Centre for Disease Prevention and Control

Location of Publisher

Stockholm

Country of Publication

Sweden

Abstract

Using numbers of SARS-CoV-2 variants detected in Japan as at 13 June 2021, relative instantaneous reproduction numbers (RRI) of the R.1, Alpha, and Delta variants with respect to other strains circulating in Japan were estimated at 1.25, 1.44, and 1.95. Depending on the assumed serial interval distributions, RRI varies from 1.20-1.32 for R.1, 1.34-1.58 for Alpha, and 1.70-2.30 for Delta. The frequency of Delta is expected to take over Alpha in Japan before 23 July 2021.

Publication Type

Journal article.

<234>

Accession Number

20210277212

Author

Mansi Vaid; Kiranmay Sarma; Anshu Gupta

Title

Microplastic pollution in aquatic environments with special emphasis on riverine systems: current understanding and way forward.

Source

Journal of Environmental Management; 2021. 293.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Microplastics (MPs) are emerging as a severe threat in our environment. Their diverse existence in marine environments is being researched globally and thus a widely known fact; however, their presence in the freshwater counterpart has gained attention lately only. Riverine systems, the most critical freshwater resources serve as an essential link between terrestrial and marine environments and their contamination with MPs is going to create severe environmental issues. Because of their small size and unique morphology, these polymers can exhibit variable toxicity to the interacting biota and alter their habitat properties; thus, causing serious impacts on the environment and health of living beings, including humans. These microplastics can also interact with pollutants like heavy metals and organic pollutants, which further augment their harming potential. Inefficient and poor plastic waste disposal practices play an important role in the generation of microplastic pollutants. In the present COVID 19 pandemics, the excessive use of plastic to contain the spread of infection has further added the plastic load in the environment which will eventually lead to the generation of microplastic particles. Also, a significant amount of microplastic pollutants in riverine systems are delivered through wastewater treatment plant effluents. These trade-offs create a distress situation in the environment. The present study connects these key issues for a better understanding of the diverse existence of microplastic pollutants, their sources, and fate, with a special emphasis on riverine systems. A critical appraisal of the knowledge gaps and proposal of suitable solutions through this review

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might open up avenues for further research and effective management of the microplastics in aquatic environments .

Publication Type

Journal article.

<235>

Accession Number

20210277184

Author

Garcia, L. C.; Szabo, J. K.; Oliveira Roque, F. de; Matos Martins Pereira, A. de; Nunes Cunha, C. da; Damasceno-Junior, G. A.; Morato, R. G.; Tomas, W. M.; Libonati, R.; Ribeiro, D. B.

Title

Record-breaking wildfires in the world's largest continuous tropical wetland: integrative fire management is urgently needed for both biodiversity and humans.

Source

Journal of Environmental Management; 2021. 293.

Publisher

Elsevier

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

In the Brazilian Pantanal, wildfire occurrence has increased, reaching record highs of over 40,000 km² in 2020. Smoke from wildfires worsened the situation of isolated, as well as urban communities, already under an increasing toll of COVID-19. Here we review the impacts and the possible causes of the 2020 mega-fires and recommend improvements for public policies and fire management in this wetland. We calculated the amount of area burnt annually since 2003 and describe patterns in precipitation and water level measurements of the Paraguay River. Our analyses revealed that the 2020 wildfires were historically unprecedented, as 43% of the area (over 17,200 km²) had not been burnt previously in the last two decades. The extent of area affected in 2020 represents a 376% increase compared to the annual average of the area burnt annually in the last two decades, double than the value in 2019. Potential factors responsible for this increase are (i) severe drought decreased water levels, (ii) the fire corridor was located in the Paraguay River flood zone, (iii) constraints on firefighters, (iv) insufficient fire prevention strategy and agency budget reductions, and (v) recent landscape changes. Climate and land use change will further increase the frequency of these extreme events. To make fire management more efficient and cost-effective, we recommend the implementation of an Integrated Fire Management program in the Pantanal. Stakeholders should use existing traditional, local ecological, and scientific knowledge to form a collective strategy with clear, achievable, measurable goals, considering the socio-ecological context. Permanent fire brigades, including indigenous members, should conduct year-round fire management. Communities should cooperate to create a collaborative network for wildfire prevention, the location and characteristics (including

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flammability) of infrastructures should be (re)planned in fire-prone environments considering and managing fire-catalysed transitions, and depending on the severity of wildfires. The 2020 wildfires were tackled in an ad-hoc fashion and prioritisation of areas for urgent financial investment, management, protection, and restoration is necessary to prevent this catastrophe from happening again.

Publication Type

Journal article.

<236>

Accession Number

20210277159

Author

Brunelli, E.; Macirella, R.

Title

Exploring the critical points of teaching STEM subjects in the time of COVID 19: the experience of the course "Microscopy Techniques for Forensic Biology" [version 2; peer review: 2 approved].

Source

F1000Research; 2021. 10(89).

Publisher

Science Navigation Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The University was among the first structures to be hit by the health emergency, transferring all its teaching and research activities remotely. It was not easy for teachers and students to find themselves suddenly shifted into different teaching and socializing context. **Results:** This article describes and analyzes the online teaching experience carried out for the course of Microscopy Techniques for Forensic Biology offered as a part of the Master's degree program in Biology at the University of Calabria (Italy). A cross-sectional survey (pilot study) was designed to investigate the accessibility of distance learning along with an evaluation of adjustments needed for the conversion from offline to online instruction. Particular attention has been paid to learning material and lesson duration, with specific emphasis on practical activities. **Conclusions:** The author's intent is that of opening a comparison between the strengths and weaknesses that emerged in this experience, highlighting, in particular, how the educational relationship between teacher and student has changed.

Publication Type

Journal article.

<237>

Accession Number

20210277145

Author

Cristiano, A.; Fortunati, V.; Cherubini, F.; Bernardini, S.; Nuccetelli, M.

Title

Anti-phospholipids antibodies and immune complexes in COVID-19 patients: a putative role in disease course for anti-annexin-V antibodies.

Source

Clinical Rheumatology; 2021. 40(7):2939-2945. 22 ref.

Publisher

Springer-Verlag

Location of Publisher

Godalming

Country of Publication

UK

Abstract

Introduction: Besides distinctive respiratory and digestive hallmarks, COVID-19 has been recently associated with a high prevalence of pro-inflammatory and hypercoagulable states known as "COVID-19 Associated Coagulopathy" (CAC), corresponding to a worsening in patients' conditions, whose causes are still to be elucidated. A link between anti-phospholipid antibodies (aPLs) and viral infections has long been suggested. APLs are assessed for anti-phospholipid syndrome (APS) diagnosis, characterized by thrombocytopenia, thrombosis, and coagulopathy. Furthermore, circulating immune complexes (CICs), arisen upon inflammatory responses and related immune dysregulation, can lead to endothelial cell damage and thrombotic complications. Method: We performed an extended panel including IgG/IgM anti-cardiolipin, IgG/IgM anti-beta2-glycoprotein-1, coupled with IgG/IgM anti-prothrombin, IgG/IgM anti-annexin-V on two COVID-19 patient groups (early and late infection time), and a negative control group. IgG CIC analysis followed to evaluate inflammatory status, through a possible complement system activation. Results: Our results showed low positive case percentage in IgG/IgM anti-cardiolipin and IgG/IgM anti-beta2-glycoprotein-1 assays (4.54%, 6.25%, and 4.55%; in early infection group, late infection group, and control group, respectively); few positive cases in IgG/IgM anti-prothrombin and IgG/IgM anti-annexin-V immunoassays; and no IgG CIC positivity in any patient. Conclusions: In conclusion, our data show a low aPL prevalence, likely excluding an involvement in the pathogenesis of CAC. Interestingly, IgG/IgM anti-prothrombin and anti-annexin-V positive cases, detected in late infection group, suggest that aPLs could temporarily increase or could trigger a "COVID-19-induced-APS-like-syndrome" in predisposed patients.

Publication Type

Journal article.

<238>

Accession Number

20210277026

Author

Brancher, M.

Title

Increased ozone pollution alongside reduced nitrogen dioxide concentrations during Vienna's first COVID-19 lockdown: significance for air quality management.

Source

Environmental Pollution; 2021. 284. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Lockdowns amid the COVID-19 pandemic have offered a real-world opportunity to better understand air quality responses to previously unseen anthropogenic emission reductions. Methods and main objective: This work examines the impact of Vienna's first lockdown on ground-level concentrations of nitrogen dioxide (NO₂), ozone (O₃) and total oxidant (O_x). The analysis runs over January to September 2020 and considers business as usual scenarios created with machine learning models to provide a baseline for robustly diagnosing lockdown-related air quality changes. Models were also developed to normalise the air pollutant time series, enabling facilitated intervention assessment. Core findings: NO₂ concentrations were on average -20.1% [13.7-30.4%] lower during the lockdown. However, this benefit was offset by amplified O₃ pollution of +8.5% [3.7-11.0%] in the same period. The consistency in the direction of change indicates that the NO₂ reductions and O₃ increases were ubiquitous over Vienna. O_x concentrations increased slightly by +4.3% [1.8-6.4%], suggesting that a significant part of the drops in NO₂ was compensated by gains in O₃. Accordingly, 82% of lockdown days with lowered NO₂ were accompanied by 81% of days with amplified O₃. The recovery shapes of the pollutant concentrations were depicted and discussed. The business as usual-related outcomes were broadly consistent with the patterns outlined by the normalised time series. These findings allowed to argue further that the detected changes in air quality were of anthropogenic and not of meteorological reason. Pollutant changes on the machine learning baseline revealed that the impact of the lockdown on urban air quality were lower than the raw measurements show. Besides, measured traffic drops in major Austrian roads were more significant for light-duty than for heavy-duty vehicles. It was also noted that the use of mobility reports based on cell phone movement as activity data can overestimate the reduction of emissions for the road transport sector, particularly for heavy-duty vehicles. As heavy-duty vehicles can make up a large fraction of the fleet emissions of nitrogen oxides, the change in the volume of these vehicles on the roads may be the main driver to explain the change in NO₂ concentrations. Interpretation and implications: A probable future with emissions of volatile organic compounds (VOCs) dropping slower than emissions of nitrogen oxides could risk worsened urban O₃ pollution under a VOC-limited photochemical regime. More holistic policies will be needed to achieve improved air quality levels across different regions and criteria pollutants.

Publication Type

Journal article.

<239>

Accession Number

20210276887

Author

Nafisa Ahmed; Yusha Araf; Ullah, M. A.

Title

Prospects of vitamin D in the treatment of COVID-19 patient and improving maternal and child health during pandemic.

Source

Journal of Advanced Biotechnology and Experimental Therapeutics; 2021. 4(2):133-148. 142 ref.

Publisher

Bangladesh Society for Microbiology, Immunology, and Advanced Biotechnology

Location of Publisher

Dhaka

Country of Publication

Bangladesh

Abstract

The coronavirus disease 2019 (COVID-19) pandemic is supposed to cause vitamin D deficiency in many people by a direct effect of home quarantine in the affected countries. Generally, vitamin D provides human body with significant health benefits including bone development, specific gene regulation and protection against different diseases. However, deficiency of optimal amount of vitamin D inside human body may result in susceptibility to multiple infectious diseases. Therefore, with vitamin D levels gravely decreased by reduced movement and activity, a number of possible negative outcomes are expected in COVID-19 patients, pregnant women and children during this ongoing pandemic. Vitamin D has a direct inhibitory effect on post infection through a number of mechanisms that promises to make vitamin D a future adjunctive therapy for COVID-19 treatment. Besides, clinical evidence also supports its role in preventing pregnancy complications and improving pregnancy outcomes. Consistent with the manifold role of vitamin D, an increasing number of studies suggest its role in improving the mental health of children who have been adversely affected throughout this pandemic. This review article discusses the potential roles of vitamin D on COVID-19 patients, pregnant women and children focusing its scope to become a supplementary candidate for these vulnerable groups to combat the ongoing pandemic.

Publication Type

Journal article.

<240>

Accession Number

20210276882

Author

Rahman, M. R.; Sajib, E. H.; Chowdhury, I. M.; Anik Banik; Rahul Bhattacharya; Hasan Ahmed

Title

Present scenario of COVID-19 in Bangladesh and government preparedness for facing challenges.

Source

Journal of Advanced Biotechnology and Experimental Therapeutics; 2021. 4(2):187-199. 111 ref.

Publisher

Bangladesh Society for Microbiology, Immunology, and Advanced Biotechnology

Location of Publisher

Dhaka

Country of Publication

Bangladesh

Abstract

The COVID-19 pandemic caused by SARS-CoV-2 has been showing a speedy growth in the number of infected patients with a remarkable mortality rate, thus it has become a worldwide public health concern. From March 8, 2020, the virus started spreading in Bangladesh. Since then, people got infected so exponentially that the country positions at the list of top infected countries in the world. Therefore, the objective of this comprehensive review was representing the overall scenario of COVID-19 in different sectors of Bangladesh. Because of insufficient scientific publications, we chose materials published by several agencies, media outlets, newspapers, and policy experts to retrieve details information. Up to 4 March 2021, 547,930 confirmed cases and 8,428 deaths were reported in Bangladesh. An alarming fact is that while the global mutation rate of coronavirus is 7.23% in average, the rate is 12.6% in Bangladesh. Although the government ruled preventive strategies such as nationwide lockdown, social distancing, contact monitoring, quarantine, and isolation, it was difficult to implement those due to lack of public awareness, inappropriate attitudes and so on. Moreover, the overburdened healthcare system had a weak response at initial stage because of insufficient healthcare facilities. Consequently, this pandemic affected severely almost all the important sectors of the country, specifically the economy, agriculture, education, and health sector. Hence, focusing on healthcare system, maintaining social distance, and other essential precautions can limit the spread of infection and help to alleviate the severity of this pandemic.

Publication Type

Journal article.

<241>

Accession Number

20210276828

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Author

Indrajitsingha, S. K.; Padmini Raulo; Padmanava Samanta; Umakanta Misra; Raju, L. K.

Title

An EOQ model of selling-price-dependent demand for non-instantaneous deteriorating items during the pandemic COVID-19.

Source

Walailak Journal of Science and Technology; 2021. 18(12). 34 ref.

Publisher

Institute of Research and Development, Walailak University

Location of Publisher

Nakhonsithammarat

Country of Publication

Thailand

Abstract

A pricing factor plays a dominant role in consumer behavior in most countries affected by the COVID19 pandemic. People have lost their job while others renegotiated for low-paying jobs during this pandemic. Thus, this article aims to develop a viable model to consider various aspects of the COVID19 pandemic. Here, we develop an optimal ordering quantity inventory model of deteriorating items, which are still in demand depending upon the selling price of the product. The items are assumed to be non-instantaneous deteriorating. The shortage is allowed in lead time and is partially backlogged. A solution procedure is presented to determine an optimal cycle, order quantity, and total average cost. A realistic numerical example is given to validate the proposed model by changing different systems of parameters, where sensitivity analysis has been carried out. The effectiveness of the system has been observed through graphical representation.

Publication Type

Journal article.

<242>

Accession Number

20210276780

Author

Diab, A. M.; Carleton, B. C.; Goralski, K. B.

Title

COVID-19 pathophysiology and pharmacology: what do we know and how did Canadians respond? A review of health Canada authorized clinical vaccine and drug trials.

Source

Canadian Journal of Physiology and Pharmacology; 2021. 99(6):577-588. many ref.

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Publisher

Canadian Science Publishing

Location of Publisher

Ontario

Country of Publication

Canada

Abstract

Coronavirus disease 2019 (COVID-19) has resulted in the death of over 18 000 Canadians and has impacted the lives of all Canadians. Many Canadian research groups have expanded their research programs to include COVID-19. Over the past year, our knowledge of this novel disease has grown and has led to the initiation of a number of clinical vaccine and drug trials for the prevention and treatment of COVID-19. Here, we review SARS-CoV-2 (the coronavirus that causes COVID-19) and the natural history of COVID-19, including a timeline of disease progression after SARS-CoV-2 exposure. We also review the pathophysiological effects of COVID-19 on the organ systems that have been implicated in the disease, including the lungs, upper respiratory tract, immune system, central nervous system, cardiovascular system, gastrointestinal organs, the liver, and the kidneys. Then we review general therapeutics strategies that are being applied and investigated for the prevention or treatment of COVID-19, including vaccines, antivirals, immune system enhancers, pulmonary supportive agents, immunosuppressants and (or) anti-inflammatories, and cardiovascular system regulators. Finally, we provide an overview of all current Health Canada authorized clinical drug and vaccine trials for the prevention or treatment of COVID-19.

Publication Type

Journal article.

<243>

Accession Number

20210276386

Author

Chen IHua; Ahorsu, D. K.; Ko NaiYing; Yen ChengFang; Lin ChungYing; Griffiths, M. D.; Pakpour, A. H.

Title

Adapting the motors of influenza vaccination acceptance scale into the motors of COVID-19 vaccination acceptance scale: psychometric evaluation among mainland Chinese university students.

Source

Vaccine; 2021. 39(32):4510-4515. 44 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

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UK

Abstract

Background: COVID-19 continues to ravage the world with economies and life significantly and negatively affected. Fortunately, there has been significant progress in the production of vaccines to stem the infection. However, with controversies and myths surrounding vaccinations, it is timely to examine individuals' willingness to vaccinate. The present study adapted the Motors of Influenza Vaccination Acceptance Scale (MoVac-Flu Scale) into the Motors of COVID-19 Vaccination Acceptance Scale (MoVac-COVID19S) for validation and assessed the acceptance of COVID-19 vaccination utilizing the cognitive model of empowerment (CME). **Methods:** A total of 3145 university students (mean age = 20.80 years; SD = 2.09) were recruited for the present study between January 5 and 16, 2021. Two MoVac-COVID19S scales (9-item and 12-item) were adapted from the MoVac-Flu Scale, an instrument developed using CME. Psychometric tests were conducted to ascertain reliability and validity properties. **Results:** The findings indicated that the MoVac-COVID19S had high internal consistency in both the 9-item version ($\alpha = 0.921$) and 12-item version ($\alpha = 0.898$). The factor structure of the MoVac-COVID19S (9-item and 12-item versions) corresponded well with CME theory. All the fit indices were satisfactory (comparative fit index = 0.984, Tucker-Lewis index = 0.971, root mean square error of approximation = 0.088, standardized root mean square residual = 0.058) but the 9-item MoVac-COVID had better fit indices than the 12-item MoVac-COVID due to the negative wording effects existing in the 12-item MoVac-COVID19S. The scale had satisfactory known-group validity in both 9-item and 12-item versions. **Conclusions:** The MoVac-COVID19S has promising psychometric properties based on internal consistency, factor structure, and known-group validity.

Publication Type

Journal article.

<244>

Accession Number

20210276376

Author

Earle, K. A.; Ambrosino, D. M.; Fiore-Gartland Andrew; Goldblatt, D.; Gilbert, P. B.; Siber, G. R.; Dull, P.; Plotkin, S. A.

Title

Evidence for antibody as a protective correlate for COVID-19 vaccines.

Source

Vaccine; 2021. 39(32):4423-4428. 16 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

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A correlate of protection (CoP) is urgently needed to expedite development of additional COVID-19 vaccines to meet unprecedented global demand. To assess whether antibody titers may reasonably predict efficacy and serve as the basis of a CoP, we evaluated the relationship between efficacy and in vitro neutralizing and binding antibodies of 7 vaccines for which sufficient data have been generated. Once calibrated to titers of human convalescent sera reported in each study, a robust correlation was seen between neutralizing titer and efficacy ($p = 0.79$) and binding antibody titer and efficacy ($p = 0.93$), despite geographically diverse study populations subject to different forces of infection and circulating variants, and use of different endpoints, assays, convalescent sera panels and manufacturing platforms. Together with evidence from natural history studies and animal models, these results support the use of post-immunization antibody titers as the basis for establishing a correlate of protection for COVID-19 vaccines.

Publication Type

Journal article.

<245>

Accession Number

20210276374

Author

Lundberg, L.; Bygdell, M.; Feilitzen, G. S. von; Woxenius, S.; Ohlsson, C.; Kindblom, J. M.; Leach, S.

Title

Recent MMR vaccination in health care workers and Covid-19: a test negative case-control study.

Source

Vaccine; 2021. 39(32):4414-4418. 16 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: It has been hypothesised that the measles-mumps-rubella (MMR) vaccine may afford cross-protection against SARS-CoV-2 which may contribute to the wide variability in disease severity of Covid-19. **Methods:** We employed a test negative case-control study, utilising a recent measles outbreak during which many healthcare workers received the MMR vaccine, to investigate the potential protective effect of MMR against SARS-CoV-2 in 5905 subjects ($n = 805$ males, $n = 5100$ females). **Results:** The odds ratio for testing positive for SARS-CoV-2, in recently MMR-vaccinated compared to not recently MMR-vaccinated individuals was 0.91 (95% CI 0.76, 1.09). An interaction analysis showed a significant interaction for sex. After sex-stratification, the odds ratio for testing positive for males was 0.43 (95% CI 0.24, 0.79, $P = 0.006$), and 1.01 (95% CI 0.83, 1.22, $P = 0.92$) for females. **Conclusion:** Our results indicate that there may be a protective effect of the MMR vaccine against SARS-CoV-2 in males but not females.

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Journal article.

<246>

Accession Number

20210276370

Author

Scheibelhofer, S.; Drothler, S.; Braun, W.; Braun, R.; Boesch, M.; Weiss, R.

Title

Laser-facilitated epicutaneous immunization of mice with SARS-CoV-2 spike protein induces antibodies inhibiting spike/ACE2 binding.

Source

Vaccine; 2021. 39(32):4399-4403. 23 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

The skin represents an attractive target tissue for vaccination against respiratory viruses such as SARS-CoV-2. Laser-facilitated epicutaneous immunization (EPI) has been established as a novel technology to overcome the skin barrier, which combines efficient delivery via micropores with an inherent adjuvant effect due to the release of danger-associated molecular patterns. Here we delivered the S1 subunit of the Spike protein of SARS-CoV-2 to the skin of BALB/c mice via laser-generated micropores with or without CpG-ODN1826 or the B subunit of heat-labile enterotoxin of *E.coli* (LT-B). EPI induced serum IgG titers of 1:3200 that could be boosted 5 to 10-fold by co-administration of LT-B and CpG, respectively. Sera were able to inhibit binding of the spike protein to its receptor ACE2. Our data indicate that delivery of recombinant spike protein via the skin may represent an alternative route for vaccines against Covid-19.

Publication Type

Journal article.

<247>

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231

Accession Number

20210276177

Author

Galieni, A.; D'Ascenzo Nicola; Stagnari, F.; Pagnani, G.; Xie QingGuo; Pisante, M.

Title

Past and future of plant stress detection: an overview from remote sensing to positron emission tomography.

Source

Frontiers in Plant Science; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Plant stress detection is considered one of the most critical areas for the improvement of crop yield in the compelling worldwide scenario, dictated by both the climate change and the geopolitical consequences of the Covid-19 epidemics. A complicated interconnection of biotic and abiotic stressors affect plant growth, including water, salt, temperature, light exposure, nutrients availability, agrochemicals, air and soil pollutants, pests and diseases. In facing this extended panorama, the technology choice is manifold. On the one hand, quantitative methods, such as metabolomics, provide very sensitive indicators of most of the stressors, with the drawback of a disruptive approach, which prevents follow up and dynamical studies. On the other hand qualitative methods, such as fluorescence, thermography and VIS/NIR reflectance, provide a non-disruptive view of the action of the stressors in plants, even across large fields, with the drawback of a poor accuracy. When looking at the spatial scale, the effect of stress may imply modifications from DNA level (nanometers) up to cell (micrometers), full plant (millimeters to meters), and entire field (kilometers). While quantitative techniques are sensitive to the smallest scales, only qualitative approaches can be used for the larger ones. Emerging technologies from nuclear and medical physics, such as computed tomography, magnetic resonance imaging and positron emission tomography, are expected to bridge the gap of quantitative non-disruptive morphologic and functional measurements at larger scale. In this review we analyze the landscape of the different technologies nowadays available, showing the benefits of each approach in plant stress detection, with a particular focus on the gaps, which will be filled in the nearby future by the emerging nuclear physics approaches to agriculture.

Publication Type

Journal article.

<248>

Accession Number

20210276170

Author

Siriwattananon, K.; Manopwisedjaroen, S.; Kanjanasirirat, P.; Purwono, P. B.; Rattanapisit, K.; Shanmugaraj, B.; Smith, D. R.; Borwornpinyo, S.; Thitithanyanont, A.; Phoolcharoen, W.

Title

Development of plant-produced recombinant ACE2-Fc fusion protein as a potential therapeutic agent against SARS-CoV-2.

Source

Frontiers in Plant Science; 2021. 12(January). many ref.

Publisher

Frontiers Media S.A.

Location of Publisher

Lausanne

Country of Publication

Switzerland

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the causative agent of coronavirus disease (COVID-19) which has recently emerged as a potential threat to global public health. SARS-CoV-2 is the third known human coronavirus that has huge impact on the human population after SARS-CoV and MERS-CoV. Although some vaccines and therapeutic drugs are currently in clinical trials, none of them are approved for commercial use yet. As with SARS-CoV, SARS-CoV-2 utilizes angiotensin-converting enzyme 2 (ACE2) as the cell entry receptor to enter into the host cell. In this study, we have transiently produced human ACE2 fused with the Fc region of human IgG1 in *Nicotiana benthamiana* and the in vitro neutralization efficacy of the plant-produced ACE2-Fc fusion protein was assessed. The recombinant ACE2-Fc fusion protein was expressed in *N. benthamiana* at 100 g/g leaf fresh weight on day 6 post-infiltration. The recombinant fusion protein showed potent binding to receptor binding domain (RBD) of SARS-CoV-2. Importantly, the plant-produced fusion protein exhibited potent anti-SARS-CoV-2 activity in vitro. Treatment with ACE2-Fc fusion protein after viral infection dramatically inhibit SARS-CoV-2 infectivity in Vero cells with an IC50 value of 0.84 g/ml. Moreover, treatment with ACE2-Fc fusion protein at the pre-entry stage suppressed SARS-CoV-2 infection with an IC50 of 94.66 g/ml. These findings put a spotlight on the plant-produced ACE2-Fc fusion protein as a potential therapeutic candidate against SARS-CoV-2.

Publication Type

Journal article.

<249>

Accession Number

20210275984

Author

Tian ChaoYang

Title

China is facing serious experimental monkey shortage during the COVID-19 lockdown.

Source

Journal of Medical Primatology; 2021. 50(4):225-227.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

This report aims to analyze the experimental monkey shortage generated by the COVID-19 lockdown. The supply capability of the monkey breeding farms is insufficient to meet demand, and the sales prices have skyrocketed since 2018. The contradiction will be further aggravated with import prohibition although the countermeasures suggested.

Publication Type

Journal article.

<250>

Accession Number

20210275928

Author

Xia Yang; Chen WeiXiang; Ren HongYi; Zhao JianPing; Wang LiHua; Jin Rui; Zhou JieSen; Wang QiYuan; Yan FuGui; Zhang Bin; Lou Jian; Wang ShaoBin; Li XiaoMeng; Zhou Jie; Xia LiMing; Jin Cheng; Feng JianJiang; Li Wen; Shen HuaHao

Title

A rapid screening classifier for diagnosing COVID-19.

Source

International Journal of Biological Sciences; 2021. 17(2):539-548. 47 ref.

Publisher

Ivyspring International Publisher Pty Ltd

Location of Publisher

Sydney

Country of Publication

Australia

Abstract

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Rationale: Coronavirus disease 2019 (COVID-19) has caused a global pandemic. A classifier combining chest X-ray (CXR) with clinical features may serve as a rapid screening approach. Methods: The study included 512 patients with COVID-19 and 106 with influenza A/B pneumonia. A deep neural network (DNN) was applied, and deep features derived from CXR and clinical findings formed fused features for diagnosis prediction. Results: The clinical features of COVID-19 and influenza showed different patterns. Patients with COVID-19 experienced less fever, more diarrhea, and more salient hypercoagulability. Classifiers constructed using the clinical features or CXR had an area under the receiver operating curve (AUC) of 0.909 and 0.919, respectively. The diagnostic efficacy of the classifier combining the clinical features and CXR was dramatically improved and the AUC was 0.952 with 91.5% sensitivity and 81.2% specificity. Moreover, combined classifier was functional in both severe and non-severe COVID-19, with an AUC of 0.971 with 96.9% sensitivity in non-severe cases, which was on par with the computed tomography (CT)-based classifier, but had relatively inferior efficacy in severe cases compared to CT. In extension, we performed a reader study involving three experienced pulmonary physicians, artificial intelligence (AI) system demonstrated superiority in turn-around time and diagnostic accuracy compared with experienced pulmonary physicians. Conclusions: The classifier constructed using clinical and CXR features is efficient, economical, and radiation safe for distinguishing COVID-19 from influenza A/B pneumonia, serving as an ideal rapid screening tool during the COVID-19 pandemic.

Publication Type

Journal article.

<251>

Accession Number

20210275848

Author

Maaravi, Y.; Heller, B.

Title

Studying the prominence effect amid the COVID-19 crisis: implications for public health policy decision-making. [version 2; peer review: 2 approved].

Source

F1000Research; 2021. 9(1356). 11 ref.

Publisher

Science Navigation Group

Location of Publisher

London

Country of Publication

UK

Abstract

The novel coronavirus disease 2019 (COVID-19) has brought with it crucial policy- and decision-making situations, especially when making judgments between financial and health concerns. One particularly relevant decision-making phenomenon is the prominence effect, where decision-makers base their decisions on the most prominent attribute of the object at hand (e.g., health concerns) rather than weigh all the

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attributes together. This bias diminishes when the decision-making mode inhibits heuristic processes. In this study, we tested the prominence of health vs. financial concerns across two decision-making modes - choice (prone to heuristics) and matching (mitigates heuristics) - during the peak of the COVID-19 in the UK using Tversky et al.'s classic experimental paradigm. We added to the classic experimental design a priming condition. Participants were presented with two casualty-minimization programs, differing in lives saved and costs: program X would save 100 lives at the cost of 55-million-pound sterling, whereas program Y would save 30 lives at the cost of 12-million-pound sterling. Half of the participants were required to choose between the programs (choice condition). The other half were not given the cost of program X and were asked to determine what the cost should be to make it as equally attractive as the program Y. Participants in both groups were primed for either: (a) financial concerns; (b) health concerns; or (c) control (no priming). Results showed that in the choice condition, unless primed for financial concerns, health concerns are more prominent. In the matching condition, on the other hand, the prominence of health concerns did not affect decision-makers, as they all "preferred" the cheaper option. These results add further support to the practical relevance of using the proper decision-making modes in times of consequential crises where multiple concerns, interests, and parties are involved.

Publication Type

Journal article.

<252>

Accession Number

20210275846

Author

Machanick, P.

Title

Revisiting early-stage COVID-19 strategy options [version 3; peer review: 2 approved].

Source

F1000Research; 2021. 9(327). 48 ref.

Publisher

Science Navigation Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Early-stage interventions in a potential pandemic are important to understand as they can make the difference between runaway exponential growth that is hard to turn back and stopping the spread before it gets that far. COVID19 is an interesting case study because there have been very different outcomes in different localities. These variations are best studied after the fact if precision is the goal; while a pandemic is still unfolding less precise analysis is of value in attempting to guide localities to learn lessons of those that preceded them. **Methods:** I examine two factors that could differentiate strategy: asymptomatic spread and the risks of basing strategy on untested claims, such as potential protective value of the Bacillus

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Calmette-Guerin (BCG) tuberculosis vaccine. Results: Differences in disease progression as well as the possibility of alternative strategies to prevent COVID-19 from entering the runaway phase or damping it down later can be elucidated by a study of asymptomatic infection. An early study to demonstrate not only what fraction are asymptomatic but how contagious they are would have informed policy on nonpharmaceutical interventions but could still be of value to understand containment during vaccine roll out. Conclusions: When a COVID-19 outbreak is at a level that makes accurate trace-and test possible, investigation of asymptomatic transmission is viable and should be attempted to enhance understanding of spread and variability in the disease as well as policy options for slowing the spread. Understanding mild cases could shed light on the disease in the longer term, including whether vaccines prevent contagiousness.

Publication Type

Journal article.

<253>

Accession Number

20210275833

Author

Hassenpflug, M. S.; Jun, D.; Nelson, D. R.; Dolinay, T.

Title

Post-COVID recovery: characteristics of chronically critically ill patients admitted to a long-term acute care hospital [version 2; peer review: 2 approved].

Source

F1000Research; 2021. 9(1241). 9 ref.

Publisher

Science Navigation Group

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Survivors of COVID-19 pneumonia often suffer from chronic critical illness (CCI) and require long-term hospitalization. Long-term acute care (LTAC) hospitals are vital in the care of CCI patients, but their role for patients post COVID-19 infection is not known. Barlow Respiratory Hospital (BRH) is a 105-bed, LTAC hospital network serving ventilator-dependent and medically-complex patients transferred from the ICUs of hospitals in southern California. We report patient characteristics of our first series of COVID-19 survivors admitted to the post-acute venue of an LTAC hospital. **Methods:** Single-center observational descriptive report of patients recovering from acute infectious complications of COVID-19 pneumonia requiring long-term respiratory support. **Results:** From 28 April to 7 September 2020, 41 patients were admitted to BRH for continued recovery from COVID-19 pneumonia. Median age: 68 [44-94] years, 25/41 (61%) male, 33/41 (80.5%) with tracheostomy, 21/41 (51.2%) on invasive mechanical ventilation, 9/41 (22%) receiving hemodialysis. All mechanical ventilation and hemodialysis interventions were initiated at the transferring hospital. **Conclusions:** To our knowledge, this is the first report to characterize CCI and medically

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complex COVID-19 patients transferred to the post-acute venue of an LTAC hospital. Patients on average spent over six weeks in the transferring hospital mostly in the ICU, are largely elderly, carry the known risk factors for COVID-19 infection, and experienced respiratory failure necessitating prolonged mechanical ventilation via tracheostomy. Our findings suggest that these patients will continue to require considerable medical interventions and treatments, including weaning from mechanical ventilation, owing to the numerous sequelae of the infection and the burden of acute-on-chronic diseases. As ICU survival rates improve, this research further emphasizes the important role of the LTAC hospital in responding to the COVID-19 crisis.

Publication Type

Journal article.

<254>

Accession Number

20210275823

Author

Barros-Sevillano, J. S.; Sandoval, C. P.; Alcarraz-Mundial, L. S.; Barboza, J. J.

Title

Self-medication in times of COVID-19. a perspective from Peru.

Source

Gaceta Medica de Mexico; 2021. 157(1). 5 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

By September 6, 2020, 676,848 confirmed cases of COVID-19 and 29,554 deaths from this cause were reported in Peru, which are figures that identify the disease as the main public health and economic problem in the country, which is ranked fifth in the number of infected subjects in the world, and first in the number of deaths per million population. 1 Collective concern has favored self-medication, with a close relationship between misinformation by the media and a desperate promotion of the use of medications without scientific basis. Currently, the Peruvian government, through the Ministry of Health, distributes the "COVID kit" for the treatment of patients with mild disease, which includes ivermectin, hydroxychloroquine, azithromycin and paracetamol. 2 Moreover, in different regions of Peru, ivermectin is openly manufactured and distributed without health registration for outpatient treatment. In a total sample of 132 patients hospitalized for COVID-19 in a Peruvian hospital, 36 (33.9%) had already self-medicated prior to admission. The most common drugs were antibiotics (28.3%), such as azithromycin and amoxicillin, followed by ivermectin (20.7%) and corticosteroids (17%), 3 three drugs with little or no clear scientific evidence that allows claiming that their early use has a positive result on the course of the disease 4 and whereby, on the contrary, adverse effects are being reported. Of particular concern is early self-medication with corticosteroids, which are only recommended in hospitalized patients who require oxygen therapy; 5 preemptive use of corticosteroids or at

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disease onset could prevent the body from fighting the virus and worsen disease presentation. Paucity of information and non-compliance with health legislation can continue to encourage this practice. To reduce this tendency, it is urgent to educate the population in order to avoid self-medication and inform about the collateral damages it entails.

Publication Type

Journal article.

<255>

Accession Number

20210275822

Author

Jimenez-Lopez, J. L.

Title

Frontline mental health teams during the COVID-19 pandemic.

Source

Gaceta Medica de Mexico; 2021. 157(1). 5 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Publication Type

Journal article.

<256>

Accession Number

20210275821

Author

Bolanos-Morales, F. V.; Santibanez-Salgado, J. A.; Guadarrama-Perez, C.; Herrera-Zamora, J. de J.; Armas-Zarate, F. J.; Santillan-Doherty, P. J.

Title

Spontaneous pneumomediastinum in COVID-19 patients. case series.

Source

Gaceta Medica de Mexico; 2021. 157(1). 9 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Spontaneous pneumomediastinum is defined as the presence of free air within the mediastinum without an apparent cause such as chest trauma. It is a benign, self-limiting condition that is conservatively treated. Clinical diagnosis is based on two symptoms: chest pain and dyspnea; and on a particular sign: subcutaneous emphysema. It has been reported in patients with influenza A (H1N1) and severe acute respiratory syndrome; however, it has been rarely observed in COVID-19 patients. In this work, we describe six male patients with COVID-19, aged between 27 and 82 years, who presented with spontaneous pneumomediastinum and subcutaneous emphysema; both conditions were completely resorbed with conservative management.

Publication Type

Journal article.

<257>

Accession Number

20210275819

Author

Sanchez-Garcia, C.; Salinas-Aguirre, J. E.; Rodriguez-Munoz, L.; Rodriguez-Sanchez, R.; Diaz-Castano, A.; Bernal-Gomez, R.

Title

History of influenza immunization in COVID-19 patients: impact on mortality.

Source

Gaceta Medica de Mexico; 2021. 157(1). 14 ref.

Publisher

Instituto Mexicano del Seguro Social

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Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Introduction: In the context of the COVID-19 pandemic, there is concern regarding the impact of the influenza season. Background: To analyze the impact of influenza immunization history on patients with SARS-CoV-2 infection. Methods: Patients older than 18 years with COVID-19, registered between March and August 2020, were included. Data were analyzed using Fisher's exact test and Student's t-test. To evaluate the impact on mortality, a logistic regression model was used; the relationship between the percentage of patients who received the influenza vaccine and mortality was determined with Pearson's correlation coefficient. Results: 16,879 participants were included; 17% had a history of influenza vaccination. Mortality was lower in the group with a history of vaccination (3.5% vs. 7%, $p < 0.0001$). The vaccination rate had an inverse relationship with the mortality rate (Pearson's $r: -0.922$, $p = 0.026$). Conclusions: Previous influenza immunization was an independent protective factor for mortality in patients with COVID-19. Although further studies are needed to determine a causal relationship, it would be reasonable to increase influenza immunization in the general population.

Publication Type

Journal article.

<258>

Accession Number

20210275818

Author

Alvarez-Maldonado, P.; Hernandez-Rios, G.; Ambriz-Mondragon, J. C.; Gordillo-Mena, J. A.; Morales-Serrano, D. F.; Reding-Bernal, A.; Hernandez-Solis, A.

Title

Characteristics and mortality of Mexican patients with COVID-19 and mechanical ventilation.

Source

Gaceta Medica de Mexico; 2021. 157(1). 11 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Introduction: COVID-19-associated mortality in patients who require mechanical ventilation is unknown in the Mexican population. Background: To describe the characteristics of Mexican patients with COVID-19 who required mechanical ventilation. Methods: Observational cohort study carried out in an intensive care unit from March 25 to July 17, 2020. Data were obtained from a prospective database and electronic medical records, and were analyzed with the chi-square test, Fisher's exact test or Mann-Whitney's U-test. Results: One hundred patients required mechanical ventilation; median age was 56 years, 31% were females and 97% were Latin American. Most common comorbidities were obesity (36%), diabetes (26%), hypertension (20%), and chronic or end-stage kidney disease (10%). At the end of the analysis, 11 patients remained in the ICU, 31 had been discharged alive and 58 (65.2%) died; survivors were younger, had lower scores on severity and organ dysfunction scales, lower levels of C-reactive protein at ICU admission, were less likely to receive hemodialysis and vasopressors, and had longer hospital and ICU stays. Conclusions: This study adds information on the presentation and results of SARS-CoV-2-infected patients who require mechanical ventilation.

Publication Type

Journal article.

<259>

Accession Number

20210275817

Author

Mena-Madrado, J. A.; Sosa-Tinoco, E.; Flores-Castro, M.; Lopez-Ortega, M.; Gutierrez-Robledo, L. M.

Title

COVID-19 and long-term care facilities in Mexico: a debt that cannot be postponed.

Source

Gaceta Medica de Mexico; 2021. 157(1). 26 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Since the emergence of the COVID-19 pandemic, the most affected population group has been that of older people living in long-term care facilities (LTCFs), which has accumulated between 30 and 60% of total number of deaths in the world. In Mexico, outbreaks have been reported in LTCFs of at least eight states. Various factors make this population group and LTCFs susceptible to COVID-19 outbreaks, mainly due to coexistence in common spaces, shared bedrooms and permanent physical contact with the personnel who work there, coupled with a lack of protocols and standards of care of mandatory observance, as well as personnel training limitations. There is evidence of the need to formally develop a National Care System that provides support to those in need of care and their families, and that includes LTCFs. In view of the challenges due to the lack of information and competencies in infection prevention and control at LTCFs, a

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group of experts, in collaboration with different public institutions, joined efforts with the purpose to update the guidelines in order to allow LTCFs face the pandemic and to contribute to the generation of said National Care System.

Publication Type

Journal article.

<260>

Accession Number

20210275816

Author

Santos-Lopez, G.; Cortes-Hernandez, P.; Vallejo-Ruiz, V.; Reyes-Leyva, J.

Title

SARS-CoV-2: basic concepts, origin and treatment advances.

Source

Gaceta Medica de Mexico; 2021. 157(1). 34 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

The first cases of COVID-19, caused by the virus called SARS-CoV-2, were recorded in Wuhan, China, in December 2019; however, its transmission ability caused for the infection to be practically present throughout the world six months later. The origin of the virus appears to be zoonotic; it has been proposed that it comes from a bat and that it may have had an intermediate host that led to its introduction in the human population. SARS-CoV-2 is an enveloped virus, with a positive single-stranded RNA genome, and it binds to the angiotensin-converting enzyme, present in susceptible cells, to infect the human respiratory system. Although other coronaviruses have been previously known, they have not had the same impact, and, therefore, research on pharmacological treatments is not sufficiently developed to face the current challenge. Almost since the beginning of the epidemic, several molecules have been proposed for the treatment of infection; however, there is not yet a drug available with sufficient effectiveness for treatment. This review describes SARS-CoV-2 main characteristics, its replicative cycle, its possible origin and some advances in the development of antiviral treatments.

Publication Type

Journal article.

<261>

Accession Number

20210275815

Author

Alvarez-Arroyo, L.; Carrera-Hueso, F. J.; El-Qutob, D.; Robustillo-Villarino, M.; Girona-Sanz, A. M.; Pin-Godos, M. T.; Sanchez-Monzo, P.; Martinez-Gonzalbez, R.; Cepeda-Madriral, S.; Martinez-Martinez, F.

Title

Descriptive study of a cohort of COVID-19 hospitalized patients in Spain.

Source

Gaceta Medica de Mexico; 2021. 157(1). 19 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Background: Several descriptive cohort studies of patients affected by COVID-19 have been published. Background: To describe the characteristics of patients with SARS-CoV-2 infection who were admitted to Hospital Universitario la Plana, Castellon, Spain. Methods: Retrospective, observational cohort study that included 18-year-old or older patients who were consecutively admitted with SARS-CoV2 confirmed infection. Demographic characteristics, comorbidities, clinical symptoms, laboratory results and radiological tests are described. Results: The study included 255 patients with a mean age of 70 years; 54.9% were males. Most common comorbidities were high blood pressure (58%), dyslipidemia (42.4%), diabetes (25.5%) and obesity (24.3%). Median number of days from the onset of clinical symptoms prior to hospital admission was seven. Most common manifestations prior to admission were fever (74.5%), dry cough (61.2%), malaise (51.8%) and dyspnea (51.0%); 19 patients (7.4%) were admitted to the intensive care unit, where mortality was 50%; overall mortality was 16.9%. Conclusions: Our cohort reflects similar characteristics to those of other European series. Mortality was lower than that in similar studies.

Publication Type

Journal article.

<262>

Accession Number

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20210275814

Author

Sirekbasan, S.; Ilhan, A. O.; Baydemir, C.

Title

Evaluation of knowledge, attitudes and practices of health services vocational schools' students with regard to COVID-19.

Source

Gaceta Medica de Mexico; 2021. 157(1). 16 ref.

Publisher

Instituto Mexicano del Seguro Social

Location of Publisher

Mexico City

Country of Publication

Mexico

Abstract

Introduction: The most critical intervention to control SARS-CoV-2 infection requires appropriate knowledge and attitude towards the virus. Background: To determine the level of knowledge, attitudes and practices of students of a health services' vocational school with regard to COVID-19. Methods: Cross-sectional study carried out between May and June 2020 in a university of the Turkish region. Data were collected through an online survey portal. Results: Four hundred and fifty-four questionnaires were completed and returned. Students of medical laboratory techniques and first aid and emergency medicine had significantly higher knowledge scores ($p < 0.001$). More than 43% of the students ($n = 201$) used the TV as their main source of information on COVID-19. There was a positive attitude towards preventive measures such as avoiding crowded places and maintaining hand hygiene and social distance. Conclusions: Health services vocational school students have good knowledge and positive attitude towards COVID-19. The main sources of information were the TV and social media. For this reason, more attention should be given to these issues in the curriculum in order for science-based information sources to be used.

Publication Type

Journal article.

<263>

Accession Number

20210275636

Author

Harder, T.; Koch, J.; Vygen-Bonnet, S.; Kulper-Schiek, W.; Pilic, A.; Reda, S.; Scholz, S.; Wichmann, O.

Title

Efficacy and effectiveness of COVID-19 vaccines against SARS-CoV-2 infection: interim results of a living systematic review, 1 January to 14 may 2021.

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Source

Eurosurveillance; 2021. 26(28). 35 ref.

Publisher

European Centre for Disease Prevention and Control

Location of Publisher

Stockholm

Country of Publication

Sweden

Abstract

Evidence on COVID-19 vaccine efficacy/effectiveness (VE) in preventing asymptomatic SARS-CoV-2 infections is needed to guide public health recommendations for vaccinated people. We report interim results of a living systematic review. We identified a total of 30 studies that investigated VE against symptomatic and/or asymptomatic infection. In fully vaccinated individuals, VE against symptomatic and asymptomatic infections was 80-90% in nearly all studies. Fully vaccinated persons are less likely to become infected and contribute to transmission.

Publication Type

Journal article.

<264>

Accession Number

20210275634

Author

Powell, A. A.; Power, L.; Westrop, S.; McOwat, K.; Campbell, H.; Simmons, R.; Ramsay, M. E.; Brown, K.; Ladhani, S. N.; Amirthalingam, G.

Title

Real-world data shows increased reactogenicity in adults after heterologous compared to homologous prime-boost COVID-19 vaccination, March-June 2021, England.

Source

Eurosurveillance; 2021. 26(28). 16 ref.

Publisher

European Centre for Disease Prevention and Control

Location of Publisher

Stockholm

Country of Publication

Sweden

Abstract

Concerns about vaccine-induced thrombosis and thrombocytopenia syndrome (VITTs) following vaccination with (coronavirus disease) COVID-19 adenoviral vector vaccines has led to several countries recommending an mRNA vaccine for the second dose in younger adults who had been given an adenoviral vector vaccine for their first dose. A clinical trial in England (COM-COV) reported that heterologous schedules using mRNA-based Comirnaty (BNT162b2, BioNTech-Pfizer, Mainz, Germany/New York, United States) hereafter referred to as BNT, and adenovirus vector Vaxzevria (ChAdOx1/nCoV-19, AstraZeneca, Cambridge, United Kingdom), hereafter ChAd, COVID-19 vaccines after a 4-week interval were associated with increased reactogenicity after the booster dose compared with their homologous counterparts, although none required hospitalisation. Here we report on the real-world effects of heterologous prime-boost COVID-19 vaccination following the UK extended schedule of up to 12 weeks between doses.

Publication Type

Journal article.

<265>

Accession Number

20210275632

Author

Wong, A. Y. S.; MacKenna, B.; Morton, C. E.; Schultze, A.; Walker, A. J.; Bhaskaran, K.; Brown, J. P.; Rentsch, C. T.; Williamson, E.; Drysdale, H.; Croker, R.; Bacon, S.; Hulme, W.; Bates, C.; Curtis, H. J.; Mehrkar, A.; Evans, D.; Inglesby, P.; Cockburn, J.; McDonald, H. I.; Tomlinson, L.; Mathur, R.; Wing, K.; Forbes, H.; Eggo, R. M.; Parry, J.; Hester, F.; Harper, S.; Evans, S. J. W.; Smeeth, L.; Douglas, I. J.; Goldacre, B.

Title

Use of non-steroidal anti-inflammatory drugs and risk of death from COVID-19: an opensafely cohort analysis based on two cohorts.

Source

Annals of the Rheumatic Diseases; 2021. 80(7):943-951. 50 ref.

Publisher

BMJ Publishing Group

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: To assess the association between routinely prescribed non-steroidal anti-inflammatory drugs (NSAIDs) and deaths from COVID-19 using OpenSAFELY, a secure analytical platform. **Methods:** We conducted two cohort studies from 1 March to 14 June 2020. Working on behalf of National Health Service England, we used routine clinical data in England linked to death data. In study 1, we identified people with an NSAID prescription in the last 3 years from the general population. In study 2, we identified people with

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rheumatoid arthritis/osteoarthritis. We defined exposure as current NSAID prescription within the 4 months before 1 March 2020. We used Cox regression to estimate HRs for COVID-19 related death in people currently prescribed NSAIDs, compared with those not currently prescribed NSAIDs, accounting for age, sex, comorbidities, other medications and geographical region. Results: In study 1, we included 536 423 current NSAID users and 1 927 284 non-users in the general population. We observed no evidence of difference in risk of COVID-19 related death associated with current use (HR 0.96, 95% CI 0.80 to 1.14) in the multivariable-adjusted model. In study 2, we included 1 708 781 people with rheumatoid arthritis/osteoarthritis, of whom 175 495 (10%) were current NSAID users. In the multivariable-adjusted model, we observed a lower risk of COVID-19 related death (HR 0.78, 95% CI 0.64 to 0.94) associated with current use of NSAID versus non-use. Conclusions: We found no evidence of a harmful effect of routinely prescribed NSAIDs on COVID-19 related deaths. Risks of COVID-19 do not need to influence decisions about the routine therapeutic use of NSAIDs.

Publication Type

Journal article.

<266>

Accession Number

20210275535

Author

Tada, A.; Senpuku, H.

Title

The impact of oral health on respiratory viral infection.

Source

Dentistry Journal; 2021. 9(4). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Influenza virus and severe acute respiratory syndrome coronavirus (SARS-CoV-2) have caused respiratory diseases worldwide. Coronavirus disease 2019 (COVID-19) is now a global health concern requiring emergent measures. These viruses enter the human body through the oral cavity and infect respiratory cells. Since the oral cavity has a complex microbiota, influence of oral bacteria on respiratory virus infection is considered. Saliva has immune molecules which work as the front line in the biophylactic mechanism and has considerable influence on the incidence and progression of respiratory viral infection. Salivary scavenger molecules, such as gp340 and sialic acid, have been reported to exert anti-influenza virus activity. Salivary secretory immunoglobulin A (SIgA) has potential to acquire immunity against these viruses. Biological features of the oral cavity are thought to affect viral infection in respiratory organs in various ways. In this

review, we reviewed the literature addressing the impact of oral conditions on respiratory infectious diseases caused by viruses.

Publication Type

Journal article.

<267>

Accession Number

20210275531

Author

Durduran, Y.; Kandemir, B.; Demir, L. S.; Ozdemir, M.; Erayman, I.; Uyar, M.; Kurt, E. K.; Kocak, S.; Vatanev, H.; Yosunkaya, A.; Zamani, A.; Kadiyoran, C.; Feyzioglu, B.; Poyraz, N.; Kucukceran, K.; Gok, F.; Evci, R.; Akcan, O. M.; Goktepe, M. H.; Gulseren, Y. D.; Yilmaz, P. D.; Cihan, F. G.; Korkmaz, C.; Ayranci, M. K.; Demirbas, S.; Pekcan, S.; Yosunkaya, S.; Teke, T.; Bicer, M.; Kucukkartallar, T.

Title

Epidemiological characteristics of patients with COVID-19 suspicion applying to a university hospital: the first eighty days in a pandemic.

Source

Annals of Medical Research; 2021. 28(6):1228-1234. 30 ref.

Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

Aim: The first COVID-19 case in Turkey was detected on March 11, 2020 during the COVID-19 pandemic process. Epidemiological studies are needed to be prepared for other outbreaks and to be effective in the disease management process. Based on this reason, in this study it was aimed to determine the epidemiological characteristics of Covid 19 possible and definite cases who applied to the university hospital during the pandemic process. **Materials and Methods:** This retrospective epidemiological study was carried out by analyzing the data of Covid 19 possible and definite cases, who applied to the university hospital operating as a pandemic hospital between 11 March/01 June 2020. The data were summarized with descriptive statistics, tables and graphs. **Results:** Of the 1,383 patients, who applied with the suspicion of COVID-19, 55.5% were men and 84.5% were adults. The median age of children is 4.0 (1.5-10) years old; adults were 52.0 (36.0-67.0) years old. The median time between the outset of complaints and the date of admission to the hospital was 2 (1-3) days. 87.4% of adults and 87.9% of children had symptoms that supported COVID-19 infection. Among cases 7.8% were health care workers. The median age of the fatal cases was 71 (64-82) years old, 79.5% were male, 77.7% were retired. The most common comorbide diseases in these cases were hypertension (28.2%) and malignancy (28.2%). The case fatality rate was found as 2.8% in all patients and 48.4% in patients hospitalized in the intensive care unit. **Conclusions:** As a result, Covid-19 affects all age groups. Hypertension and malignancy were the most common additional

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diseases in fatal cases. The risk of illness is higher in healthcare workers who have direct contact with the patients. According to our observations, preventive measures, rapid diagnosis and supportive treatment are valuable.

Publication Type

Journal article.

<268>

Accession Number

20210275530

Author

Koc, U.; Unal, O.; Ozkan, E.; Kayaaslan, B.

Title

COVID-19 computed tomography reporting systems: inter-rater and inter-system agreement study.

Source

Annals of Medical Research; 2021. 28(6):1217-1222. 21 ref.

Publisher

Inonu Universitesi Tip Fakultesi

Location of Publisher

Malatya

Country of Publication

Turkey

Abstract

Aim: The aim of this study was to investigate agreements between COVID-19 reporting systems and radiologists. **Materials and Methods:** A total of 100 laboratory-confirmed COVID-19 cases (49 males, 51 females; age range 19-88 years) were retrospectively collected. Firstly, computed tomography (CT) images were evaluated by two radiologists independently and blinded to clinical notes and laboratory and radiological reports and they gave their impressions independently according to four COVID-19 reporting systems, then all CTs were interpreted again by the two radiologists for extracting CT features at the same session by consensus. **Results:** Bilateral, lower lobe, peripheral, dorsal and multifocal lung involvements were predominantly seen, and ground-glass opacities (GGOs) were the most common CT imaging finding in the current study. Reporting systems showed fair to moderate agreements between senior and junior raters (0.246-0.490, $p < 0.001$). According to the assigned three-category coding system as similar to that of the Radiological Society of North America (RSNA) Expert Consensus Statement on Reporting and other reporting systems and guidance, strength of inter-rater agreement values was increased (0.365-0.576, $p < 0.001$) and inter-system agreements were substantial to almost perfect in both raters. **Conclusion:** Radiology reporting including frequently seen CT features and lung parenchyma distributions with systems based on fewer categories may provide good agreement between observers in patients with suspected COVID-19.

Publication Type

Journal article.

<269>

Accession Number

20210275509

Author

Goupil, R.; Benlarbi, M.; Beaubien-Souligny, W.; Nadeau-Fredette, A. C.; Chatterjee, D.; Goyette, G.; Gunaratnam, L.; Lamarche, C.; Tom, A.; Finzi, A.; Suri, R. S.

Title

Short-term antibody response after 1 dose of BNT162b2 vaccine in patients receiving hemodialysis.

Source

Canadian Medical Association Journal; 2021. 193(22):E793-E800. 25 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

BACKGROUND: Patients receiving in-centre hemodialysis are at high risk of exposure to SARS-CoV-2 and death if infected. One dose of the BNT162b2 SARS-CoV-2 vaccine is efficacious in the general population, but responses in patients receiving hemodialysis are uncertain. **METHODS:** We obtained serial plasma from patients receiving hemodialysis and health care worker controls before and after vaccination with 1 dose of the BNT162b2 mRNA vaccine, as well as convalescent plasma from patients receiving hemodialysis who survived COVID-19. We measured anti-receptor binding domain (RBD) immunoglobulin G (IgG) levels and stratified groups by evidence of previous SARS-CoV-2 infection. **RESULTS:** Our study included 154 patients receiving hemodialysis (135 without and 19 with previous SARS-CoV-2 infection), 40 controls (20 without and 20 with previous SARS-CoV-2 infection) and convalescent plasma from 16 patients. Among those without previous SARS-CoV-2 infection, anti-RBD IgG was undetectable at 4 weeks in 75 of 131 (57%, 95% confidence interval [CI] 47% to 65%) patients receiving hemodialysis, compared with 1 of 20 (5%, 95% CI 1% to 23%) controls ($p < 0.001$). No patient with nondetectable levels at 4 weeks developed anti-RBD IgG by 8 weeks. Results were similar in non-immunosuppressed and younger individuals. Three patients receiving hemodialysis developed severe COVID-19 after vaccination. Among those with previous SARS-CoV-2 infection, median anti-RBD IgG levels at 8 weeks in patients receiving hemodialysis were similar to controls at 3 weeks ($p = 0.3$) and to convalescent plasma ($p = 0.8$). **INTERPRETATION:** A single dose of BNT162b2 vaccine failed to elicit a humoral immune response in most patients receiving hemodialysis without previous SARS-CoV-2 infection, even after prolonged observation. In those with previous SARS-CoV-2 infection, the antibody response was delayed. We advise that patients receiving hemodialysis be prioritized for a second BNT162b2 dose at the recommended 3-week interval.

Publication Type

Journal article.

<270>

Accession Number

20210275508

Author

Verzani, M.; Bizzarri, C.; Chioma, L.; Bottaro, G.; Pedicelli, S.; Cappa, M.

Title

Impact of COVID-19 pandemic lockdown on early onset of puberty: experience of an Italian tertiary center.

Source

Italian Journal of Pediatrics; 2021. 47(52):(05 March 2021). 6 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

At the end of 2019, an emerging atypical pneumonia called COVID-19 (coronavirus disease 2019), caused by the novel coronavirus defined as SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2), was first reported. COVID-19 rapidly expanded leading to an epidemic in China, followed by a global pandemic during the year 2020. In few weeks Italy was assaulted by a severe health emergency, constraining the Italian government to put in place extraordinary restrictive measures, such as school closures and a strict lockdown extended to the entire country at the beginning of March 2020. Since the beginning of lockdown, the Endocrinology Unit of Bambino Gesù Children's Hospital has recorded a rapid increase of the outpatient consultations for suspected precocious or early puberty. We have now retrospectively analyzed all the consultations recorded in the database of our outpatient clinic from March to September 2020, and compared them with the consultations recorded in the same database from March to September 2019. Our preliminary data suggest a significant increase of precocious puberty cases in girls during the first period of COVID-19 pandemic. Further investigations in larger cohorts of children are needed in order to correlate the observed increase of precocious puberty with specific pathogenic factors.

Publication Type

Journal article.

<271>

Accession Number

20210275506

Author

Crea, F.; Panfili, F. M.; Amodeo, M. E.; Fintini, D.; Rossi, F. P.; Trenta, I.; Menichella, A.; Ossella, C.; Deidda, A.; Lidano, R.; Macchiarulo, G.; Lambiase, C.; Barbieri, M. A.; Raponi, M.

Title

The impact of National Containment Measures on a Pediatric Italian regional Hub for COVID-19, an observational study.

Source

Italian Journal of Pediatrics; 2021. 47(122):(02 June 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Numerous studies described the epidemiological link and main clinical features of pediatric COVID-19, during the first pandemic period. Our study encompasses several different phases since the National Lockdown in Italy. The primary outcome is (I) to analyze the prevalence of positive NST (Nasopharyngeal Swab Test) among the largest Italian Pediatric cohort admitted to a single regional PED Hub for COVID-19 during an eight-month period. Secondary outcomes are: (II) the description of trend of admissions in our PED and (III) the categorization of the positive patients according to clinical manifestations and epidemiological link. **Methods:** We described 316 patients with a positive NST for SARS-CoV2, on a total of 5001 nasopharyngeal swabs performed among 13,171 admissions at our PED, over a period starting from March 17th, 2020 to December 1st, 2020. Age, epidemiological link, clinical features and hospitalizations were analyzed according to different lockdown phases. Data were collected anonymously from electronic records and analyzed using SPSS 22.00 statistics software (Chicago, IL). **Results:** Thirty-six percent of total admissions have been tested. During the post lockdown period, we performed the highest percentage of NST (Nasopharyngeal Swab Test) 49.7%, and among them 7.9% were positive. The prevalence of infection during a 10-month period was 2.3%. Mean age was 6.5 years old. Familial Link accounted for the 67.7% of infection, while Extrafamilial and Unknown link accounted for 17 and 14.9%, respectively. Familial link is predominant during all phases. Seventeen patients showed an intra-scholastic link, and the highest prevalence was observed in the 7-10 years age group, with a prevalence of 12.8% (5 patients). Fever was the most frequent symptom (66%), in particular among preschooler children aged 0-6 years (71.9%). Older children were more frequently symptomatic. Seven patients were admitted with MIS-C diagnosis. **Conclusions:** Different levels of containment measures caused important changes in number of positive NST for SARS-CoV2. Familial link was predominant in our cohort, during all phases of Lockdown. The risk of being infected at home is four time greater than the risk of being infected from an extra familial individual. Further studies are needed to evaluate the clear impact of intra-scholastic link. The constant improvement in knowledge on onset symptoms and risk factor for SARS-CoV2 infection and its complications (e.g. MIS-C), can impact on number of hospitalizations, ICU admissions and early management.

Publication Type

Journal article.

<272>

Accession Number

20210275503

Author

Sopirala, M. M.

Title

Predisposition of COVID-19 patients to secondary infections: set in stone or subject to change?

Source

Current Opinion in Infectious Diseases; 2021. 34(4):357-364.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Purpose of review: There likely are several predisposing factors to secondary infections in patients with Coronavirus disease 2019 (COVID-19), some of which may be preventable. The aim of this review is to explore the literature, summarize potential predisposing factors to secondary infections and their incidence. It also summarizes a variety of healthcare scenarios in which different kinds of secondary infections occur. Recent findings: Apart from immune dysregulation, severe resource limitations in healthcare settings have made COVID-19 units conducive to a variety of secondary infections. Long-term effect of excess antibiotic use in COVID-19 patients is yet to be studied. Very few studies have assessed secondary infections as the primary outcome measure making it difficult to know the true incidence. Mortality attributable to secondary infections in COVID-19 patients is also unclear. Summary: Incidence of secondary infections in COVID-19 patients is likely higher than what is reported in the literature. Well designed studies are needed to understand the incidence and impact of secondary infections in this patient population. Many of these may be preventable especially now, as personal protective equipment and other healthcare resources are recovering. Infection prevention and control (IPC) and antimicrobial stewardship programmes (ASP) must reassess current situation to correct any breaches that could potentially cause more harm in these already vulnerable patients as we brace for a future surge with another pandemic wave.

Publication Type

Journal article.

<273>

Accession Number

20210275500

Author

Stachel, A.; Keegan, L. T.; Blumberg, S.

Title

Modeling transmission of pathogens in healthcare settings.

Source

Current Opinion in Infectious Diseases; 2021. 34(4):333-338.

Publisher

Lippincott Williams & Wilkins, Inc.

Location of Publisher

Hagerstown

Country of Publication

USA

Abstract

Purpose of review: Mathematical, statistical, and computational models provide insight into the transmission mechanisms and optimal control of healthcare-associated infections. To contextualize recent findings, we offer a summative review of recent literature focused on modeling transmission of pathogens in healthcare settings. Recent findings: The COVID-19 pandemic has led to a dramatic shift in the modeling landscape as the healthcare community has raced to characterize the transmission dynamics of SARS-CoV-2 and develop effective interventions. Inequities in COVID-19 outcomes have inspired new efforts to quantify how structural bias impacts both health outcomes and model parameterization. Meanwhile, developments in the modeling of methicillin-resistant *Staphylococcus aureus*, *Clostridioides difficile*, and other nosocomial infections continue to advance. Machine learning continues to be applied in novel ways, and genomic data is being increasingly incorporated into modeling efforts. Summary: As the type and amount of data continues to grow, mathematical, statistical, and computational modeling will play an increasing role in healthcare epidemiology. Gaps remain in producing models that are generalizable to a variety of time periods, geographic locations, and populations. However, with effective communication of findings and interdisciplinary collaboration, opportunities for implementing models for clinical decision-making and public health decision-making are bound to increase.

Publication Type

Journal article.

<274>

Accession Number

20210275460

Author

Martignon, S.; Cortes, A.; Douglas, G. V. A.; Newton, J. T.; Pitts, N. B.; Avila, V.; Usuga-Vacca, M.; Gamboa, L. F.; Deery, C.; Abreu-Placeres, N.; Bonifacio, C.; Braga, M. M.; Carletto-Korber, F.; Castro, P.; Cerezo, M. P.; Chavarria, N.; Cifuentes, O. L.; Echeverri, B.; Jacome-Lievano, S.; Kuzmina, I.; Lara, J. S.;

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Manton, D.; Martinez-Mier, E. A.; Melo, P.; Muller-Bolla, M.; Ochoa, E.; Osorio, J. R.; Ramos, K.; Sanabria, A. F.; Sanjuan, J.; San-Martin, M.; Squassi, A.; Velasco, A. K.; Villena, R.; Zandona, A. F.; Beltran, E. O.

Title

CariesCare International adapted for the pandemic in children: caries OUT multicentre single-group interventional study protocol.

Source

BMC Oral Health; 2021. 21(329):(01 July 2021). 49 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Comprehensive caries care has shown effectiveness in controlling caries progression and improving health outcomes by controlling caries risk, preventing initial-caries lesions progression, and patient satisfaction. To date, the caries-progression control effectiveness of the patient-centred risk-based CariesCare International (CCI) system, derived from ICCMSTM for the practice (2019), remains unproven. With the onset of the COVID-19 pandemic a previously planned multi-centre RCT shifted to this "Caries OUT" study, aiming to assess in a single-intervention group in children, the caries-control effectiveness of CCI adapted for the pandemic with non-aerosols generating procedures (non-AGP) and reducing in-office time. **Methods:** In this 1-year multi-centre single-group interventional trial the adapted-CCI effectiveness will be assessed in one single group in terms of tooth-surface level caries progression control, and secondarily, individual-level caries progression control, children's oral-health behaviour change, parents' and dentists' process acceptability, and costs exploration. A sample size of 258 3-5 and 6-8 years old patients was calculated after removing half from the previous RCT, allowing for a 25% dropout, including generally health children (27 per cent). The single-group intervention will be the adapted-CCI 4D-cycle caries care, with non-AGP and reduced in-office appointments' time. A trained examiner per centre will conduct examinations at baseline, at 5-5.5 months (3 months after basic management), 8.5 and 12 months, assessing the child's CCI caries risk and oral-health behaviour, visually staging and assessing caries-lesions severity and activity without air-drying (ICDAS-merged Epi); fillings/sealants; missing/dental-sepsis teeth, and tooth symptoms, synthesizing together with parent and external-trained dental practitioner (DP) the patient- and tooth-surface level diagnoses and personalised care plan. DP will deliver the adapted-CCI caries care. Parents' and dentists' process acceptability will be assessed via Treatment-Evaluation-Inventory questionnaires, and costs in terms of number of appointments and activities. Twenty-one centres in 13 countries will participate. **Discussion:** The results of Caries OUT adapted for the pandemic will provide clinical data that could help support shifting the caries care in children towards individualised oral-health behaviour improvement and tooth-preserving care, improving health outcomes, and explore if the caries progression can be controlled during the pandemic by conducting non-AGP and reducing in-office time.

Publication Type

Journal article.

<275>

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

256

Accession Number

20210275457

Author

Budweiser, S.; Bas, S.; Jorres, R. A.; Engelhardt, S.; Delius, S. von; Lenherr, K.; Deerberg-Wittram, J.; Bauer, A.

Title

Patients' treatment limitations as predictive factor for mortality in COVID-19: results from hospitalized patients of a hotspot region for SARS-CoV-2 infections.

Source

Respiratory Research; 2021. 22(168):(04 June 2021). 30 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: In hospitalized patients with SARS-CoV-2 infection, outcomes markedly differ between locations, regions and countries. One possible cause for these variations in outcomes could be differences in patient treatment limitations (PTL) in different locations. We thus studied their role as predictor for mortality in a population of hospitalized patients with COVID-19. **Methods:** In a region with high incidence of SARS-CoV-2 infection, adult hospitalized patients with PCR-confirmed SARS-CoV-2 infection were prospectively registered and characterized regarding sex, age, vital signs, symptoms, comorbidities (including Charlson comorbidity index (CCI)), transcutaneous pulse oximetry (SpO₂) and laboratory values upon admission, as well as ICU-stay including respiratory support, discharge, transfer to another hospital and death. PTL assessed by routine clinical procedures comprised the acceptance of ICU-therapy, orotracheal intubation and/or cardiopulmonary resuscitation. **Results:** Among 526 patients included (median [quartiles] age 73 [57; 82] years, 47% female), 226 (43%) had at least one treatment limitation. Each limitation was associated with age, dementia and eGFR ($p < 0.05$ each), that regarding resuscitation additionally with Charlson comorbidity index (CCI) and cardiac disease. Overall mortality was 27% and lower ($p < 0.001$) in patients without treatment limitation (12%) compared to those with any limitation (47%). In univariate analyses, age and comorbidities (diabetes, cardiac, cerebrovascular, renal, hepatic, malignant disease, dementia), SpO₂, hemoglobin, leucocyte numbers, estimated glomerular filtration rate (eGFR), C-reactive protein (CRP), Interleukin-6 and LDH were predictive for death ($p < 0.05$ each). In multivariate analyses, the presence of any treatment limitation was an independent predictor of death (OR 4.34, 95%-CI 2.10-12.30; $p = 0.001$), in addition to CCI, eGFR < 55 ml/min, neutrophil number > 5 G/l, CRP > 7 mg/l and SpO₂ $< 93\%$ ($p < 0.05$ each). **Conclusion:** In hospitalized patients with SARS-CoV-2, the percentage of patients with treatment limitations was high. PTL were linked to age, comorbidities and eGFR assessed upon admission and strong, independent risk factors for mortality. These findings might be useful for further understanding of COVID-19 mortality and its regional variations.

Publication Type

Journal article.

<276>

Accession Number

20210275432

Author

Hleyhel, M.; Haddad, C.; Haidar, N.; Charbachy, M.; Saleh, N.

Title

Determinants of knowledge and prevention measures towards COVID-19 pandemic among Lebanese dentists: a cross sectional survey.

Source

BMC Oral Health; 2021. 21(241):(06 May 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Coronavirus Disease 2019 (COVID-19) is a major global threat. Healthcare professionals including dentists are facing real challenges during this pandemic. This study aimed to evaluate knowledge, attitudes, and prevention measures of Lebanese dentists towards COVID-19 and determinants of high level of knowledge and prevention practices. Methods: A cross-sectional study was conducted between May and August 2020 in Lebanon on a random sample of 323 Lebanese dentists. Data were collected through an online survey questionnaire. A multivariate linear regression model was used to evaluate factors associated with COVID-19 knowledge. A multivariate logistic regression was conducted to evaluate the factors associated with high level of prevention measures towards COVID-19. Results: The mean COVID-19 knowledge index was 24.5 over 38 with only 15% achieving high knowledge level. The mean prevention measures index was 11.4 over 16 with only 35% achieving high prevention level. Higher knowledge index was associated with younger age, being employed, and considering dentist's role significant in teaching others about COVID-19. General dental practitioners, dentists living with family members and concerned about their family members to get infected because of their occupational exposure were more likely to report higher level of adopted prevention measures. Higher knowledge was associated with high level of prevention measures. Conclusions: Given the rapid evolution of information related to COVID-19 pandemic, dentists should be regularly educated through trainings, workshops, and updates of national guidelines for dental healthcare.

Publication Type

Journal article.

<277>

Accession Number

20210275425

Author

Nejabi, M. B.; Noor, N. A. S.; Raufi, N.; Essar, M. Y.; Ehsan, E.; Shah, J.; Shah, A.; Nemat, A.

Title

Tongue ulcer in a patient with COVID-19: a case presentation.

Source

BMC Oral Health; 2021. 21(273):(20 May 2021). 32 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background; The emergence of COVID-19 has devastated many parts of the world. From asymptomatic to symptomatic, the virus causes a wide spectrum of presentations. COVID-19 patients may present with oral manifestations. In Afghanistan, where COVID-19 has severely strained the health care system, much of the population lacks proper oral hygiene. This makes the oral cavity a perfect site for SARS-CoV-2 to manifest clinical signs. Case presentation: A 62-year-old male was evaluated in the Dentistry Teaching Clinic of Kabul University of Medical Sciences for a painful erosive lesion on dorsal surface of his tongue. He also complained of fever, cough, and taste alteration. He was referred to Afghan Japan Hospital for COVID-19 testing and tested positive. He was followed on for the treatment of SARS-CoV2. After 2 weeks, the patient tested negative and returned to the dentistry clinic for follow-up. Although there were no other signs of COVID-19, the painful erosive lesion on his tongue persisted. Oral evaluation were performed and the patient was advised to practice good hygiene. After 10 days, we observed an asymptomatic geographic tongue without fever and myalgias and the lesion of dorsal surface of tongue improved from severe condition to moderate. Conclusion: In conclusion, patients with suspected or confirmed SARS-CoV-2 should be screened for symptoms and physical findings in the oral mucosa To prevent such an outcome, awareness programs need to be implemented for the diagnosis and management of clinical symptoms among patients.

Publication Type

Journal article.

<278>

Accession Number

20210275420

Author

Stefanuto, P. P. G.; Fernandes, C. J. da S.; Cruz, C. G. da; Leite, R. D.; Tavares, L. V. de S.

Title

COVID-19 in a child with Down Syndrome and extensive pulmonary tuberculosis: a case report. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S553-S557 (en), S559-S563 (pt). 11 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Introduction: Although pediatric patients have comparatively fewer cases of COVID-19, children with Down Syndrome exhibit comorbidities such as immunodeficiency, diabetes and, in this perspective, are considered a population at risk for severe COVID-19. In addition, the literature also points to an unfavorable perspective on co-infection with Mycobacterium tuberculosis, considered an important comorbidity and a predictor of a worse clinical outcome. Description: Female child, nine years old, with Down Syndrome, congenital heart disease and prematurity, with significant weight loss and intermittent fever for six months. A week ago, she had an intensification of fever, productive cough and mild respiratory distress. RTPCR for SARS-CoV-2 detectable in nasopharynx swab, chest X-ray with diffuse alveolar infiltrate, chest CT with consolidations, excavation, solid micronodules in a sprouting tree pattern mainly in the right upper and lower lobes. Molecular rapid test for Mycobacterium tuberculosis detectable in gastric lavage. After specific treatment, the patient progressed well and was discharged from the hospital after 72 hours without fever and improvement in her breathing pattern. Discussion: Despite the extensive pulmonary involvement, the patient did not require invasive ventilatory support and presented a satisfactory short-term outcome. Therefore, the relevance of the association of Tuberculosis and COVID-19 and other comorbidities in the pediatric age group still remains uncertain.

Publication Type

Journal article.

<279>

Accession Number

20210275418

Author

Bezerra, M. R.; Mello, M. J. G. de; Lima, J. T. de O.; Cavalcanti, Z. do R.; Bezerra, G. M. P.; Dias, L. M.; Sa, P. K. de O.; Nunes, R.

Title

Prioritization to ensure care in COVID-19 pandemic. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S519-S527 (en), S529-S537(pt). 30 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: To develop a flow to ensure care for all people with severe acute respiratory syndrome coronavirus 2, offering from intensive care to palliative care, in an equitable and fair manner. **Methods:** The modified Delphi methodology was used to reach consensus on a flow and a prioritization index among specialists, the regional council of medicine, members of the healthcare system and the local judicial sector. **Results:** The score was incorporated into the flow as the final phase for building the list of patients who will be referred to intensive care, whenever a ventilator is available. Patients with lower scores should have priority access to the ICU. Patients with higher scores should receive palliative care associated with available curative measures. However, curative measures must be proportionate to the severity of the overall clinical situation and the prognosis. **Conclusions:** This tool could and will prevent patients from being excluded from access to the necessary health care so that their demands are assessed, their suffering is reduced, and their illnesses are cured, when possible.

Publication Type

Journal article.

<280>

Accession Number

20210275417

Author

Figueiredo, M. de O.; Alegretti, A. L.; Magalhaes, L.

Title

COVID-19 and child development: educational material for family members. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S501-S508 (en), S509-S517 (pt). 26 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Abstract

Objectives: to describe methodological procedures, theoretical foundation, activities and guidelines that compose an educational material designed for family members with a focus on the development of babies and children from 0 to 5 years old during the pandemic period. **Methods:** methodological research was applied to the preparation and validation of the educational material. The elaboration involved a literature review, graphic material creation and a validation by experts. **Results:** the literature review provided materials and background on child development principles and forms of stimulation through the realization of child occupations. The stage of validation by specialists provided a greater degree of reliability regarding the potential to stimulate activities and adequacy of the written elements of the material. **Conclusions:** the methods employed made it possible to develop, evaluate and improve the educational material, ensuring greater quality to guide and assist families in the daily stimulation of their children and in the management of occupational disruption. The material can also be useful for education and health professionals, support undergraduate education and/or university extension activities that focus on child development.

Publication Type

Journal article.

<281>

Accession Number

20210275416

Author

Gama, G. L.; Silva, B. M. da; Silva, M. B. da; Ferreira, R. V. B.; Tavares, J. de S.; Melo, A.

Title

Mental health and burden in mothers of children with congenital Zika syndrome during COVID-19 pandemic. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S481-S490 (en), S491-S500 (pt). 30 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: to evaluate burden, frequency of anxiety and signs and symptoms of depression in mothers of children with congenital Zika syndrome (CZS) during the COVID-19 pandemic and the social isolation period. **Methods:** this is a cross-sectional study conducted with mothers who care for their children with CZS. The data were collected by an online form with questions regarding mother's socioeconomic conditions and questions related with Zarit burden scale and Beck's inventories on depression and anxiety. Spearman's correlation tests and multiple regression analyzes were performed to assess factors related to mothers' burden and mental health. **Results:** 41 mothers were evaluated, 51.2% had mild burden, 39% had minimal

anxiety and 73.2% did not have signs and symptoms of depression. Negative correlations were observed between levels of burden and maternal schooling ($p=0.01$), presence of signs and symptoms of anxiety and receiving financial aid ($p<0.04$) as well as the presence of signs and symptoms of anxiety and having children with seizures history ($p=0.03$). Conclusion: despite the risk of their children again being victims of an epidemic virus, mothers who care for their children with CZS did not present serious mental health impairments.

Publication Type

Journal article.

<282>

Accession Number

20210275415

Author

Godoi, A. P. N.; Bernardes, G. C. S.; Almeida, N. A. de; Melo, S. N. de; Belo, V. S.; Nogueira, L. S.; Pinheiro, M. de B.

Title

Severe acute respiratory syndrome by COVID-19 in pregnant and postpartum women. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S461-S469 (en), S471-S480 (pt). 30 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: To evaluate the morbidity and mortality profile and factors associated with death due to severe acute respiratory syndrome (SARS) by COVID-19 in pregnant and postpartum women. **Methods:** This is a quantitative and retrospective research that analyzed the SIVEP-gripe Database (Influenza Epidemiological Surveillance Information System), from 01/01/2020 to 04/01/2021. All pregnant women and postpartum women diagnosed with SARS caused by COVID-19 in the State of Minas Gerais were included. After the descriptive analysis of the hospitalizations profile, the association between different exposure variables and the occurrence of death was evaluated. **Results:** Of the 227 records obtained, 94.3% required hospitalization. Among hospitalizations in the Intensive Care Unit, 29.8% used invasive ventilatory support. Fifteen deaths were recorded. The most frequent clinical manifestations were: cough and fever; the predominant comorbidities were cardiovascular disease and diabetes mellitus. The variables "ICU stay", "use of ventilatory support" and "heart disease" were associated with the occurrence of deaths. **Conclusions:** Hospitalization was necessary for most pregnant women with SARS and the presence of previous heart disease increased the risk of death. Knowing the SARS morbidity and mortality profile is important in the definition of public health strategies aimed at reducing the impacts of COVID-19 during pregnancy and the puerperium.

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Publication Type

Journal article.

<283>

Accession Number

20210275413

Author

Cavalcante, A. N. M.; Tavares, L. V. de S.; Bastos, M. L. A.; Almeida, R. L. F. de

Title

Clinical-epidemiological profile of children and adolescents with COVID-19 in Ceara. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S429-S435 (en), S437-S443 (pt). 18 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: To describe the clinical-epidemiological profile of children and adolescents notified by COVID-19 in Ceara. Methods: Descriptive epidemiological study from open data repositories of the State Government of Ceara, about cases of OVID-19 in children and adolescents, from 03/15/2020 to 07/31/2020. For data analysis the tests X2 Pearson, Fisher's exact and Poisson's regression with robust variance were used. Results: 48,002 cases of children and adolescents suspected of COVID-19 were reported, of which 18,180 (8.9%) were confirmed. The median of confirmed cases was 12 years old, 10.5% were newborns/lactants, 10.7% were pre-school children, 21.2% were school children and 57.7% were adolescents. They evolved to death 0.3% of the cases, of which 15% had comorbidities. They needed hospitalization 1.8% of the cases. The highest probability of hospitalization was found in newborns/lactants, male and with comorbidities. Conclusions: Most of the confirmed cases occurred in adolescents, however, the evolution of the disease was more severe and with greater need for hospitalization in the age group of newborns/lactants, being the male gender and the presence of comorbidities additional factors for the need for hospitalization.

Publication Type

Journal article.

<284>

Accession Number

20210275411

Author

Laguna, T. F. dos S.; Hermanns, T.; Silva, A. C. P. da; Rodrigues, L. N.; Abaid, J. L. W.

Title

Remote education: parents' challenges in teaching during the pandemic. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S393-S401 (en), S403-S412 (pt). 41 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: To characterize the teaching-learning process of children in early childhood taught by their parents and/or caregivers in remote educational mode, in different social contexts, during the COVID-19 pandemic. **Methods:** A bibliographic study was carried out through a qualitative research in three VHL, Lilacs and Scielo databases. The descriptors Children, Pandemic, Caregivers, Distance education and Mental health were used. The sample was composed of 35 materials. **Results:** It was observed that countries presented problems in its educational system and that their situation also aggravated, such as in Brazil. Schools should try to mitigate the impact of the confinement, based on the recommendations that aim to consolidate what has been learned and interrupt the teaching of new content, eliminating the pressure on parents and guardians who assist students at this time. It is known that there is a lack of preparation of these caregivers, since the vast majority do not have materials or available time, because of home office, making remote learning difficult. The psychological impacts of remote learning - stress, fear, decreased performance and frustration are noticeable in everyone who is involved. Thus, the coping strategy focused on the problem can prevent the worsening of symptoms in mental health. **Conclusion:** It is expected to promote future reflections according to the theme through Psychology.

Publication Type

Journal article.

<285>

Accession Number

20210275409

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

265

Author

Amorim, M. M. R.; Souza, A. S. R.; Melo, A. S. de O.; Delgado, A. M.; Florencio, A. C. M. C. da C.; Oliveira, T. V. de; Lira, L. C. S.; Sales, L. M. dos S.; Souza, G. A.; Melo, B. C. P. de; Morais, I.; Katz, L.

Title

COVID-19 and pregnancy. (Special issue.)

Source

Revista Brasileira de Saude Materno Infantil; 2021. 21(Suppl. 2):S337-S353 (en), S355-S372 (pt). 66 ref.

Publisher

Instituto de Medicina Integral Prof. Fernando Figueira, IMIP

Location of Publisher

Recife

Country of Publication

Brazil

Abstract

Objectives: Reviewing the available literature on COVID-19 infection and the maternal and perinatal outcomes. **Methods:** This is a narrative review of the literature carried out from March to September 2020, using the MESH: coronavirus, Covid 19, SARS-CoV-2, pregnancy, gravidity, pregnancy complications and pregnancy complications infections. All study designs, reviews, recommendations and technical notes were included, without distinction of language and that would bring the approach of the new coronavirus in the gestational and perinatal scenario. **Results:** The COVID-19 pandemic has had devastating effects, affecting millions of people and claiming almost a million lives worldwide. Initially, pregnant women were not seen as a risk group for the disease, however as the proportion of women affected during the pregnancy- puerperal cycle increased, several studies were published showing an increased risk of complications. Brazilian studies have also warned of a high number of maternal deaths, associated with the presence of comorbidities but, above all, with the social determinants of the disease and serious failures in care. **Conclusion:** The need for new studies with an adequate research design was observed, as many studies are only letters or small series of cases, in addition expert recommendations, without the necessary scientific rigor.

Publication Type

Journal article.

<286>

Accession Number

20210275406

Author

Kopp, A. R.; Rikin, S.; Cassese, T.; Berger, M. A.; Raff, A. C.; Gendlina, I.

Title

Medical student remote eConsult participation during the COVID-19 pandemic.

Source

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www.rcvsknowledge.org

BMC Medical Education; 2021. 21(120):(22 February 2021). 25 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Undergraduate medical education was severely impacted by the COVID-19 pandemic. As traditional clinical rotations were suspended, medical students quickly began alternative, novel educational experiences. Third-year medical students at an academic medical center were given the opportunity to join inpatient eConsult teams within the department of medicine. This study describes the development and implementation of this program as well as the experiences of student and faculty participants. **Methods:** Student eConsult participation was rapidly developed and implemented within medical subspecialty teams in either infectious diseases (ID) or nephrology. Twelve third-year medical students and 15 subspecialty attendings participated in this program during an eight-week period from April 6 through May 29, 2020. Breadth of student clinical experience was assessed via review of clinical documentation and surveys. Participating students and attending physicians completed surveys to reflect upon their impressions of the program. Surveys were returned by nine students and eight faculty members. Survey responses were summarized with descriptive statistics. **Results:** Over an eight-week period, student consultants wrote 126 notes on 100 patients; 74 of these patients (74%) were hospitalized with COVID-19. Student experiences were largely positive with most strongly agreeing that attendings promoted interactive and engaged learning (N = 8 of 8, 100%), that the experience helped to expand their knowledge about consultant roles (N = 6, 75%), and that they would participate in a remote eConsult program again if given the opportunity (N = 6, 75%). Faculty also were largely positive about the experience with most agreeing or strongly agreeing with the importance of teaching medical students about telehealth (N = 7 of 8, 88%) and eConsults (N = 6, 75%). In narrative responses, students and faculty agreed that teaching was a strength of the program whereas lack of in-person contact was a challenge. **Conclusions:** Rapid development of an inpatient eConsult-based educational experience for third-year medical students was feasible and successful. Student-consultants saw a range of pathology including COVID-19 and related complications. Students were satisfied with the program. They were able to develop a strong relationship with attendings while learning about the role of a consultant. Faculty agreed with the importance of teaching students about telehealth and eConsults specifically.

Publication Type

Journal article.

<287>

Accession Number

20210275279

Author

Ricci, A.; Pagliuca, A.; D'Ascanio, M.; Innammorato, M.; Vitis, C. de; Mancini, R.; Giovagnoli, S.; Facchiano, F.; Sposato, B.; Anibaldi, P.; Marcolongo, A.; Dominicis, C. de; Laghi, A.; Muscogiuri, E.; Sciacchitano, S.

Title

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www.rcvsknowledge.org

267

Circulating Vitamin D levels status and clinical prognostic indices in COVID-19 patients.

Source

Respiratory Research; 2021. 22(76):(3 March 2021). 36 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Several immune mechanisms activate in COVID-19 pathogenesis. Usually, coronavirus infection is characterized by dysregulated host immune responses, interleukine-6 increase, hyper-activation of cytotoxic CD8 T lymphocytes. Interestingly, Vitamin D deficiency has been often associated with altered immune responses and infections. In the present study, we evaluated Vitamin D plasma levels in patients affected with different lung involvement during COVID-19 infection. **Methods:** Lymphocyte phenotypes were assessed by flow cytometry. Thoracic CT scan involvement was obtained by an image analysis program. **Results:** Vitamin D levels were deficient in (80%) of patients, insufficient in (6.5%) and normal in (13.5%). Patients with very low Vitamin D plasma levels had more elevated D-Dimer values, a more elevated B lymphocyte cell count, a reduction of CD8 + T lymphocytes with a low CD4/CD8 ratio, more compromised clinical findings (measured by LIPI and SOFA scores) and thoracic CT scan involvement. **Conclusions:** Vitamin D deficiency is associated with compromised inflammatory responses and higher pulmonary involvement in COVID-19 affected patients. Vitamin D assessment, during COVID-19 infection, could be a useful analysis for possible therapeutic interventions.

Publication Type

Journal article.

<288>

Accession Number

20210275267

Author

Dijkstra, J. M.; Frenette, A. P.; Dixon, B.

Title

Most Japanese individuals are genetically predisposed to recognize an immunogenic protein fragment shared between COVID-19 and common cold coronaviruses.

Source

F1000Research; 2021. 10(196). many ref.

Publisher

Science Navigation Group

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Location of Publisher

London

Country of Publication

UK

Abstract

In the spring of 2020, we and others hypothesized that T cells in COVID-19 patients may recognize identical protein fragments shared between the coronaviruses of the common cold and COVID-19 and thereby confer cross-virus immune memory. Here, we look at this issue by screening studies that, since that time, have experimentally addressed COVID-19 associated T cell specificities. Currently, the identical T cell epitope shared between COVID-19 and common cold coronaviruses most convincingly identified as immunogenic is the CD8+ T cell epitope VYIGDPAQL if presented by the MHC class I allele HLA-A*24:02. The HLA-A*24:02 allele is found in the majority of Japanese individuals and several indigenous populations in Asia, Oceania, and the Americas. In combination with histories of common cold infections, HLA-A*24:02 may affect their protection from COVID-19.

Publication Type

Journal article.

<289>

Accession Number

20210275247

Author

Gu ShiXian; Zhang AiJing; Huo Gang; Yuan WenQing; Li Yan; Han JiangLi; Shen Ning

Title

Application of PDCA cycle management for postgraduate medical students during the COVID-19 pandemic.

Source

BMC Medical Education; 2021. 21(308):(29 May 2021). 10 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 outbreak has exerted an enormous impact on various industries worldwide. During this pandemic, clinical teaching hospitals have faced unprecedented challenges regarding the management of postgraduate medical students since postgraduate students in clinical medicine have both student and resident identity characteristics. The purpose of this study was to explore the management

effectiveness of Peking University Third Hospital (PUTH) based on PDCA (plan-do-check-act) cycle management and to further develop the medical student management system during the pandemic. Methods: The methods of document review, questionnaire surveys and interviews were used to continuously improve the management measures for postgraduate medical students during the COVID-19 pandemic by using the PDCA cycle. Results: Investigations were conducted on the management system, back-to-school arrangements, laboratory management, COVID-19 prevention and control training, online teaching, mentoring, dissertation progress, and emotional state of postgraduate medical students during the COVID-19 pandemic. We found that strengthening public health management knowledge training, increasing infectious-disease-related knowledge training, innovating online teaching methods, improving PDCA management model maps, and formulating improvement programmes are conducive to improving the quality of such management. Conclusion: Given the difficulties involved in the management of postgraduate medical students during the COVID-19 pandemic, managers need to comprehensively consider and conduct overall planning and use the PDCA management model to improve the management of postgraduate medical students during this period.

Publication Type

Journal article.

<290>

Accession Number

20210275246

Author

Husson, H.; Howarth, C.; Neil-Sztramko, S.; Dobbins, M.

Title

The national collaborating centre for methods and tools (NCCMT): supporting evidence-informed decision-making in public health in Canada.

Source

Canada Communicable Disease Report; 2021. 47(5/6):292-346. 22 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

The National Collaborating Centre for Methods and Tools (NCCMT) is part of a network of six National Collaborating Centres for Public Health (NCC) created in 2005 by the federal government following the severe acute respiratory syndrome (SARS) epidemic to strengthen public health infrastructure in Canada. The work of the NCCMT, to support evidence-informed decision-making (EIDM) in public health in Canada, is accomplished by curating trustworthy evidence, building competence to use evidence and accelerating change in EIDM. Ongoing engagement with its target audiences ensures NCCMT's relevance and ability to respond to evolving public health needs. This has been particularly critical during the coronavirus disease

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2019 (COVID-19) pandemic, which saw NCCMT pivot its activities to support the public health response by conducting rapid reviews on priority questions identified by decision-makers from federal to local levels as well as create and maintain a national repository of in-progress or completed syntheses. These efforts, along with partnering with the COVID-19 Evidence Network to support Decision-Making (COVID-END), sought to reduce duplication, increase coordination of synthesis efforts and support decision-makers to use the best available evidence in decision-making. Data from website statistics illustrate the successful uptake of these initiatives across Canada and internationally.

Publication Type

Journal article.

<291>

Accession Number

20210275245

Author

MacDonald, S.; Sell, H.; Wilson, S.; Meyer, S.; Gagneur, A.; Assi, A.; Sadarangani, M.

Title

Environmental scan of provincial and territorial planning for COVID-19 vaccination programs in Canada.

Source

Canada Communicable Disease Report; 2021. 47(5/6):285-291. 13 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

Background: Public health departments in Canada are currently facing the challenging task of planning and implementing coronavirus disease 2019 (COVID-19) vaccination programs. Background: To collect and synthesize information regarding COVID-19 vaccination program planning in each province and territory of Canada, including logistic considerations, priority groups, and vaccine safety and effectiveness monitoring. Methods: Provincial/territorial public health leaders were interviewed via teleconference during the early planning stage of COVID-19 vaccination programs (August-October 2020) to collect information on the following topics: unique factors for COVID-19 vaccination, intention to adopt National Advisory Committee on Immunization (NACI) recommendations, priority groups for early vaccination, and vaccine safety and effectiveness monitoring. Data were grouped according to common responses and descriptive analysis was performed. Results: Eighteen interviews occurred with 25 participants from 11 of 13 provinces/territories (P/Ts). Factors unique to COVID-19 vaccination included prioritizing groups for early vaccination (n=7), public perception of vaccines (n=6), and differing eligibility criteria (n=5). Almost all P/Ts (n=10) reported reliance on NACI recommendations. Long-term care residents (n=10) and healthcare workers (n=10) were most frequently prioritized for early vaccination, followed by people with chronic medical conditions (n=9) and seniors (n=8). Most P/Ts (n=9) are planning routine adverse event monitoring to assess vaccine safety.

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Evaluation of effectiveness was anticipated to occur within public health departments (n=3), by researchers (n=3), or based on national guidance (n=4). Conclusion: Plans for COVID-19 vaccination programs in the P/Ts exhibit some similarities and are largely consistent with NACI guidelines, with some discrepancies. Further research is needed to evaluate COVID-19 vaccination programs once implemented.

Publication Type

Journal article.

<292>

Accession Number

20210275244

Author

Zhao LinLu; Young, K.; House, A.; Stirling, R.; Tunis, M.

Title

Demonstrating the capacity of the national advisory committee on immunization for timely responses to post-market vaccine monitoring signals: Canada's experience with the live-attenuated influenza vaccine.

Source

Canada Communicable Disease Report; 2021. 47(5/6):279-284. 18 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

Over the last several years, the recommended use of the live-attenuated influenza vaccine (LAIV) for children has evolved in the United States (US) in response to evidence of a potential decrease in LAIV effectiveness based on post-market monitoring. These issues were not observed in Canada or elsewhere; consequently, recommendations from Canada's National Advisory Committee on Immunization (NACI) and the US Advisory Committee on Immunization Practices (ACIP) on whether to use LAIV differed for two influenza seasons (2016-2017 and 2017-2018). This retrospective describes how NACI arrived at its recommendations in response to post-market signals of reduced LAIV performance from the US in 2013-2014 and again in 2015-2016. NACI's experience with LAIV marks the first time in Canada where a preferential recommendation on the use of an influenza vaccine in a routine immunization program was reversed. This experience highlights the importance of ongoing post-market monitoring of vaccines, international collaboration and careful consideration of local context to inform vaccine recommendations. NACI's capacity for timely responses to post-market vaccine performance signals will facilitate responsiveness to similar post-market monitoring signals from the coronavirus disease 2019 (COVID-19) vaccines.

Publication Type

Journal article.

<293>

Accession Number

20210275243

Author

Saravanakarhikeyan Balasubramanian; Divya Vinayachandran

Title

Bioaerosols from mouth-breathing: under-recognized transmissible mode in COVID-19?

Source

Canada Communicable Disease Report; 2021. 47(5/6):276-278. 16 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

The whole world has been affected by the coronavirus disease 2019 (COVID-19) pandemic, and many researchers are racing to understand the disease course and to undertake risk analyses to formulate effective treatment strategies. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is highly transmissible through coughing and sneezing, and through breathing and talking which may account for viral transmission from asymptomatic carriers. Bioaerosols produced during mouth-breathing, an expiratory process in habitual mouth breathers, should be considered in addition to nasal bioparticles as a potential transmissible mode in COVID-19. Oral health professionals are justifiably apprehensive about the exposure risk due to close face-to-face contact and the mode of transmission. The aim of this commentary is to summarize the research conducted in this area and suggested strategies to limit the spread of COVID-19, especially in dental offices.

Publication Type

Journal article.

<294>

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Accession Number

20210275239

Author

Rees, E. E.; Rodin, R.; Ogden, N. H.

Title

Population surveillance approach to detect and respond to new clusters of COVID-19.

Source

Canada Communicable Disease Report; 2021. 47(5/6):243-250. 22 ref.

Publisher

Public Health Agency of Canada

Location of Publisher

Ottawa

Country of Publication

Canada

Abstract

Background: To maintain control of the coronavirus disease 2019 (COVID-19) epidemic as lockdowns are lifted, it will be crucial to enhance alternative public health measures. For surveillance, it will be necessary to detect a high proportion of any new cases quickly so that they can be isolated, and people who have been exposed to them traced and quarantined. Here we introduce a mathematical approach that can be used to determine how many samples need to be collected per unit area and unit time to detect new clusters of COVID-19 cases at a stage early enough to control an outbreak. Methods: We present a sample size determination method that uses a relative weighted approach. Given the contribution of COVID-19 test results from sub-populations to detect the disease at a threshold prevalence level to control the outbreak to (1) determine if the expected number of weekly samples provided from current healthcare-based surveillance for respiratory virus infections may provide a sample size that is already adequate to detect new clusters of COVID-19 and, if not, (2) to determine how many additional weekly samples were needed from volunteer sampling. Results: In a demonstration of our method at the weekly and Canadian provincial and territorial (P/T) levels, we found that only the more populous P/T have sufficient testing numbers from healthcare visits for respiratory illness to detect COVID-19 at our target prevalence level-assumed to be high enough to identify and control new clusters. Furthermore, detection of COVID-19 is most efficient (fewer samples required) when surveillance focuses on healthcare symptomatic testing demand. In the volunteer populations: the higher the contact rates; the higher the expected prevalence level; and the fewer the samples were needed to detect COVID-19 at a predetermined threshold level. Conclusion: This study introduces a targeted surveillance strategy, combining both passive and active surveillance samples, to determine how many samples to collect per unit area and unit time to detect new clusters of COVID-19 cases. The goal of this strategy is to allow for early enough detection to control an outbreak.

Publication Type

Journal article.

<295>

Accession Number

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20210274871

Author

Arun Parashar; Arpit Shukla; Sharma, A.; Tapan Behl; Dweipayan Goswami; Mehta, V.

Title

Reckoning P-Glutamyl-S-allylcysteine as a potential main protease (mpro) inhibitor of novel SARS-CoV-2 virus identified using docking and molecular dynamics simulation.

Source

Drug Development and Industrial Pharmacy; 2021. 47(5):699-710. 65 ref.

Publisher

Taylor & Francis

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2 or COVID-19), outbreak was first reported in December 2019 in the Wuhan, China. COVID-19 managed to spread worldwide and so far more than 9.1 million cases and more than 4.7 lakh death has been reported globally. Children, pregnant women, elderly population, immunocompromised patients, and patients with conditions like asthma, diabetes, etc. are highly vulnerable to COVID infection. Currently, there is no treatment available for COVID-19 infection. Traditional medicinal plants have provided bioactive molecules in the past that are efficiently used during conditions like cancer, malaria, microbial infections, immune-compromised states, etc. AYUSH India has recommended the use of Curcuma longa, Allium sativum, Ocimum tenuiflorum, and Withania somnifera for immune-boosting during SARS-CoV-2 infection. In the present study, we investigated the potential of 63-major bioactive molecules of these plants against SARS-CoV-2 main protease (Mpro) through docking studies and compared the results with known inhibitor 11a. Our results proposed cuscohygrine, P-Glutamyl-S-allylcysteine, anahygrine, and S-allylcystein as the potent inhibitors against Mpro identified using molecular docking and molecular simulation dynamics. Interestingly, these molecules are from A. sativum, and W. somnifera, which are known for their antimicrobial and immunomodulatory potential. None of the proposed molecules have earlier been reported as antiviral molecules. Our results predict very strong potential of these four-molecules against SARS-CoV-2 Mpro, especially P-glutamyl-S-allylcysteine, as all four form hydrogen bonding with Glu166 that is a crucial residue for the formation of the biologically active dimeric form of Mpro. Therefore, we strongly recommend further research on these biomolecules against SARS-CoV-2.

Publication Type

Journal article.

<296>

Accession Number

20210274657

Author

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF
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E: library@rcvsknowledge.org

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275

Sik, N.; Duman, M.; Yilmaz, D.; Asrak, H. K.; Erbas, I. C.; Guzin, A. C.; Alatas, S. O.; Appak, O.; Sayiner, A. A.; Belet, N.

Title

Evaluation of COVID-19 disease and the effect of trends in intervention measures: the pediatric perspective from a tertiary care hospital in Turkey.

Source

Balkan Medical Journal; 2021. 38(4):222-228. 30 ref.

Publisher

Galenos Yayınevi

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

Background: COVID-19 is an emerging disease of global public health concern. **Aims:** To evaluate the epidemiological, clinical, laboratory, and radiologic findings and the clinical outcomes of children who were diagnosed with SARS-CoV-2 by polymerase chain reaction (PCR), and to evaluate the effect of the trends in intervention measures. **Study Design:** Between April 2, 2020 and January 16, 2021, children aged 0-18 years who had presented at the pediatric emergency department and were diagnosed with confirmed SARS-CoV-2 by PCR were enrolled. **Methods:** Details on demographics, epidemiologic characteristics, clinical findings, laboratory data, and radiologic investigations, hospital admissions, and prognosis were recorded. According to clinical severity, patients were divided into 5 groups as asymptomatic, mild, moderate, severe, or critical. We classified the outbreak into 3 periods. The first was between April 2, 2020, the date when the first pediatric case of our hospital was detected, and June 1, 2020, when restrictive measures were relaxed. The second period was between June 1, 2020 and November 15, 2020, when restrictive measures were reimplemented. The third period was between November 15, 2020 and January 16, 2021. **Results:** A total of 600 patients [median age: 10.3 years (IQR: 4.4-15.1); 304 females] were enrolled. Among them, 25.0% were asymptomatic, while the 3 most common symptoms among symptomatic cases were fever, cough, and fatigue. There was contact with a COVID-19 PCRpositive individual in 73.5% of the cases, with 76.6% of those being a household contact. There were 23 (3.9%) moderate, severe, or critical cases in terms of clinical severity. The presence of chronic disease, a pathological physical chest examination, and procalcitonin levels of >0.05 ng/mL were identified as predictors of being moderate, severe, or critical. Twenty-four (4.0%) patients were admitted to the hospital; 14 (2.3%) to the ward and 10 (1.6%) to the pediatric intensive care unit. In the second intervention period, we observed a rapidly increasing number of new cases daily, especially in August. From September, an increase was observed, being particularly marked from October to November 18. Since then, there was a decrease in the daily number of cases. **Conclusion:** The majority of the cases were asymptomatic or had a mild clinical presentation. The presence of chronic disease, a pathological physical chest examination, and procalcitonin levels of >0.05 ng/mL were identified as predictors of being moderate, severe, or critical in terms of clinical severity. Strict intervention measures seem to be effective in containing the spread of COVID-19.

Publication Type

Journal article.

<297>

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

276

Accession Number

20210274656

Author

Pooja Arora; Sumit Mrig; Yaser Goldust; Kroumpouzou, G.; Karadag, A. S.; Rudnicka, L.; Galadari, H.; Szepletowski, J. C.; Lernia, V. di; Goren, A.; Kassir, M.; Goldust, M.

Title

New coronavirus (SARS-CoV-2) crossing borders beyond cities, nations, and continents: impact of international travel.

Source

Balkan Medical Journal; 2021. 38(4):205-211. 33 ref.

Publisher

Galenos Yayinevi

Location of Publisher

Istanbul

Country of Publication

Turkey

Abstract

The third outbreak of coronavirus in the form of the COVID-19 infection started in Wuhan, China, in December 2019. The early and rapid spread of this infection across borders can be largely attributed to international air travel that has become a part of modern globalization. In this article, we analyze the spread of the novel coronavirus (SARS-CoV-2) along the routes of international travel, both by air and by sea. Pitfalls of various screening methods used at the airports and the importance of optimal aircraft ventilation are discussed. Also, we suggest measures that can be taken to reduce the risk of transmission associated with air travel.

Publication Type

Journal article.

<298>

Accession Number

20210274488

Author

Alonazi, W. B.

Title

Building learning organizational culture during COVID-19 outbreak: a national study.

Source

BMC Health Services Research; 2021. 21(422):(04 May 2021). 39 ref.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Hospitals and healthcare institutions should be observant of the ever-changing environment and be adaptive to learning practices. By adopting the steps and other components of organizational learning, healthcare institutions can convert themselves into learning organizations and ultimately strengthen the overall healthcare system of the country. The present study aimed to examine the influence of several organizational learning dimensions on organization culture in healthcare settings during the COVID-19 outbreak. **Methods:** During COVID-19 crisis in 2020, an online cross-sectional study was performed. Data were collected via official emails sent to 1500 healthcare professionals working in front line at four sets of hospitals in Saudi Arabia. Basic descriptive analysis was constructed to identify the variation between the four healthcare organizations. A multiple regression was employed to explore how hospitals can adopt learning process during pandemics, incorporating several Dimensions of Learning Organizations Questionnaire (DLOQ) developed by Marsick and Watkins (2003) and Leufven and others (2015). **Results:** Organizational learning including system connections (M = 3.745), embedded systems (M = 3.732), and team work and collaborations (M = 3.724) tended to have major significant relationships with building effective learning organization culture. Staff empowerment, dialogues and inquiry, internal learning culture, and continuous learning had the lowest effect on building health organization culture (M = 3.680, M = 3.3.679, M = 3.673, M = 3.663, respectively). A multiple linear regression was run to predict learning organization based on the several variables. These variables statistically significantly predicted learning organization, $F(6, 1124) = 168.730, p < .0005, R^2 = 0.471, (p < .05)$. **Discussion:** The findings concluded that although intrinsic factors like staff empowerment, dialogues and inquiry, and internal learning culture, revealed central roles, still the most crucial factors toward the development of learning organization culture were extrinsic ones including connections, embed system and collaborations. **Conclusions:** Until knowledge-sharing is embedded in health organizational systems; organizations may not maintain a high level of learning during crisis.

Publication Type

Journal article.

<299>

Accession Number

20210274487

Author

Shi MeiHong; Zhang FengYing; He XinXin; Huang SiYuan; Zhang MingFeng; Hu XiuYing

Title

Are preventive measures adequate? An evaluation of the implementation of COVID-19 prevention and control measures in nursing homes in China.

Source

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

278

BMC Health Services Research; 2021. 21(641):(03 July 2021). 48 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The novel coronavirus disease 2019 (COVID-19) pandemic has become a challenge for nursing homes in China. Nursing homes are particularly dangerous places in terms of the spread of COVID-19 given that they house vulnerable, high-risk populations. As such, several useful guidelines for coping with COVID-19 in nursing homes have been provided. However, the actual implementation rates of such guidelines are unknown. This study aims to document the adherence of nursing homes to the Ministry of Civil Affairs guidelines for COVID-19 prevention and control in nursing homes. **Methods:** A cross-sectional study was conducted among 484 nursing homes in 136 cities of 28 provinces in China. A self-report questionnaire was created based on the Ministry of Civil Affairs guidelines for COVID-19 prevention and control in nursing homes (first edition). The questionnaire and the Transformational Leadership in the Public Sector Scale were sent to nursing home managers via the Wenjuanxing app online from February 7 to 29, 2020. Ultimately, 461 of 960 nursing homes participated, for a response rate of 48.0%. **Results:** The average overall implementation rate of COVID-19 prevention and control measures was 80.0% (143.97/180). The average implementation rates for hygienic behaviour management and access management were lower, at 75.3 and 78.7%, respectively. Number of medical staff and transformational leadership score of nursing home's manager were associated with total implementation score ($p < 0.05$). A total of 69.8% (322/461) of the nursing home managers had serious resource problems, and inadequate protective supplies (72.0%) and staff shortages (47.7%) were the two primary problems. The nursing homes that located in urban, with large nursing home size, had hospital-nursing home cooperation and the transformational leadership score of manager > 60 , had a lower risk of having serious resource problems. **Conclusions:** Overall, the implementation of prevention and control measures by nursing homes are insufficient during the epidemic in China. More medical staff, adequate resource, cooperation with hospitals, and higher transformational leadership of manager are required to improve the implementation rate. It is urgent for nursing homes to maintain the safety of residents and staff.

Publication Type

Journal article.

<300>

Accession Number

20210274447

Author

O'Driscoll, M.; Harry, C.; Donnelly, C. A.; Cori, A.; Dorigatti, I.

Title

A comparative analysis of statistical methods to estimate the reproduction number in emerging epidemics, with implications for the current coronavirus disease 2019 (COVID-19) pandemic.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Source

Clinical Infectious Diseases; 2021. 73(1):e215-e223. 28 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: As the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic continues its rapid global spread, quantification of local transmission patterns has been, and will continue to be, critical for guiding the pandemic response. Understanding the accuracy and limitations of statistical methods to estimate the basic reproduction number, R_0 , in the context of emerging epidemics is therefore vital to ensure appropriate interpretation of results and the subsequent implications for control efforts. **Methods:** Using simulated epidemic data, we assess the performance of 7 commonly used statistical methods to estimate R_0 as they would be applied in a real-time outbreak analysis scenario: fitting to an increasing number of data points over time and with varying levels of random noise in the data. Method comparison was also conducted on empirical outbreak data, using Zika surveillance data from the 2015-2016 epidemic in Latin America and the Caribbean. **Results:** We find that most methods considered here frequently overestimate R_0 in the early stages of epidemic growth on simulated data, the magnitude of which decreases when fitted to an increasing number of time points. This trend of decreasing bias over time can easily lead to incorrect conclusions about the course of the epidemic or the need for control efforts. **Conclusions:** We show that true changes in pathogen transmissibility can be difficult to disentangle from changes in methodological accuracy and precision in the early stages of epidemic growth, particularly for data with significant over-dispersion. As localized epidemics of SARS-CoV-2 take hold around the globe, awareness of this trend will be important for appropriately cautious interpretation of results and subsequent guidance for control efforts.

Publication Type

Journal article.

<301>

Accession Number

20210274445

Author

Guerrero-Torres, L.; Caro-Vega, Y.; Crabtree-Ramirez, B.; Sierra-Madero, J. G.

Title

Clinical characteristics and mortality of health-care workers with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in Mexico City.

Source

Clinical Infectious Diseases; 2021. 73(1):e199-e205. 28 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: We evaluated the risk of death for health-care workers (HCW) with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in Mexico City during the coronavirus disease 2019 (COVID-19) pandemic, and describe the associated factors in hospitalized HCW, compared with non-HCW. **Methods:** We analyzed data from laboratory-confirmed SARS-CoV-2 cases registered from 27 February-31 August 2020 in Mexico City's public database. Individuals were classified as non-HCW or HCW (subcategorized as physicians, nurses, and other HCW). In hospitalized individuals, a multivariate logistic regression model was used to analyze the potential factors associated with death and compare mortality risks among groups. **Results:** A total of 125 665 patients were included. Of these, 13.1% were HCW (28% physicians, 38% nurses, and 34% other HCW). Compared with non-HCW, HCW were more frequently female, were younger, and had fewer comorbidities. Overall, 25 771 (20.5%) were treated as inpatients and 11 182 (8.9%) deaths were reported. Deaths in the total population (9.9% vs 1.9%, respectively; $P < .001$) and in hospitalized patients (39.6% vs 19.3%, respectively; $P < .001$) were significantly higher in non-HCW than in HCW. In hospitalized patients, using a multivariate model, the risk of death was lower in HCW in general (odds ratio [OR], 0.53) than in non-HCW, and the risks were also lower by specific occupation (OR for physicians, 0.60; OR for nurses, 0.29; OR for other HCW 0.61). **Conclusions:** HCW represent an important proportion of individuals with SARS-CoV-2 infection in Mexico City. While the mortality risk is lower in HCW compared to non-HCW, a high mortality rate in hospitalized patients was observed in this study. Among HCW, nurses had a lower risk of death compared to physicians and other HCW.

Publication Type

Journal article.

<302>

Accession Number

20210274444

Author

Antonio-Villa, N. E.; Bello-Chavolla, O. Y.; Vargas-Vazquez, A.; Fermin-Martinez, C. A.; Marquez-Salinas, A.; Pisanty-Alatorre, J.; Bahena-Lopez, J. P.

Title

Assessing the burden of coronavirus disease 2019 (COVID-19) among healthcare workers in Mexico City: a data-driven call to action.

Source

Clinical Infectious Diseases; 2021. 73(1):e191-e198. 43 ref.

Publisher

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Healthcare workers (HCWs) could be at increased occupational risk for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections due to increased exposure. Information regarding the burden of coronavirus disease 2019 (COVID-19) epidemic in HCWs living in Mexico is scarce. Here, we aimed to explore the epidemiology, symptoms, and risk factors associated with adverse outcomes in HCWs in Mexico City. Methods: We explored data collected by the National Epidemiological Surveillance System in Mexico City, in HCWs who underwent real-time reverse transcription polymerase chain reaction (RT-PCR) test. We explored COVID-19 outcomes in HCWs and the performance of symptoms to detect SARS-CoV-2 infection. Results: As of 20 September 2020, 57 758 HCWs were tested for SARS-CoV-2 and 17 531 were confirmed (30.35%); 6610 were nurses (37.70%), 4910 physicians (28.0%), 267 dentists (1.52%), and 5744 laboratory personnel and other HCWs (32.76%). Overall, 2378 HCWs required hospitalization (4.12%), 2648 developed severe COVID-19 (4.58%), and 336 required mechanical-ventilatory support (.58%). Lethality was recorded in 472 (.82%) cases. We identified 635 asymptomatic SARS-CoV-2 infections (3.62%). Compared with general population, HCWs had higher incidence, testing, asymptomatic cases, and mortality rates. No individual symptom offers adequate performance to detect SARS-CoV2. Older HCWs with chronic noncommunicable diseases and severe respiratory symptoms were associated with higher risk for adverse outcome; physicians were at higher risk compared with nurses and other HCWs. Conclusions: We report a high prevalence of SARS-CoV-2 infection in HCWs in Mexico City. Symptoms as a screening method are not efficient to discern those HCWs with a positive PCR-RT test. Particular attention should focus on HCWs with risk factors to prevent adverse outcomes.

Publication Type

Journal article.

<303>

Accession Number

20210274163

Author

Singh, D. R.; Sunuwar, D. R.; Shah, S. K.; Kshitij Karki; Sah, L. K.; Adhikari, B.; Sah, R. K.

Title

Impact of COVID-19 on health services utilization in province-2 of Nepal: a qualitative study among community members and stakeholders.

Source

BMC Health Services Research; 2021. 21(174):(24 February 2021). many ref.

Publisher

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E: library@rcvsknowledge.org

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Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic has posed unprecedented challenges and threats to the health care system, particularly affecting the effective delivery of essential health services in resource-poor countries such as Nepal. This study aimed to explore community perceptions of COVID-19 and their experiences towards health services utilization during the pandemic in Province-2 of Nepal. Methods: The semi-structured qualitative interviews were conducted among purposively selected participants (n = 41) from a mix of rural and urban settings in all districts (n = 8) of the Province 2 of Nepal. Virtual interviews were conducted between July and August 2020 in local languages. The data were analyzed using thematic network analysis in NVivo 12 Pro. Results: The findings of this research are categorized into four global themes: (i) Community and stakeholders' perceptions towards COVID-19; (ii) Impact of COVID-19 and lockdown on health services delivery; (iii) Community perceptions and experiences of health services during COVID-19; and (iv) COVID-19: testing, isolation, and quarantine services. Most participants shared their experience of being worried and anxious about COVID-19 and reported a lack of awareness, misinformation, and stigma as major factors contributing to the spread of COVID-19. Maternity services, immunization, and supply of essential medicine were found to be the most affected areas of health care delivery during the lockdown. Participants reported that the interruptions in health services were mostly due to the closure of health services at local health care facilities, limited affordability, and involvement of private health sectors during the pandemic, fears of COVID-19 transmission among health care workers and within health centers, and disruption of transportation services. In addition, the participants expressed frustrations on poor testing, isolation, and quarantine services related to COVID-19, and poor accountability from the government at all levels towards health services continuation/management during the COVID-19 pandemic. Conclusions: This study found that essential health services were severely affected during the COVID-19 pandemic in all districts of Province-2. It is critical to expand and continue the service coverage, and its quality (even more during pandemics), as well as increase public-private sector engagement to ensure the essential health services are available for the population.

Publication Type

Journal article.

<304>

Accession Number

20210274124

Author

Marinello, S.; Lolli, F.; Gamberini, R.

Title

The impact of the COVID-19 emergency on local vehicular traffic and its consequences for the environment: the case of the City of Reggio Emilia (Italy).

Source

Sustainability; 2021. 13(1). 72 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 health emergency has imposed the need to limit and/or stop non-essential economic and commercial activities and movement of people. The objective of this work is to report an assessment of the change in vehicle flows and in air quality of a specific study area in the north of Italy, comparing the periods February-May 2020 and February-May 2019. Circulating vehicles have been measured at nine characteristic points of the local road network of the city of Reggio Emilia (Italy), while atmospheric pollutant concentrations have been analysed using data extracted from the regional air quality monitoring network. The results highlight a rapid decline in the number of vehicles circulating in 2020 (with values of up to -82%). This has contributed to a reduction in air concentrations of pollutants, in particular for NO₂ and CO (over 30% and over 22%, respectively). On the other hand, O₃ has increased (by about +13%), but this is expected. Finally, the particulate matter grew (about 30%), with a behaviour similar to the whole regional territory. The empirical findings of this study provide some indications and useful information to assist in understanding the effects of traffic blocking in urban areas on air quality.

Publication Type

Journal article.

<305>

Accession Number

20210274087

Author

Radulescu, C. V.; Ladaru, G. R.; Burlacu, S.; Constantin, F.; Ioanas, C.; Petre, I. L.

Title

Impact of the COVID-19 pandemic on the Romanian labor market.

Source

Sustainability; 2021. 13(1). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The present research aims to establish the impact that the current crisis situation the planet is facing, namely the COVID-19 pandemic, has had so far on the Romanian labor force market. In this context, given the lack of information and information regarding this pandemic and its effects, the administration of a questionnaire among the population was considered to identify the research results. The method of semantic differential and the method of ordering the ranks were used for the interpretation of the results. With the help of this questionnaire, it will be possible to answer the question of the research in this study: What are the main effects of the COVID-19 pandemic on the Romanian labor market? The main results showed that the COVID-19 pandemic affected the Romanian workforce; the respondents of the applied questionnaire claimed that they obtained better results and maintained a similar income, but the health crisis also influenced the mentality of employees, with respondents stating that in the event of changing jobs, they would consider it very important for the new employer to ensure the conditions for preventing and combating COVID-19, as well as complex health insurance. However, analyzing at the macroeconomic level, it was found that the COVID-19 pandemic induced an increase in the number of unemployed people in the Romanian labor market.

Publication Type

Journal article.

<306>

Accession Number

20210274076

Author

Qiu MengYuan; Sha Ji; Utomo, S.

Title

Listening to forests: comparing the perceived restorative characteristics of natural soundscapes before and after the COVID-19 pandemic.

Source

Sustainability; 2021. 13(1). 68 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Natural sounds are known to contribute to health and well-being. However, few studies have investigated what makes a natural sound renew and re-energize people, especially in the face of significant stressors caused by the Corona Virus Disease 2019 (COVID-19). This study examined the interactive mechanism towards the perceived restorative characteristics of natural soundscapes: fascination, being-away, compatibility, and extent. Two groups of data were collected in Burleigh Heads National Park, Australia,

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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before the outbreak of COVID-19 (n=526) and in October 2020 (n=371). The objective measures of LAeq confirmed that the acoustic environment of Burleigh Heads National Park are quiet and peaceful for attention restoration. The results of the subject evaluation revealed that participants from the post-COVID-19 group reported higher stress levels, while there was a greater mental restoration through water sounds. There are significant differences between the pre- and post-COVID-19 groups with respect to the relationships among the perceived restorative characteristics of natural soundscapes. The direct effects of extent and fascination, as well as the mediating effects of fascination, were more significant among the post-COVID-19 group than the pre-COVID-19 group. However, the effects of being-away on compatibility were less significant in the post-COVID-19 group. This study reduces the gap that exists on the research of environment-people-health-wellbeing nexus. Knowledge about natural soundscapes encourages administrations to consider it as a guideline for the planning and management of natural resources, especially during the COVID-19 pandemic.

Publication Type

Journal article.

<307>

Accession Number

20210274042

Author

Klamroth-Marganska, V.; Gemperle, M.; Ballmer, T.; Grylka-Baesclin, S.; Pehlke-Milde, J.; Gantschnig, B. E.

Title

Does therapy always need touch? A cross-sectional study among Switzerland-based occupational therapists and midwives regarding their experience with health care at a distance during the COVID-19 pandemic in spring 2020.

Source

BMC Health Services Research; 2021. 21(578):(15 June 2021). 38 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: The COVID-19 pandemic impedes therapy and care activities. Tele-health, i.e., the provision of health care at a distance (HCD), is a promising way to fill the supply gap. However, facilitators and barriers influence the use and experience of HCD for occupational therapists (OTs) and midwives. We identified use of services and appraisal of experiences of Switzerland-based OTs and midwives regarding the provision of HCD during the lockdown as it pertains to the COVID-19 pandemic in spring 2020. **1. Hypothesis:** Profession, age in years, and area of work have a significant and meaningful influence over whether HCD is provided. **2. Hypothesis:** Profession, age in years, area of work, possibility of reimbursement by health insurance, and application used have a significant and meaningful influence on the experience of HCD. **Methods:** In a cross-

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

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sectional survey, 5755 OTs and midwives were contacted to fill out an online questionnaire with 13 questions regarding demographic information, use of HCD, and experiences while providing the service. Eleven potential facilitators and barriers and areas where there was desire for support were identified. Results: The questionnaire was completed by 1269 health professionals (response rate 22.5%). 73.4% of responding OTs (n = 431) and midwives (n = 501) provided HCD during the COVID-19 pandemic lockdown. Profession and area of work had a significant influence on whether HCD was provided. Age only had a significant influence on the use of videotelephony, SMS, and chat services. OTs experienced HCD significantly more positively than midwives (log odds = 1.3; p .01). Video-telephony (log odds = 1.1; p .01) and use of phone (log odds = 0.8; p = .01) were positive predictors for positive experience, while use of SMS (log odds = - 0.33; p = .02) was a negative predictor. Among OTs, 67.5% experienced HCD as positive or mostly positive, while 27.0% experienced it as negative or mostly negative. Among midwives, 39.5% experienced it as positive or mostly positive, while 57.5% experienced it as negative or mostly negative. Most respondents desired support concerning reimbursement by health insurance (70.8%), followed by law and data protection (60.4%). Conclusions: HCD during the early COVID-19 pandemic was generally perceived as positive by OTs and midwives. There is need for training opportunities in connection with HCD during the COVID-19 pandemic.

Publication Type

Journal article.

<308>

Accession Number

20210273989

Author

Christensen, K. A.; Forbush, K. T.; Richson, B. N.; Thomeczek, M. L.; Perko, V. L.; Bjorlie, K.; Christian, K.; Ayres, J.; Wildes, J. E.; Chana, S. M.

Title

Food insecurity associated with elevated eating disorder symptoms, impairment, and eating disorder diagnoses in an American University student sample before and during the beginning of the COVID-19 pandemic.

Source

International Journal of Eating Disorders; 2021. 54(7):1213-1223. many ref.

Publisher

Wiley

Location of Publisher

Hoboken

Country of Publication

USA

Abstract

Objective: This study tested the association between food insecurity and eating disorder (ED) pathology, including probable ED diagnosis, among two cohorts of university students before and during the beginning of the COVID-19 pandemic. **Method:** Students (n = 579) from a large Midwestern American university completed self-report questionnaires assessing frequency of ED behaviors, ED-related impairment, and

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individual food insecurity as measured by the Eating Disorder Diagnostic Scale 5, Clinical Impairment Assessment, and Radimer/Cornell, respectively. Chi-square tests and MANOVA with post-hoc corrections were conducted to compare demographic characteristics, ED pathology, and probable ED diagnosis prevalence between students with and without individual food insecurity. Results: Partially supporting hypotheses, MANOVA indicated significantly greater frequency of objective binge eating, compensatory fasting, and ED-related impairment for students with food insecurity compared with individuals without food insecurity. Chi-squared tests showed higher prevalence of ED diagnoses among individuals with food insecurity compared with those without food security (47.6 vs. 31.1%, respectively, $p < .01$, NNT = 6.06), specifically bulimia nervosa and other specified feeding and eating disorder. There were no differences in food insecurity before or during the beginning of the COVID-19 pandemic. Discussion: Consistent with prior literature, food insecurity was associated with elevated ED psychopathology in this sample. Findings emphasize the importance of proper ED screening for college students vulnerable to food insecurity and EDs.

Publication Type

Journal article.

<309>

Accession Number

20210273984

Author

Keerthana, R.; Nisha, D. B.

Title

Impact of COVID-19 on human resource management in the organization.

Source

International Journal of Aquatic Science; 2021. 12(2):2431-2440. 12 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

A study on changes caused by COVID-19 that has enforced companies around the globe to accelerate transition to digital business processes. Human Resource Management (HRM) is a modern approach of maintaining people at the workplace which focuses on acquisition, development, utilization and maintenance of human resources. HRM needs to manage people in companies during the crisis in order to enable business continuity and ensure work-life balance. The Pandemic has also affected the day-to-day lives of the general public. Thus, people's income level is going down, inflation is going up and the losing job ratio is also going up. Meanwhile a number of discussions are taking place, concerning the impact of COVID-19 and implications of workplaces, working practices and Human Resource Management (HRM). The overall role of HRM and the daily tasks performed by the HR professionals have gone through significant shifts, particularly

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because of the exceptional growth of remote work in response to COVID-19 Pandemic. Hence, HR has to redesign and reimagine the way it works within the workplace. The quantitative methods have been utilized in this research in which a total of 84 respondents have been selected on the scale of non-profitability sampling. Descriptive statistics are the statistical metrics used in this research. From the analysis, it is found that the HR Managers should play a major role in satisfying their employee's needs, and the other major elements are mentioned in the analysis part.

Publication Type

Journal article.

<310>

Accession Number

20210273976

Author

Neelamadhab Padhy; Praveen Yadav; Syed Khasim; Basha, S. S.; Assudani, P. J.; Ranjana, S.

Title

Development of machine learning techniques to differentiate COVID-19 indications from serious diseases.

Source

International Journal of Aquatic Science; 2021. 12(2):2062-2067. 8 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

Considering the identical signs of both covid-19 and influenza, most individuals are unable to distinguish between the two, which can result in a person's death. To control the death rate, several approaches are needed to categories the signs of covid-19 and other diseases. Severe sickness is more likely to hit the elderly and individuals with underlying medical conditions and diseases lung diseases and cancer. In the context of the present outbreak, identification of these diseases is limited to a few clinical studies like RT-PCR and CT-Scan of lung pictures to detect the covid-19. We will develop a method to solve the present issues experienced by people in the outbreak condition, as these examinations take a long time and are highly expensive. Researchers discovered that image processing, data mining, artificial intelligence, and pattern recognition are widely utilized approaches for solving these problems after doing a research study.

Publication Type

Journal article.

<311>

Accession Number

20210273968

Author

Upmasingh

Title

Impact of COVID-19 on small town individual investors.

Source

International Journal of Aquatic Science; 2021. 12(2):1849-1856. 18 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

The outbreak of coronavirus in India has been trouble making for economic activity. Approximately all the sectors have been badly affected as household demand and export of goods sharply dropped. As every coin has two sides pandemic too became cold for some and a boon for others. Before the pandemic small-town investors used to invest in the mutual funds, gold, land, etc. after the pandemic they were not able to invest the money due to the financial crisis. SIP collections drop to 96000 crores in the 2020-21 the fiscal year. Despite the challenge's shops, businesses related to daily essentials have seen a sharp increase because of restricted travel due to preventive measures taken by the government as lockdown. Entrepreneurship survey shows that more than 60% of the small business in India are confident that besides slowdown and negative impact due to pandemic their business will recover and continue to grow. In my research, I have gathered information from individual investors of small-town using electronic media. I have received information through news papers, editorials. I have analyzed there life fund allocated by the government and how it helps to small-town individual investors to grow. This research study includes only individual investors.

Publication Type

Journal article.

<312>

Accession Number

20210273957

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

290

Author

Mitali Gupta

Title

Advent of e-learning is a blessing to education sector during COVID-19 pandemic.

Source

International Journal of Aquatic Science; 2021. 12(2):1458-1467. 20 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

In India, educational institutions (schools, colleges, and universities) use only traditional learning methods, such as face-to-face lectures in a classroom. Despite the fact that many academic institutions have begun to implement blended learning, many remain trapped in the past. The rapid emergence of Covid-19, a devastating disease caused by the Corona Virus (SARS-CoV-2) startled the entire world. This situation posed a challenge to the global education system, forcing instructors to switch to an online form of instruction overnight. Many academic institutions that had previously been hesitant to adapt their traditional pedagogical method now have no choice but to fully embrace online teaching- learning. This research will assist in determining the effects of e-learning during the COVID-19 Pandemic. This research was conducted for students enrolled in various colleges and universities who wanted to understand more about the role of e-learning during the epidemic. It can be a learning paradigm at educational institutions to use digital technologies to improve students' knowledge and abilities. For the sake of pupils, the government and educational departments must offer improved infrastructure for e-learning.

Publication Type

Journal article.

<313>

Accession Number

20210273955

Author

Leo, J.; Srinivasan, S.; Kumar, C. D. N.

Title

An economic impact of COVID-19 in India.

Source

International Journal of Aquatic Science; 2021. 12(2):1360-1366. 6 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

The current Indian economy has different challenges; it is impact on both demand and supply which has led to down India's economic growth. Meanwhile the Corona virus pandemic has set foot in India as well as global. It is affecting to the country's primary, secondary economic sectors and service sectors. This research article identifies the effects of India's Gross Domestic Product contributors and economic compensations due to the Covid-19 pandemic using the long-term distribution of a Markov Chain Analysis. In addition, the paper seeks to find the effects of the five sectors of the Indian economy due to the Covid-19. The results from this paper suggest to the government of India to alternate economic planning in the affected sectors of the economy. Moreover, the information may be helpful in constructing an economic recovery plan for the Indian economy post Covid-19.

Publication Type

Journal article.

<314>

Accession Number

20210273949

Author

Venkataramana Manipatruni; Nannapaneni, S. K.

Title

The role of Ed puzzle in online English language teaching and learning-a revolution through gamification during COVID-19 pandemic.

Source

International Journal of Aquatic Science; 2021. 12(2):1221-1226. 7 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

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E: library@rcvsknowledge.org

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The sudden paradigm shift in teaching and learning due to COVID-19 pandemic is just tantamount to this pandemic itself, as online teaching and learning turned up quite a shock for teachers and learners. Though there have been many Edtech tools even before COVID-19 pandemic, this pandemic furthers teachers and learners' dependence on Edtech tools conspicuously better than ever before. However, teachers and learners had to acclimatize to this unexpected shift in the realm of teaching and learning due to COVID-19. It would be intriguing to see teaching methodologies gain more momentum than curriculum does, during this crisis-hit situation. This shift in teaching and learning emphasizes Bertrand Russell's point of view as in 'More than the curriculum is the question of the methods of teaching and the spirit in which the teaching is given'. During this pandemic, at the outset, many teachers must have found it difficult to teach online using various Edtech tools which they may not have got acquainted with. But the problems with online teaching gradually dwindled, because of the teachers' acquaintance with the Edtech tools. At this juncture, our paper discusses how the Edtech tool Edpuzzle plays an important role in online teaching and learning, how it gamifies the activities and thus intrigues teaching and learning online and how it bridges the gap between teaching and learning online. Our paper would analyse numerous advantages of using Edpuzzle in teaching and learning English online and the very purpose of using it with a few limitations as well.

Publication Type

Journal article.

<315>

Accession Number

20210273939

Author

Gokilavani, S.; Sudalaiyandi Vignesh; Suzan, C.

Title

Impact of COVID-19 on augmentation of newest technologies used in banking sector.

Source

International Journal of Aquatic Science; 2021. 12(2):824-830.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

Banking system plays a very important role in Indian economy. It is like a central bravery to nation's economy as it caters to the financial needs of credit in all the provinces of the society. The progression in the technology has also impacted the Banking Sector not only in India but also in many countries. The Covid-19 pandemic situation has completely changed the lifestyle of the people. During this pandemic situation technologies such as e-banking plays a very important role for the banks to communicate with their customers. In this paper, an attempt has been made to study about the technologies used in banking

systems especially in the post Covid-19 Situation. The main objective of this study is to know about the mentality of the citizens in the digital payments and net banking in this post pandemic situation.

Publication Type

Journal article.

<316>

Accession Number

20210273934

Author

Surendran, C.; Premraj, F. C.

Title

The life style, anxiety and depression of the dump yard dwellers in Stalin Nagar, Ariyamangalam Village, Tiruchirappalli district due to COVID-19.

Source

International Journal of Aquatic Science; 2021. 12(2):783-789. 17 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

In Tiruchirappalli district, over 400 tonnes of waste collected from across the city and dumped at Ariyamangalam yard on a daily basis, which is spread across 55 acres. While this waste has grown to over 12 lakh tonnes over the years. At the same time, over 250 persons from 70 families are depending on this dump yard, they have been living for the past 40 years near about this dump yard, Peoples whose livelihoods depending on this dump yard, dumping of wastes are their sustenance. Germ, This single word is plaguing the whole world today, doing everything to protect themselves from it through New technology, In this context, the purpose of this research is to measure the lifestyle, depression and anxiety of the people of Stalin Nagar, Ariyamangalam village, Tiruchirappalli district, who have been living for four generations among the germs of life surrounded only by garbage, and the social demographic characteristics of those who have been taken for research. Explain and find out the similarities and differences in the nature of respondents' depression and anxiety. From a total 250 members of 70 families, of whom 50 persons between the ages of 25 and 40 are selected by lottery method from both gender. A questionnaire is prepared to determine their identity, the answers are obtained, and developing the conceptual and theoretical ideas concerning the lifestyle, depression and anxiety of Dump yard dwellers during Covid-19, protecting them from the depression and anxiety of Covid-19 and focusing to improving their quality of life through this research.

Publication Type

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Journal article.

<317>

Accession Number

20210273933

Author

Chitra, A.; Gopinath, R.

Title

A study on causes of stress to the farmers during COVID-19 pandemic.

Source

International Journal of Aquatic Science; 2021. 12(2):773-782. 27 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

Background of the Study: India has experienced various epidemics such as cholera (1817-1923), Flu (1918), Small pox (1974), Plague (1994), Swine Flu (2009) have had a great impact on the economy, the environment and all other human activities, such as Dairy, livestock, agriculture, transport, education, tourism, health, fishing, mining, production, commerce, etc. Currently, humankind is facing another pandemic, the infection of the new coronavirus (2019-nCoV) that produces the disease known as COVID-19. As on today the second wave of coronavirus is threatening India, people are in the fear of survival and expecting another lockdown. In this pandemic situation almost every one of us has a fair reason to get stressed. This paper is an attempt to study the causes of stress to the famers during COVID-19. The objective of this paper is to analyse thecasus of stressto farmers due to the impact of COVID-19 and lockdown and their level of psychological stress in Selected Districts of Tamil Nadu and suggest some measures to moderate the problems. Methodology: To study the casus of stressto farmers due the Coronavirus and the Lockdown, the researcher has selected Two Districts (Salem & Dharmapui) on convenient basis. The researcher has collected 350 samples through interview technique and collected secondary data from Press media. Findings: The researcher found, the famers are having stress due to factors like inadequate price for the product and so on. And the causes are differing based on gender and size of land possessed by the respondent. Conclusion: Soon we will come out form this pandemic situation; if at all Government will focus on the problems faced by the famers, it will leads to an another pandemic situation due to starving. Government should take necessary steps to moderate the stress causers and should do the needful to sort out the situation.

Publication Type

Journal article.

<318>

Accession Number

20210273930

Author

Ponni, S.; Raj, M. M. A.

Title

A study on digital gaming behavior and its associations with COVID-19 pandemic.

Source

International Journal of Aquatic Science; 2021. 12(2):699-704. 9 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

Background: The novel Coronavirus 2019 (COVID-19) pandemic has changed the daily routine life all over the world. India is devastating the second Wave of COVID-19. To combat, the government of India followed many public health measures such as quarantine, lockdown protocols, social distancing, promoting healthy lifestyles and self-isolation policies etc. As a consequence, the measures have led to occupational and educational disruption and psychological distress among the youth. Objectives: The study aims to explore the digital gaming behavior and its association during lockdown period of COVID-19 among the college students. Methods: Data collect randomly from the college students who they enrolled in various Arts colleges of Kanyakumari District, Tamilnadu. A total of 80 students constitute as samples. They contacted through Email or College Whatsapp group and requested to share the details. Results: the result will analyse their increasing and decreasing digital gaming behavior during the lockdown pandemic situation and also explore the association of components such as hours of gaming per day, changing daily routine, psychological problems with the lockdown period of COVID-19. Conclusion: Even though students may think digital gaming can be healthy way to relieve from stress and changing mood especially during lockdown but excessive engagement in digital gaming leads to developing unhealthy daily routine.

Publication Type

Journal article.

<319>

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

296

Accession Number

20210273928

Author

Tigga, M.; Dhivakar, J. P. F.

Title

A study on the mental health status of social workers working during this pandemic situation at Chennai.

Source

International Journal of Aquatic Science; 2021. 12(2):686-693. 8 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

Mental health is one of the most important factors in an individual's life. It is interlinked with all other aspects such as an individual's physical and emotional health, work life, relationships etc. Any disruptions in one of these aspects can affect all the other factors. It refers to the condition of being mentally and emotionally sound that is characterized by the absence of any mental illness and by adequate adjustment especially as reflected in feeling comfortable about oneself, positive feelings about others, and the ability to meet the demands of daily life (Merriam-Webster 1828). With the present situation of Covid-19 it has taken a toll on most of our mental health. In context of the present situation with shortage of adequate medical utilities, massive spike in Covid-19 cases around the country, as well as the mismanagement of the government regarding this situation, social work professionals along with other professionals have been working continuously to help the people who are in desperate need of help. The amount of work and commitment that this period demands especially in the part of a social work profession can affect their mental health to a great extent resulting in compassion fatigue which in itself is a factor for burnouts making them emotionally drained and helpless. Therefore this study aims to examine the mental health status of the Social Workers working during this pandemic crisis. For this study, the researcher used descriptive and quantitative research method. 50 samples for the study were collected through convenient sampling method. This study will help us to understand mental health aspect of social workers which in turn help us to know more about the difficulties faced by people who are helping and supporting others.

Publication Type

Journal article.

<320>

Accession Number

20210273916

Author

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Akhila, K. P.; John, J.

Title

The impact of COVID-19 on children and adolescents: an Indian perspectives and reminiscent model.

Source

International Journal of Aquatic Science; 2021. 12(2):472-482. 48 ref.

Publisher

International Journal of Aquatic Science

Location of Publisher

Urmia

Country of Publication

Iran

Abstract

This article summarizes and analyses the available data regarding the impact of Covid 19 on the care and well-being of children (5-9 years old) and adolescents (10-19 years old) in India. The Study used ' Snowball retrieval strategy 'The authors identified peer-reviewed studies, reports, and government articles relevant to the research question published between January 2020 and April 2021. The study finds that children and adolescents are highly vulnerable to the pandemic and also the effects are diverse and require immediate attention. The evaluation highlights the disproportionately more vulnerability of younger children and teenage girls within in the regions of education, home violence, child marriage, home workload, and mental health. The study proposes a Psychosocial Response Model for Pandemic Management (PRP Model) in unique connection with youngsters and adolescent's population in the country.

Publication Type

Journal article.

<321>

Accession Number

20210273544

Author

Micocci, M.; Gordon, A. L.; Allen, A. J.; Hicks, T.; Kierkegaard, P.; McLister, A.; Walne, S.; Hayward, G.; Buckle, P.

Title

COVID-19 testing in English care homes and implications for staff and residents.

Source

Age and Ageing; 2021. 50(3):668-672.

Publisher

Oxford University Press

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E: library@rcvsknowledge.org

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Location of Publisher

Oxford

Country of Publication

UK

Abstract

Introduction: Care home residents are at high risk of dying from coronavirus disease 2019 (COVID-19). Regular testing, producing rapid and reliable results is important in this population because infections spread quickly, and presentations are often atypical or asymptomatic. This study evaluated current testing pathways in care homes to explore the role of point-of-care tests (POCTs). Methods: A total of 10 staff from eight care homes, purposively sampled to reflect care organisational attributes that influence outbreak severity, underwent a semi-structured remote videoconference interview. Transcripts were analysed using process mapping tools and framework analysis focussing on perceptions about, gaps within and needs arising from current pathways. Results: Four main steps were identified in testing: infection prevention, preparatory steps, swabbing procedure and management of residents. Infection prevention was particularly challenging for mobile residents with cognitive impairment. Swabbing and preparatory steps were resource-intensive, requiring additional staff resource. Swabbing required flexibility and staff who were familiar to the resident. Frequent approaches to residents were needed to ensure they would participate at a suitable time. After-test management varied between sites. Several homes reported deviating from government guidance to take more cautious approaches, which they perceived to be more robust. Conclusion: Swab-based testing is organisationally complex and resource-intensive in care homes. It needs to be flexible to meet the needs of residents and provide care homes with rapid information to support care decisions. POCT could help address gaps but the complexity of the setting means that each technology must be evaluated in context before widespread adoption in care homes.

Publication Type

Journal article.

<322>

Accession Number

20210273542

Author

Talbot, C. V.; Briggs, P.

Title

'Getting back to normality seems as big of a step as going into lockdown': the impact of the COVID-19 pandemic on people with early to middle stage dementia.

Source

Age and Ageing; 2021. 50(3):657-663. 19 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

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Country of Publication

UK

Abstract

People with dementia can experience shrinkage of their social worlds, leading to a loss of independence, control and reduced well-being. We used 'the shrinking world' theory to examine how the COVID 19 pandemic has impacted the lives of people with early to middle stage dementia and what longer-term impacts may result. Interviews were conducted with 19 people with dementia and a thematic analysis generated five themes: the forgotten person with dementia, confusion over government guidance, deterioration of cognitive function, loss of meaning and social isolation, safety of the lockdown bubble. The findings suggest that the pandemic has accelerated the 'shrinking world' effect and created tension in how people with dementia perceive the outside world. Participants felt safe and secure in lockdown but also missed the social interaction, cognitive stimulation and meaningful activities that took place outdoors. As time in lockdown continued, these individuals experienced a loss of confidence and were anxious about their ability to re-engage in the everyday practises that allow them to participate in society. We recommend ways in which the government, communities and organisations might counteract some of the harms posed by this shrinking world.

Publication Type

Journal article.

<323>

Accession Number

20210273539

Author

Blomaard, L. C.; Linden, C. M. J. van der; Bol, J. M. van der; Jansen, S. W. M.; Polinder-Bos, H. A.; Willems, H. C.; Festen, J.; Barten, D. G.; Borgers, A. J.; Bos, J. C.; Bos, F. van den; Brouwer, E. J. M. de; Deudekom, F. J. A. van; Dijk, S. C. van; Emmelot-Vonk, M. H.; Geels, R. E. S.; Glind, E. M. M. van de; Groot, B. de; Hempenius, L.; Kamper, A. M.; Kampschreur, L. M.; Koning, M. M. M. de; Labots Geert; Looman, R.; Lucke, J. A.; Maas, H. A. A. M.; Mattace-Raso, F. U. S.; El-Moussaoui, R.; Munster, B. C. van; Nieuwkoop, C. van; Oosterwijk, L.; Regtuijt, M.; Robben, S. H. M.; Ruiten, R.; Salarbaks, A. M.; Schouten, H. J.; Smit, O. M.; Smits, R. A. L.; Spies, P. E.; Vreeswijk, R.; Vries, O. J. de; Wijngaarden, M. A.; Wyers, C. E.; Mooijaart, S. P.

Title

Frailty is associated with in-hospital mortality in older hospitalised COVID-19 patients in the Netherlands: the COVID-OLD study.

Source

Age and Ageing; 2021. 50(3):631-640.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

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www.rcvsknowledge.org

UK

Abstract

Background: During the first wave of the coronavirus disease 2019 (COVID-19) pandemic, older patients had an increased risk of hospitalisation and death. Reports on the association of frailty with poor outcome have been conflicting. **Background:** The aim of the present study was to investigate the independent association between frailty and in-hospital mortality in older hospitalised COVID-19 patients in the Netherlands. **Methods:** This was a multicentre retrospective cohort study in 15 hospitals in the Netherlands, including all patients aged 70 years, who were hospitalised with clinically confirmed COVID-19 between February and May 2020. Data were collected on demographics, co-morbidity, disease severity and Clinical Frailty Scale (CFS). Primary outcome was in-hospital mortality. **Results:** A total of 1,376 patients were included (median age 78 years (interquartile range 74-84), 60% male). In total, 499 (38%) patients died during hospital admission. Parameters indicating presence of frailty (CFS 6-9) were associated with more co-morbidities, shorter symptom duration upon presentation (median 4 versus 7 days), lower oxygen demand and lower levels of C-reactive protein. In multivariable analyses, the CFS was independently associated with in-hospital mortality: compared with patients with CFS 1-3, patients with CFS 4-5 had a two times higher risk (odds ratio (OR) 2.0 (95% confidence interval (CI) 1.3-3.0)) and patients with CFS 6-9 had a three times higher risk of in-hospital mortality (OR 2.8 (95% CI 1.8-4.3)). **Conclusions:** The in-hospital mortality of older hospitalised COVID-19 patients in the Netherlands was 38%. Frailty was independently associated with higher in-hospital mortality, even though COVID-19 patients with frailty presented earlier to the hospital with less severe symptoms.

Publication Type

Journal article.

<324>

Accession Number

20210273537

Author

Cosco, T. D.; Best, J.; Davis, D.; Bryden, D.; Arkill, S.; Oppen, J. van; Riadi, I.; Wagner, K. R.; Conroy, S.

Title

What is the relationship between validated frailty scores and mortality for adults with COVID-19 in acute hospital care? A systematic review.

Source

Age and Ageing; 2021. 50(3):608-616. 45 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

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Background and Aim: The aim of this systematic review was to quantify the association between frailty and COVID-19 in relation to mortality in hospitalised patients. **Methods:** Medline, Embase, Web of Science and the grey literature were searched for papers from inception to 10 September 2020; the search was re-run in Medline up until the 9 December 2020. Screening, data extraction and quality grading were undertaken by two reviewers. **Results:** were summarised using descriptive statistics, including a meta-analysis of overall mortality; the relationships between frailty and COVID-19 mortality were summarised narratively. Results A total of 2,286 papers were screened resulting in 26 being included in the review. Most studies were from Europe, half from the UK, and one from Brazil; the median sample size was 242.5, median age 73.1 and 43.5% were female. In total, 22/26 used the Clinical Frailty Scale; reported mortality ranged from 14 to 65%. Most, but not all studies showed an association between increasing frailty and a greater risk of dying. Two studies indicated a sub-additive relationship between frailty, COVID-19 and death, and two studies showed no association. **Conclusions:** Whilst the majority of studies have shown a positive association between COVID-19-related death and increasing frailty, some studies suggested a more nuanced understanding of frailty and outcomes in COVID-19 is needed. Clinicians should exert caution in placing too much emphasis on the influence of frailty alone when discussing likely prognosis in older people with COVID-19 illness.

Publication Type

Journal article.

<325>

Accession Number

20210273473

Author

Schutz, D.; Conzelmann, C.; Fois, G.; Gross, R.; Weil, T.; Wettstein, L.; Stenger, S.; Zelikin, A.; Hoffmann, T. K.; Frick, M.; Muller, J. A.; Munch, J.

Title

Carrageenan-containing over-the-counter nasal and oral sprays inhibit SARS-CoV-2 infection of airway epithelial cultures.

Source

American Journal of Physiology - Lung Cellular and Molecular Physiology; 2021. 320(5):L750-L756. 57 ref.

Publisher

American Physiological Society

Location of Publisher

Bethesda

Country of Publication

USA

Abstract

Pharmaceutical interventions are urgently needed to prevent severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and transmission. As SARS-CoV-2 infects and spreads via the nasopharyngeal airways, we analyzed the antiviral effect of selected nasal and oral sprays on virus infection in vitro. Two nose sprays showed virucidal activity but were cytotoxic precluding further analysis in cell culture. One nasal and one mouth spray suppressed SARS-CoV-2 infection of TMPRSS2-expressing Vero

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E6 cells and primary differentiated human airway epithelial cultures. The antiviral activity in both sprays could be attributed to polyanionic i- and -carrageenans. Thus, application of carrageenan-containing nasal and mouth sprays may reduce the risk of acquiring SARS-CoV-2 infection and may limit viral spread, warranting further clinical evaluation.

Publication Type

Journal article.

<326>

Accession Number

20210273428

Author

Rodriguez-Pla, A.; Vikram, H. R.; Khalid, V.; Wesselius, L. J.

Title

COVID-19 pneumonia in a patient with granulomatosis with polyangiitis on rituximab: case-based review.

Source

Rheumatology International; 2021. 41(8):1509-1514. 34 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

A 77-year-old man with past medical history of granulomatosis with polyangiitis (GPA) on rituximab and prednisone, presented to the hospital with worsening cough and shortness of breath. He had tested positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection by nasal swab polymerase chain reaction (PCR) while asymptomatic, 6 weeks earlier. He started with cough and shortness of breath 2 weeks after his initial positive test. After developing symptoms, he tested negative twice by nasal swab PCR, but the PCR of his bronchioalveolar lavage was positive for SARS-CoV-2. He did not develop antibodies against coronavirus. Prednisone 15 mg daily was continued, and he received remdesivir, and convalescent plasma with quick recovery. We reviewed the literature to search for similar cases. Our case suggests that SARS-CoV-2 infection in patients on rituximab may have an atypical presentation and the diagnosis may be delayed due to negative PCR testing in the nasal swab. Patients may benefit from treatment with convalescent plasma.

Publication Type

Journal article.

<327>

Accession Number

20210273320

Author

Medetalibeyoglu, A.; Emet, S.; Senkal, N.; Aydogan, M.; Kose, M.; Tukek, T.

Title

Cardiovascular view of intermediate and high-risk COVID-19 patients: single-centre experience with low mortality and intensive care hospitalisation rates.

Source

Cardiovascular Journal of Africa; 2021. 32(2):79-86.

Publisher

Clinics Cardive Publishing (Pty) Ltd.

Location of Publisher

Durbanville

Country of Publication

South Africa

Abstract

Aim: The purpose of this article was to report the low rates of intensive care unit admission and mortality in intermediate and high-risk COVID-19 patients, and to share our clinical approach with other colleagues. In addition, we sought to reveal the relationship between myocardial injury and clinical outcomes such as death, intensive care unit uptake and hospital stay, and the relationship between inflammatory parameters and cardiac biomarkers in a cardiovascular perspective. **Methods:** Patients admitted to the emergency department in the Department of Internal Medicine, Faculty of Medicine, Istanbul University, with laboratory or clinically and radiologically confirmed COVID-19 were included in this retrospective cross-sectional study, which was conducted from 11 March to 10 April 2020. The demographic (age and gender) and clinical (symptoms, co-morbidities, treatments, complications and outcomes) characteristics, laboratory findings, and results of cardiac examinations (cardiac biomarkers and electrocardiography) of patients during hospitalisation were collected from their medical records by two investigators. Data were analysed using SPSS version 25.0 (IBM). A two-sided $p < 0.05$ was considered statistically significant. Analysis began on 11 April 2020. **Results:** Mortality and intensive care unit admission rates were statistically significantly higher in patients with cardiac injury than in those without. There was a positive correlation between levels of high-sensitivity TNT and fibrinogen, D-dimer, ferritin, procalcitonin and C-reactive protein ($r = 0.24$, $p < 0.01$; $r = 0.37$, $p < 0.01$; $r = 0.25$, $p < 0.01$; $r = 0.34$, $p < 0.01$; $r = 0.31$, $p < 0.01$). **Conclusion:** The first general data of our 309 patients regarding low mortality and intensive care admission rates, and particular treatment algorithms specific to our centre should be helpful in determining better treatment strategies in the future. Our study emphasises the importance and frequency of cardiovascular outcomes, and the significance of some cardiac biomarkers in predicting COVID-19 prognosis.

Publication Type

Journal article.

<328>

Accession Number

20210273302

Author

Nazia Mehfooz; Farhana Siraj; Afshan Shabir; Suhail Mantoo; Tajamul Hussain; Umar Hafiz; Muzaffar Bindroo; Mudasir Qadri; Mushtaq Dangroo; Koul, A. N.; Rafi Jan; Sanaullah Shah; Fayaz Sofi; Wani, F.

Title

Assessment of risk factors for severe illness in hospitalized COVID-19 patients at a tertiary care hospital.

Source

Journal of the Association of Physicians of India; 2021. 69(May):56-61. 33 ref.

Publisher

Association of Physicians of India

Location of Publisher

Mumbai

Country of Publication

India

Abstract

Background: COVID-19 -19 is caused by severe acute respiratory syndrome coronavirus (SAR-COV-2). Identification of risk factors for severe illness helps in stratification of patients who may benefit from aggressive management strategies and early intervention. We aim to assess the risk factors for severe illness in patients admitted with COVID 19 infection. Methods: We conducted a retrospective observational study of 802 patients with confirmed COVID-19 admitted to our tertiary care hospital. Univariate and multivariate logistic regression were used to identify determinants for disease severity. Results: Of 802 hospitalized patients, severe COVID-19 infection was noted in (n= 537) (67%) patients. Patients with severe infection were significantly more likely to have hypertension, diabetes, and chronic pulmonary disease and had significantly higher white blood cell counts, NLR and decreased haemoglobin than patients with non severe infection. In multivariable logistic regression analysis, risk factors for severe infection included pre-existing hypertension (OR 2.29, 95% CI; (1.532-3.423), longer duration of symptoms before hospitalization (OR:1.158,95% CI(1.098-1.221), P < 0.001) and Neutrophil lymphocyte ratio(NLR) > 3.8(OR, 1.101,95% CI (1.068-1.135); P < 0.001). ROC curve for NLR shows that NLR at a cut off more than 3.8 has sensitivity of 80.5% and specificity of 58% in predicting severe illness. Conclusions: Patients with pre-existing hypertension, longer duration symptoms before hospitalization and high NLR (>3.8) needs early intervention to prevent the potential development of severe COVID-19.

Publication Type

Journal article.

<329>

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305

Accession Number

20210273283

Author

Sousa, J. G. M. de; Ribeiro, W. A.; Franco, A. de A.; Floriano, A. de A.; Souza, A. B. T. de; Carvalho, B. L. de; Guinancio, J. C.; Dias, L. L. da C.

Title

Use of personal protective equipment from the perspective of the nursing team in the fight against COVID-19. [Portuguese]

Source

Revista Cientifica Multidisciplinar RECIMA21; 2021. 2(4). 34 ref.

Publisher

Editora Revista Cientifica Multidisciplinar RECIMA21 LTDA

Location of Publisher

Jundiai

Country of Publication

Brazil

Abstract

This is a narrative literature review, that is, it seeks to comprehensively understand the existing literature in the scientific community in order to reflect on good nursing practices in the use of personal protective equipment in the prevention of COVID-19 within health services. Personal protective equipment (PPE) is all devices or products for individual use, used by the worker, intended to protect risks that may threaten safety and health at work. The COVID-19 pandemic represents one of the greatest global health challenges of this century. Epidemiological situation of covid-19 in Brazil (20.04.2021) - Ministry of Health. The total number of lives lost to covid-19 reached 378,003. To account for the study proposal, the final sample consisted of only 09 references, with 07 articles and 02 guidebooks. Finally, the pandemic has brought unparalleled and unstable times and with the fast speed of rapid changes, however, reliable, current and good quality information is not enough, it is also necessary to think about the role of communication properly. It is effective in eliminating risks, emphasizing the importance of hand hygiene and continuous use of the mask correctly.

Publication Type

Journal article.

<330>

Accession Number

20210273262

Author

Chaves, A. G.; Costa, V. M. da; Brito, M. de V.

Title

Candida auris: is there a new pandemy imminent? [Portuguese]

Source

Revista Cientifica Multidisciplinar RECIMA21; 2021. 2(4). 23 ref.

Publisher

Editora Revista Cientifica Multidisciplinar RECIMA21 LTDA

Location of Publisher

Jundiai

Country of Publication

Brazil

Abstract

Candida auris was first described in Japan and since then outbreaks of infection and colonization considered serious by C. auris have been reported in different countries. This work aims to show, with updated and relevant information from the literature, the potential for emergence of the yeast C. auris, as well as to present knowledge about the means of drug resistance of this pathogen. This study is an integrative literature review. The emergence of C. auris is characterized by its high capacity for drug resistance, with various resistance mechanisms and preference for hospital environments, especially immunosuppressed patients. The pathogen has limited therapeutic options and can cause several infections, most of which are serious, as they occur in conjunction with other adjacent complications such as COVID-19. C. auris has a high potential to be the protagonist of a new pandemic with a characteristic of multidrug resistance and the capacity for high mortality rates.

Publication Type

Journal article.

<331>

Accession Number

20210273243

Author

Javeria Saleem; Muhammad Ishaq; Rubeena Zakar; Suddahazai, I. H. K.; Fischer, F.

Title

Experiences of frontline Pakistani emigrant physicians combating COVID-19 in the United Kingdom: a qualitative phenomenological analysis.

Source

BMC Health Services Research; 2021. 21(291):(31 March 2021). 29 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

307

Country of Publication

UK

Abstract

Background: This study aims to explore the experiences, beliefs, feelings, and challenges faced by Pakistani migrant doctors working in the United Kingdom in times of the COVID-19 pandemic. The qualitative study aims to explore the lived experiences, beliefs, feelings, and challenges faced by Pakistani migrant physicians working in the United Kingdom during the COVID-19 pandemic. **Methods:** An exploratory phenomenological approach was used to collate data on experiences expressed during the COVID-19 pandemic. Purposive and snowball sampling was used to target participants, which were doctors of Pakistani origin involved in the direct care and management of COVID-19 patients in different NHS hospitals of the United Kingdom. Semi-structured, in-depth telephonic interviews were conducted with study participants in May 2020. Data analysis was done parallel with data collection by using an inductive qualitative approach. **Results:** We recruited ten frontline physicians. Four theme categories emerged from the data analysis: (1) Working across borders and cultures, (2) Role of beliefs for coping with stress and fear, (3) Passion and profession, and (4) Scaffolding the Pakistani health system. Overall, the results show that the participants received limited professional support, in terms of counseling and psychological rehabilitation. Instead, they had to use self-management strategies to cope with the situation. **Conclusion:** The intensive work exhausted participants physically and emotionally. They were holding a lot of grief and hurt inside, but still, healthcare professionals showed the spirit of professional dedication to overcome difficulties. Although currently coping with their emotional problems, comprehensive professional support should be made available to cater to the wellbeing of frontline physicians.

Publication Type

Journal article.

<332>

Accession Number

20210273219

Author

Olcer, S.; Idris, M.; Yilmaz-Aslan, Y.; Brzoska, P.

Title

"We are taking every precaution to do our part...": a comparative analysis of nursing, palliative and hospice care facilities' websites during the COVID-19 pandemic.

Source

BMC Health Services Research; 2021. 21(579):(16 June 2021). 28 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

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Abstract

Background: The COVID-19 pandemic has a significant impact on health care processes. Precautions such as restrictions imposed on visitors and social distancing have led to multiple challenges, particularly in terms of communication. Using the case of nursing, palliative and hospice care facilities in Germany and drawing on agenda-setting theory, the present study aims to shed light on how health care facilities use their websites to inform (potential) health care users about changes in regulations, new protective measures implemented and about recommendations in the context of the COVID-19 pandemic. **Methods:** The websites of nursing, palliative and hospice care facilities in Germany were examined using qualitative document analysis and qualitative content analysis. A total of 138 websites was analysed in the study. The data gathered includes all information about COVID-19 on these websites published from the beginning of March until August 15, 2020. **Results:** Facilities show similarities in adhering to the measures taken by the authorities to restrict the spread of SARS-CoV-2 and to protect vulnerable patients and employees. All facilities urged the public to avoid paying visits to patients in facilities unless there was an emergency; however, visiting procedures in practice varied by types of facilities. For optimal communication, telephone and especially video calls were the options preferred by health care providers and health care users. Facilities made great efforts to prevent emotional stress and to strengthen resilience among all stakeholders. Transparency was adopted by many facilities in order to build the public's trust. **Conclusions:** The agenda of health care facilities has been seriously affected by the COVID-19 pandemic. The study sheds light on the strategies developed by facilities, their efforts to increase emotional resilience among health care staff and health care users, the ethical guidelines they have adopted regarding privacy policies as well as how these themes are communicated via the facilities' websites. The results can inform other health care facilities about how websites can be used as essential communication tools in times of public health crises.

Publication Type

Journal article.

<333>

Accession Number

20210273190

Author

Aunger, J. A.; Millar, R.; Greenhalgh, J.

Title

When trust, confidence, and faith collide: refining a realist theory of how and why inter-organisational collaborations in healthcare work.

Source

BMC Health Services Research; 2021. 21(602):(26 June 2021). 92 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

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Abstract

Background: Health systems are facing unprecedented socioeconomic pressures as well as the need to cope with the ongoing strain brought about by the COVID-19 pandemic. In response, the reconfiguration of health systems to encourage greater collaboration and integration has been promoted with a variety of collaborative shapes and forms being encouraged and developed. Despite this continued interest, evidence for success of these various arrangements is lacking, with the links between collaboration and improved performance often remaining uncertain. To date, many examinations of collaborations have been undertaken, but use of realist methodology may shed additional light on how and why collaboration works, and whom it benefits. Methods: This paper seeks to test initial context-mechanism-outcome configurations (CMOCs) of interorganisational collaboration with the view to producing a refined realist theory. This phase of the realist synthesis used case study and evaluation literature; combined with supplementary systematic searches. These searches were screened for rigour and relevance, after which CMOCs were extracted from included literature and compared against existing ones for refinement, refutation, or affirmation. We also identified demi-regularities to better explain how these CMOCs were interlinked. Results: Fifty-one papers were included, from which 338 CMOCs were identified, where many were analogous. This resulted in new mechanisms such as 'risk threshold' and refinement of many others, including trust, confidence, and faith, into more well-defined constructs. Refinement and addition of CMOCs enabled the creation of a 'web of causality' depicting how contextual factors form CMOC chains which generate outputs of collaborative behaviour. Core characteristics of collaborations, such as whether they were mandated or cross-sector, were explored for their proposed impact according to the theory. Conclusion: The formulation of this refined realist theory allows for greater understanding of how and why collaborations work and can serve to inform both future work in this area and the implementation of these arrangements. Future work should delve deeper into collaborative subtypes and the underlying drivers of collaborative performance. Review registration: This review is part of a larger realist synthesis, registered at PROSPERO with ID CRD42019149009.

Publication Type

Journal article.

<334>

Accession Number

20210272901

Author

Nozari, N.

Title

COVID-19 outbreak and its burden on a new wave of functional gastrointestinal disorders.

Source

Middle East Journal of Digestive Diseases; 2021. 13(2):91-94. 25 ref.

Publisher

Iranian Association of Gastroenterology and Hepatology & Shiraz University of Medical Sciences

Location of Publisher

Tehran

Country of Publication

Iran

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Abstract

The current outbreak of COVID-19 infection among humans is strongly impacting global physical and mental health. This outbreak can induce or exacerbate some chronic disorders such as functional gastrointestinal disorders (FGIDs) due to stress, anxiety, depression, insomnia, denial, anger, and fear. The current focus on the physical aspects of COVID-19 infection may distract public attention from the psychosocial consequences of this outbreak. The mental disorders related to this outbreak may develop and extend FGIDs in the long term. FGIDs have a significant impact on daily activities and quality of life and also cause high economic burdens through direct medical costs and loss of productivity. The purpose of this mini-review was to emphasize the critical state of old and new cases of FGIDs during the COVID-19 outbreak. Published English papers about mental health disorders related to the COVID19 outbreak or before the infectious outbreak, stress, and FGIDs were considered and reviewed. We selected articles which were current and had the most relevance to FGIDs, psycho-somatization, and infectious outbreak.

Publication Type

Journal article.

<335>

Accession Number

20210272843

Author

Citarella, A.; Scala, A.; Piperno, A.; Micale, N.

Title

SARS-CoV-2 Mpro: a potential target for peptidomimetics and small-molecule inhibitors.

Source

Biomolecules; 2021. 11(4). 135 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The uncontrolled spread of the COVID-19 pandemic caused by the new coronavirus SARS-CoV-2 during 2020-2021 is one of the most devastating events in the history, with remarkable impacts on the health, economic systems, and habits of the entire world population. While some effective vaccines are nowadays approved and extensively administered, the long-term efficacy and safety of this line of intervention is constantly under debate as coronaviruses rapidly mutate and several SARS-CoV-2 variants have been already identified worldwide. Then, the WHO's main recommendations to prevent severe clinical complications by COVID-19 are still essentially based on social distancing and limitation of human interactions, therefore the identification of new target-based drugs became a priority. Several strategies have been proposed to counteract such viral infection, including the repurposing of FDA already approved for the

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treatment of HIV, HCV, and EBOLA, inter alia. Among the evaluated compounds, inhibitors of the main protease of the coronavirus (Mpro) are becoming more and more promising candidates. Mpro holds a pivotal role during the onset of the infection and its function is intimately related with the beginning of viral replication. The interruption of its catalytic activity could represent a relevant strategy for the development of anti-coronavirus drugs. SARS-CoV-2 Mpro is a peculiar cysteine protease of the coronavirus family, responsible for the replication and infectivity of the parasite. This review offers a detailed analysis of the repurposed drugs and the newly synthesized molecules developed to date for the treatment of COVID-19 which share the common feature of targeting SARS-CoV-2 Mpro, as well as a brief overview of the main enzymatic and cell-based assays to efficaciously screen such compounds.

Publication Type

Journal article.

<336>

Accession Number

20210272833

Author

Najim, M.; Rahhal, A.; Khir, F.; Aljundi, A. H.; Yousef, S. A.; Ibrahim, F.; Amer, A.; Mohamed, A. S.; Saleh, S.; Alfariidi, D.; Mahfouz, A.; Alyafei, S.; Howady, F.; Khatib, M.; Alemadi, S. A.

Title

Prevalence and clinical significance of antiphospholipid antibodies in patients with coronavirus disease 2019 admitted to intensive care units: a prospective observational study.

Source

Rheumatology International; 2021. 41(7):1243-1252. 32 ref.

Publisher

Springer-Verlag GmbH

Location of Publisher

Berlin

Country of Publication

Germany

Abstract

Coronavirus disease 2019 (COVID-19) increases the risk of coagulopathy. Although the presence of antiphospholipid antibodies (aPLs) has been proposed as a possible mechanism of COVID-19-induced coagulopathy, its clinical significance remains uncertain. Therefore, this study aimed to evaluate the prevalence and clinical significance of aPLs among critically ill patients with COVID-19. This prospective observational study included 60 patients with COVID-19 admitted to intensive care units (ICU). The study outcomes included prevalence of aPLs, and a primary composite outcome of all-cause mortality and arterial or venous thrombosis between antiphospholipid-positive and antiphospholipid-negative patients during their ICU stay. Multiple logistic regression was used to assess the influence of aPLs on the primary composite outcome of mortality and thrombosis. A total of 60 critically ill patients were enrolled. Among them, 57 (95%) were men, with a mean age of 52.8 +or- 12.2 years, and the majority were from Asia (68%). Twenty-two patients (37%) were found be antiphospholipid-positive; 21 of them were positive for lupus anticoagulant,

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whereas one patient was positive for anti-beta2-glycoprotein IgG/IgM. The composite outcome of mortality and thrombosis during their ICU stay did not differ between antiphospholipid-positive and antiphospholipid-negative patients (4 [18%] vs. 6 [16%], adjusted odds ratio 0.98, 95% confidence interval 0.1-6.7; p value = 0.986). The presence of aPLs does not seem to affect the outcomes of critically ill patients with COVID-19 in terms of all-cause mortality and thrombosis. Therefore, clinicians may not screen critically ill patients with COVID-19 for aPLs unless deemed clinically appropriate.

Publication Type

Journal article.

<337>

Accession Number

20210272800

Author

Chappell, J. G.; Tsoleridis, T.; Clark, G.; Berry, L.; Holmes, N.; Moore, C.; Carlile, M.; Sang Fei; Debebe, B. J.; Wright, V.; Irving, W. L.; Thomson, B. J.; Boswell, T. C. J.; Willingham, I.; Joseph, A.; Smith, W.; Khakh, M.; Fleming, V. M.; Lister, M. M.; Howson-Wells, H. C.; Holmes, E. C.; Loose, M. W.; Ball, J. K.; McClure, C. P.

Title

Retrospective screening of routine respiratory samples revealed undetected community transmission and missed intervention opportunities for SARS-CoV-2 in the United Kingdom.

Source

Journal of General Virology; 2021. 102(6). 39 ref.

Publisher

Microbiology Society

Location of Publisher

London

Country of Publication

UK

Abstract

In the early phases of the SARS coronavirus type 2 (SARS-CoV-2) pandemic, testing focused on individuals fitting a strict case definition involving a limited set of symptoms together with an identified epidemiological risk, such as contact with an infected individual or travel to a high-risk area. To assess whether this impaired our ability to detect and control early introductions of the virus into the UK, we PCR-tested archival specimens collected on admission to a large UK teaching hospital who retrospectively were identified as having a clinical presentation compatible with COVID-19. In addition, we screened available archival specimens submitted for respiratory virus diagnosis, and dating back to early January 2020, for the presence of SARS-CoV-2 RNA. Our data provides evidence for widespread community circulation of SARS-CoV-2 in early February 2020 and into March that was undetected at the time due to restrictive case definitions informing testing policy. Genome sequence data showed that many of these early cases were infected with a distinct lineage of the virus. Sequences obtained from the first officially recorded case in Nottinghamshire - a traveller returning from Daegu, South Korea - also clustered with these early UK

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sequences suggesting acquisition of the virus occurred in the UK and not Daegu. Analysis of a larger sample of sequences obtained in the Nottinghamshire area revealed multiple viral introductions, mainly in late February and through March. These data highlight the importance of timely and extensive community testing to prevent future widespread transmission of the virus.

Publication Type

Journal article.

<338>

Accession Number

20210272785

Author

Kumric, M.; Kurir, T. T.; Martinovic, D.; Zivkovic, P. M.; Bozic, J.

Title

Impact of the COVID-19 pandemic on inflammatory bowel disease patients: a review of the current evidence.

Source

World Journal of Gastroenterology; 2021. 27(25):3748-3761. 102 ref.

Publisher

Beijing Baishideng BioMed Scientific Co., Ltd.

Location of Publisher

Beijing

Country of Publication

China

Abstract

Since the initial coronavirus disease 2019 (COVID-19) outbreak in China in December 2019, the infection has now become the biggest medical issue of modern medicine. Two major contributors that amplified the impact of the disease and subsequently increased the burden on health care systems were high mortality among patients with multiple co-morbidities and overcapacity of intensive care units. Within the gastroenterology-related community, particular concern was raised with respect to patients with inflammatory bowel disease (IBD), as those patients are prone to opportunistic infections mainly owing to their immunosuppressive-based therapies. Hence, we sought to summarize current knowledge regarding COVID-19 infection in patients with IBD. Overall, it seems that IBD is not a comorbidity that poses an increased risk for COVID-19 acquisition, except in patients treated with 5-aminosalicylates. Furthermore, outcomes of the infected patients are largely dependent on therapeutic modality by which they are treated, as some worsen the clinical course of COVID-19 infection, whereas others seem to dampen the detrimental effects of COVID-19. Finally, we discussed the present and the future impact of COVID-19 pandemic and concomitantly increased health care burden on IBD-management.

Publication Type

Journal article.

<339>

Accession Number

20210272783

Author

Inchingolo, R.; Acquafredda, F.; Tedeschi, M.; Laera, L.; Surico, G.; Surgo, A.; Fiorentino, A.; Spiliopoulos, S.; De'Angelis, N.; Memeo, R.

Title

Worldwide management of hepatocellular carcinoma during the COVID-19 pandemic.

Source

World Journal of Gastroenterology; 2021. 27(25):3780-3789. 42 ref.

Publisher

Beijing Baishideng BioMed Scientific Co., Ltd.

Location of Publisher

Beijing

Country of Publication

China

Abstract

The coronavirus disease 2019 (COVID-19) pandemic has impacted hospital organization, with the necessity to quickly react to face the pandemic. The management of the oncological patient has been modified by necessity due to different allocation of nurses and doctors, requiring new strategies to guarantee the correct assistance to the patients. Hepatocellular carcinoma, considered as one of the most aggressive types of liver cancer, has also required a different management during this period in order to optimize the management of patients at risk for and with this cancer. The aim of this document is to review recommendations on hepatocellular carcinoma surveillance and management, including surgery, liver transplantation, interventional radiology, oncology, and radiotherapy. Publications and guidelines from the main scientific societies worldwide regarding the management of hepatocellular carcinoma during the COVID-19 pandemic were reviewed.

Publication Type

Journal article.

<340>

Accession Number

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20210272621

Author

Pendolino, A. L.; Ottaviano, G.; Scarpa, B.; Cattelan, A.; Andrews, J. A.; Andrews, P. J.

Title

Characteristics of taste dysfunction in COVID-19 subjects coming from two different countries.

Source

Journal of Neurovirology; 2021. 27(3):482-485. 7 ref.

Publisher

Springer

Location of Publisher

New York

Country of Publication

USA

Abstract

Taste dysfunction (TD) has been recognised, together with olfactory dysfunction, as a key presenting symptom of COVID-19. The capability to recognise flavours, flavour intensities and aroma characteristics can be highly variable within the same population, as well as potentially diverse between culturally different populations. The aims of this study are to evaluate whether a difference in the types of TD presentation amongst COVID-19 positive subjects can be demonstrated and whether a difference exists between populations of different cultures.

Publication Type

Journal article.

<341>

Accession Number

20210272601

Author

Burgess, H. M.; Depledge, D. P.; Thompson, L.; Srinivas, K. P.; Grande, R. C.; Vink, E. I.; Abebe, J. S.; Blackaby, W. P.; Hendrick, A.; Albertella, M. R.; Kouzarides, T.; Stapleford, K. A.; Wilson, A. C.; Mohr, I.

Title

Targeting the m6A RNA modification pathway blocks SARS-CoV-2 and HCoV-OC43 replication.

Source

Genes & Development; 2021. 35(13/14):1005-1019. many ref.

Publisher

Cold Spring Harbor Laboratory Press

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Location of Publisher

Cold Spring Harbor

Country of Publication

USA

Abstract

N6-methyladenosine (m6A) is an abundant internal RNA modification, influencing transcript fate and function in uninfected and virus-infected cells. Installation of m6A by the nuclear RNA methyltransferase METTL3 occurs cotranscriptionally; however, the genomes of some cytoplasmic RNA viruses are also m6A-modified. How the cellular m6A modification machinery impacts coronavirus replication, which occurs exclusively in the cytoplasm, is unknown. Here we show that replication of SARS-CoV-2, the agent responsible for the COVID-19 pandemic, and a seasonal human beta-coronavirus HCoV-OC43, can be suppressed by depletion of METTL3 or cytoplasmic m6A reader proteins YTHDF1 and YTHDF3 and by a highly specific small molecule METTL3 inhibitor. Reduction of infectious titer correlates with decreased synthesis of viral RNAs and the essential nucleocapsid (N) protein. Sites of m6A modification on genomic and subgenomic RNAs of both viruses were mapped by methylated RNA immunoprecipitation sequencing (meRIP-seq). Levels of host factors involved in m6A installation, removal, and recognition were unchanged by HCoV-OC43 infection; however, nuclear localization of METTL3 and cytoplasmic m6A readers YTHDF1 and YTHDF2 increased. This establishes that coronavirus RNAs are m6A-modified and host m6A pathway components control beta-coronavirus replication. Moreover, it illustrates the therapeutic potential of targeting the m6A pathway to restrict coronavirus reproduction.

Publication Type

Journal article.

<342>

Accession Number

20210272374

Author

Kostyal, L. A.; Szeman, Z.; Almasi, V. E.; Fabbietti, P.; Quattrini, S.; Socci, M.; Lamura, G.; Gagliardi, C.

Title

Impact of the COVID-19 pandemic on family carers of older people living with dementia in Italy and Hungary.

Source

Sustainability; 2021. 13(13). 63 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

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Abstract

The COVID-19 pandemic has had a major effect on both older people with dementia and families caring for them. This paper presents the results of an online survey carried out among Italian and Hungarian family carers of people with dementia during the first pandemic wave (May-July 2020, n = 370). The research questions were the following: (1) How has the pandemic changed the lives of family carers? (2) How did government restriction measures change the availability of care-related help? (3) What other changes did families experience? Results show that about one-quarter of both subsamples experienced a deterioration in their financial status. A decline in both general and mental health was also reported. Due to "lockdown", family carers' burden increased substantially. Utilization of care-related help decreased, and the share of those left with no help increased in both countries. Cross-country differences emerged in terms of dementia care system, severity of the first pandemic wave, and measures put in place by governments. Findings outline the weaknesses of support structures and their country-specific vulnerabilities to a worldwide pandemic. To better protect people with dementia in the future, it is essential to strengthen their family carers, and support structures need to be re-evaluated and re-designed.

Publication Type

Journal article.

<343>

Accession Number

20210272358

Author

Lall, S. V.; Wahba, S. N.

Title

Crowded cities: new methodology in COVID-19 risk assessment.

Source

Sustainability; 2021. 13(13). 24 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In this paper, we provide a novel approach to distinguish livable urban densities from crowded cities and describe how this distinction has proved to be critical in predicting COVID-19 contagion hotspots in cities in low- and middle-income country. Urban population density - considered as the ratio of population to land area, without reference to floor space consumption or other measures of livability - can have large drawbacks. To address this drawback and distinguish between density and crowding, it is important to adjust for measures of floor space as well as open space and neighborhood amenities. We use a dataset on building heights, representative of cities worldwide, to measure densities based on floor area consumption

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per person as well as apply this measure to develop a COVID-19 hotspot predictive tool to help city leaders prioritize civic and medical resources during the pandemic. We conclude by outlining priority interventions that could enable city leaders and local governments to transform crowded cities into livable places.

Publication Type

Journal article.

<344>

Accession Number

20210272326

Author

Winchester, A. K.; Peterson, R. A.; Carter, E.; Sammel, M. D.

Title

Impact of COVID-19 social distancing policies on traffic congestion, mobility, and NO₂ pollution.

Source

Sustainability; 2021. 13(13). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Lockdowns implemented during the COVID-19 pandemic were utilized to evaluate the associations between "social distancing policies" (SDPs), traffic congestion, mobility, and NO₂ air pollution. Spatiotemporal linear mixed models were used on city-day data from 22 US cities to estimate the associations between SDPs, traffic congestion and mobility. Autoregressive integrated moving average models with Fourier terms were then used on historical data to forecast expected 2020 NO₂. Time series models were subsequently employed to measure how much reductions in local traffic congestion were associated with lower-than-forecasted 2020 NO₂. Finally, the equity of NO₂ pollution was assessed with community-level sociodemographics. When cities' most stringent SDPs were implemented, they observed a 23.47 (95% CI: 18.82-28.12) percent reduction in average daily congestion and a 13.48 (95% CI: 10.36-16.59) percent decrease in average daily mobility compared to unrestricted days. For each standard deviation (8.38%) reduction in local daily congestion, average daily NO₂ decreased by 1.37 (95% CI: 1.24-1.51) parts per billion relative to its forecasted value. Citizenship, education, and race were associated with elevated absolute NO₂ pollution levels but were not detectably associated with reductions in 2020 NO₂ relative to its forecasted value. This illustrates the immediate behavioral and environmental impacts of local SDPs during the COVID-19 pandemic.

Publication Type

Journal article.

<345>

Accession Number

20210272273

Author

Mujahid Ali; Azevedo, A. R. G. de; Marvila, M. T.; Muhammad Imran Khan; Abdul Muhaimin Memon; Faisal Masood; Najib Mohammed, Y. A.; Muhammad Kashif Shad; Mudassir Ali Khan; Fediuk, R.; Timokhin, R.; Borovkov, A.; Ihtisham-ul-Haq

Title

The influence of COVID-19-induced daily activities on health parameters - a case study in Malaysia.

Source

Sustainability; 2021. 13(13). 52 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Since December 2019, the COVID-19 epidemic has been spreading all over the world. This epidemic has brought a risk of death in the daily activity (physical and social) participation that influences travellers' physical, social, and mental health. To analyze the impact of the COVID-19-induced daily activities on health parameters of higher education institutes, 150 students of the Universiti Teknologi PETRONAS, Perak, Malaysia, were surveyed through an online web survey using random sampling techniques. The data were analyzed through RStudio and SPSS using multilevel linear regression analysis and Hierarchical Structural Equation Modeling. The estimated results indicate that restricting individuals from doing out-of-home activities negatively influences physical and social health. A unit increase in the in-home maintenance activities during the COVID-19 pandemic introduced a daily increase of 0.5% in physical health. Moreover, a unit increase in the in-home activities at leisure time represents a 1% positive improvement in social health. Thus, physical activity has proven to be beneficial in improving physical and social health with severe COVID-19. In contrast, the coefficient of determination (R²) for all endogenous variables ranges from 0.148 to 0.227, which is incredibly acceptable in psychological research. For a healthier society with a better quality of life, this study adopted multidisciplinary approaches that are needed to be designed.

Publication Type

Journal article.

<346>

Accession Number

20210271686

Author

Head, J. R.; Andrejko, K. L.; Cheng Qu; Collender, P. A.; Phillips, S.; Boser, A.; Heaney, A. K.; Hoover, C. M.; Wu, S. L.; Northrup, G. R.; Click, K.; Bardach, N. S.; Lewnard, J. A.; Remais, J. V.

Title

School closures reduced social mixing of children during COVID-19 with implications for transmission risk and school reopening policies.

Source

Journal of the Royal Society Interface; 2021. 18(177). 66 ref.

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

School closures may reduce the size of social networks among children, potentially limiting infectious disease transmission. To estimate the impact of K-12 closures and reopening policies on children's social interactions and COVID-19 incidence in California's Bay Area, we collected data on children's social contacts and assessed implications for transmission using an individual-based model. Elementary and Hispanic children had more contacts during closures than high school and non-Hispanic children, respectively. We estimated that spring 2020 closures of elementary schools averted 2167 cases in the Bay Area (95% CI: -985, 5572), fewer than middle (5884; 95% CI: 1478, 11,550), high school (8650; 95% CI: 3054, 15,940) and workplace (15,813; 95% CI: 9963, 22,617) closures. Under assumptions of moderate community transmission, we estimated that reopening for a four-month semester without any precautions will increase symptomatic illness among high school teachers (an additional 40.7% expected to experience symptomatic infection, 95% CI: 1.9, 61.1), middle school teachers (37.2%, 95% CI: 4.6, 58.1) and elementary school teachers (4.1%, 95% CI: -1.7, 12.0). However, we found that reopening policies for elementary schools that combine universal masking with classroom cohorts could result in few within-school transmissions, while high schools may require masking plus a staggered hybrid schedule. Stronger community interventions (e.g. remote work, social distancing) decreased the risk of within-school transmission across all measures studied, with the influence of community transmission minimized as the effectiveness of the within-school measures increased.

Publication Type

Journal article.

<347>

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

321

Accession Number

20210271685

Author

Steyn, N.; Plank, M. J.; James, A.; Binny, R. N.; Hendy, S. C.; Lustig, A.

Title

Managing the risk of a COVID-19 outbreak from border arrivals.

Source

Journal of the Royal Society Interface; 2021. 18(177). 33 ref.

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

In an attempt to maintain the elimination of COVID-19 in New Zealand, all international arrivals are required to spend 14 days in government-managed quarantine and to return a negative test result before being released. We model the testing, isolation and transmission of COVID-19 within quarantine facilities to estimate the risk of community outbreaks being seeded at the border. We use a simple branching process model for COVID-19 transmission that includes a time-dependent probability of a false-negative test result. We show that the combination of 14-day quarantine with two tests is highly effective in preventing an infectious case entering the community, provided there is no transmission within quarantine facilities. Shorter quarantine periods, or reliance on testing only with no quarantine, substantially increases the risk of an infectious case being released. We calculate the fraction of cases detected in the second week of their two-week stay and show that this may be a useful indicator of the likelihood of transmission occurring within quarantine facilities. Frontline staff working at the border risk exposure to infected individuals and this has the potential to lead to a community outbreak. We use the model to test surveillance strategies and evaluate the likely size of the outbreak at the time it is first detected. We conclude with some recommendations for managing the risk of potential future outbreaks originating from the border.

Publication Type

Journal article.

<348>

Accession Number

20210271684

Author

Ejima, K.; Kim KwangSu; Iwanami, S.; Fujita, Y.; Li Ming; Zoh, R. S.; Aihara, K.; Miyazaki, T.; Wakita, T.; Iwami, S.

Title

Time variation in the probability of failing to detect a case of polymerase chain reaction testing for SARS-CoV-2 as estimated from a viral dynamics model.

Source

Journal of the Royal Society Interface; 2021. 18(177). 49 ref.

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

Viral tests including polymerase chain reaction (PCR) tests are recommended to diagnose COVID-19 infection during the acute phase of infection. A test should have high sensitivity; however, the sensitivity of the PCR test is highly influenced by viral load, which changes over time. Because it is difficult to collect data before the onset of symptoms, the current literature on the sensitivity of the PCR test before symptom onset is limited. In this study, we used a viral dynamics model to track the probability of failing to detect a case of PCR testing over time, including the presymptomatic period. The model was parametrized by using longitudinal viral load data collected from 30 hospitalized patients. The probability of failing to detect a case decreased toward symptom onset, and the lowest probability was observed 2 days after symptom onset and increased afterwards. The probability on the day of symptom onset was 1.0% (95% CI: 0.5 to 1.9) and that 2 days before symptom onset was 60.2% (95% CI: 57.1 to 63.2). Our study suggests that the diagnosis of COVID-19 by PCR testing should be done carefully, especially when the test is performed before or way after symptom onset. Further study is needed of patient groups with potentially different viral dynamics, such as asymptomatic cases.

Publication Type

Journal article.

<349>

Accession Number

20210271682

Author

Liu PengYu; McQuarrie, L.; Song YeXuan; Colijn, C.

Title

Modelling the impact of household size distribution on the transmission dynamics of COVID-19.

Source

Journal of the Royal Society Interface; 2021. 18(177). 31 ref.

Publisher

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

Under the implementation of non-pharmaceutical interventions such as social distancing and lockdowns, household transmission has been shown to be significant for COVID-19, posing challenges for reducing incidence in settings where people are asked to self-isolate at home and to spend increasing amounts of time at home due to distancing measures. Accordingly, characteristics of households in a region have been shown to relate to transmission heterogeneity of the virus. We introduce a discrete-time stochastic epidemiological model to examine the impact of the household size distribution in a region on the transmission dynamics. We choose parameters to reflect incidence in two health regions of the Greater Vancouver area in British Columbia and simulate the impact of distancing measures on transmission, with household size distribution the only different parameter between simulations for the two regions. Our result suggests that the dissimilarity in household size distribution alone can cause significant differences in incidence of the two regions, and the distributions drive distinct dynamics that match reported cases. Furthermore, our model suggests that offering individuals a place to isolate outside their household can speed the decline in cases, and does so more effectively where there are more larger households.

Publication Type

Journal article.

<350>

Accession Number

20210271665

Author

Briggs, R.; Ward, M.; Kenny, R. A.

Title

The 'Wish to Die' in later life: prevalence, longitudinal course and mortality. Data from TILDA.

Source

Age and Ageing; 2021. 50(4):1321-1328. 22 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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Abstract

Background: 'Wish to Die' (WTD) involves thoughts of or wishes for one's own death or that one would be better off dead. Background: To examine the prevalence, longitudinal course and mortality-risk of WTD in community-dwelling older people. Design: Observational study with 6-year follow-up. Setting: The Irish Longitudinal Study on Ageing, a nationally representative cohort of older adults. Subjects: In total, 8,174 community-dwelling adults aged 50 years. Methods: To define WTD, participants were asked: 'In the last month, have you felt that you would rather be dead?' Depressive symptoms were measured using the CES-D. Mortality data were compiled by linking administrative death records to individual-level survey data from the study. Results: At Wave 1, 3.5% of participants (279/8,174) reported WTD. Both persistent loneliness (OR 5.73 (95% CI 3.41-9.64)) and depressive symptoms (OR 6.12 (95% CI 4.33-8.67)) were independently associated with WTD. Of participants who first reported WTD at Wave 1 or 2, 72% did not report WTD when reassessed after 2 years, and the prevalence of depressive symptoms (-44%) and loneliness (-19%) was more likely to decline in this group at follow-up. Fifteen per cent of participants expressing WTD at Wave 1 died during a 6-year follow-up. Conclusions: WTD amongst community-dwelling older people is frequently transient and is strongly linked with the course of depressive symptoms and loneliness. An enhanced focus on improving access to mental health care and addressing social isolation in older people should therefore be a public health priority, particularly in the current context of the Covid-19 pandemic.

Publication Type

Journal article.

<351>

Accession Number

20210271652

Author

Burton, J. K.; Reid, M.; Gribben, C.; Caldwell, D.; Clark, D. N.; Hanlon, P.; Quinn, T. J.; Fischbacher, C.; Knight, P.; Guthrie, B.; McAllister, D. A.

Title

Impact of COVID-19 on care-home mortality and life expectancy in Scotland.

Source

Age and Ageing; 2021. 50(4):1029-1037. 32 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: COVID-19 deaths are commoner among care-home residents, but the mortality burden has not been quantified. Methods: Care-home residency was identified via a national primary care registration database linked to mortality data. Life expectancy was estimated using Makeham-Gompertz models to (i)

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describe yearly life expectancy from November 2015 to October 2020 (ii) compare life expectancy (during 2016-18) between care-home residents and the wider population and (iii) apply care-home life expectancy estimates to COVID-19 death counts to estimate years of life lost (YLL). Results: Among care-home residents, life expectancy in 2015/16 to 2019/20 ranged from 2.7 to 2.3 years for women and 2.3 to 1.8 years for men. Age-sex-specific life expectancy in 2016-18 in care-home residents was lower than in the Scottish population (10 and 2.5 years in those aged 70 and 90, respectively). Applying care home-specific life expectancies to COVID-19 deaths yield mean YLLs for care-home residents of 2.6 and 2.2 for women and men, respectively. In total YLL care-home residents have lost 3,560 years in women and 2,046 years in men. Approximately half of deaths and a quarter of YLL attributed to COVID-19 were accounted for by the 5% of over-70s who were care-home residents. Conclusion: COVID-19 infection has led to the loss of substantial years of life in care-home residents aged 70 years and over in Scotland. Prioritising the 5% of older adults who are care-home residents for vaccination is justified not only in terms of total deaths, but also in terms of YLL.

Publication Type

Journal article.

<352>

Accession Number

20210271651

Author

Dutey-Magni, P. F.; Williams, H.; Jhass, A.; Rait, G.; Lorencatto, F.; Hemingway, H.; Hayward, A.; Shallcross, L.

Title

COVID-19 infection and attributable mortality in UK care homes: cohort study using active surveillance and electronic records (March-June 2020).

Source

Age and Ageing; 2021. 50(4):1019-1028. 31 ref.

Publisher

Oxford University Press

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Background: Epidemiological data on COVID-19 infection in care homes are scarce. We analysed data from a large provider of long-term care for older people to investigate infection and mortality during the first wave of the pandemic. Methods: Cohort study of 179 UK care homes with 9,339 residents and 11,604 staff. We used manager-reported daily tallies to estimate the incidence of suspected and confirmed infection and mortality in staff and residents. Individual-level electronic health records from 8,713 residents were used to model risk factors for confirmed infection, mortality and estimate attributable mortality. Results: 2,075/9,339 residents developed COVID-19 symptoms (22.2% [95% confidence interval: 21.4%; 23.1%]), while 951

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residents (10.2% [9.6%; 10.8%]) and 585 staff (5.0% [4.7%; 5.5%]) had laboratory-confirmed infections. The incidence of confirmed infection was 152.6 [143.1; 162.6] and 62.3 [57.3; 67.5] per 100,000 person-days in residents and staff, respectively. Sixty-eight percent (121/179) of care homes had at least one COVID-19 infection or COVID-19-related death. Lower staffing ratios and higher occupancy rates were independent risk factors for infection. Out of 607 residents with confirmed infection, 217 died (case fatality rate: 35.7% [31.9%; 39.7%]). Mortality in residents with no direct evidence of infection was twofold higher in care homes with outbreaks versus those without (adjusted hazard ratio: 2.2 [1.8; 2.6]). Conclusions: Findings suggest many deaths occurred in people who were infected with COVID-19, but not tested. Higher occupancy and lower staffing levels were independently associated with risks of infection. Protecting staff and residents from infection requires regular testing for COVID-19 and fundamental changes to staffing and care home occupancy.

Publication Type

Journal article.

<353>

Accession Number

20210271549

Author

Pathak, S. B.; Narurkar, R.; Khan, M. H.; Jiang Bei; Soe NyeinChann [Soe, N. C. M.]; Hwang, C.; Muppidi, M.; Aronow, W. S.

Title

Continuing cancer care delivery during the peak of COVID-19 in the Bronx, New York: experience from a public teaching hospital.

Source

Archives of Medical Science; 2021. 17(4):1109-1113. 15 ref.

Publisher

Termedia Publishing House

Location of Publisher

Poznan

Country of Publication

Poland

Abstract

Introduction: We report our experience with cancer care delivery during the peak of COVID-19 pandemic in New York City. Material and methods: Retrospective analysis of the patients treated from the 1st of March, 2020 to the 8th of May, 2020. Results: Team huddles, infection screening and patient selection strategies were implemented. 170 patients were treated in 576 visits. Six developed severe COVID-19 requiring hospitalization, two died. Their median Charlson Comorbidity Index was 9, higher than the rest of the cohort. Conclusions: Cancer care delivery is safe and feasible using an approach focused on careful patient selection, team communication and infection control.

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327

Journal article.

<354>

Accession Number

20210271250

Author

Theджа, M. D.; Wibowo, D. P.; El-Khobar, K. E.; Ie, S. I.; Turyadi; Setiawan, L.; Murti, I. S.; Muljono, D. H.

Title

Improving linkage to care of hepatitis C: clinical validation of GeneXpertR HCV viral load point-of-care assay in Indonesia.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 105(1):117-124. 52 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Hepatitis C virus (HCV) infection large-scale diagnosis and treatment are hampered by lack of a simple, rapid, and reliable point-of-care (POC) test, which poses a challenge for the elimination of hepatitis C as a public health problem. This study aimed to evaluate Cepheid XpertR HCV Viral Load performance in comparison with the Roche CobasR TaqManR HCV Test using serum samples of HCV-infected patients in Indonesia. Viral load quantification was performed on 243 anti-HCV positive patients' samples using both Xpert HCV VL and Roche HCV tests, followed by HCV genotyping by reverse hybridization. Strength of the relationship between the assays was measured by Pearson correlation coefficient, while level of agreement was analyzed by Deming regression and Bland-Altman plot analysis using log₁₀-transformed viral load values. Quantifiable viral load was detected in 180/243 (74.1%), with Xpert HCV VL sensitivity of 100% (95% CI 0.98, 1.00) and specificity of 98.4% (95% CI 0.91, 0.99) based on the Roche HCV test, while HCV genotypes were determined in 172/180 (95.6%) samples. There was a good correlation between both assays ($r = 0.97$, $P < 0.001$), overall and per genotype, with good concordance by Deming regression and a mean difference of $-0.25 \log_{10} \text{ IU/mL}$ (95% CI $-0.33, -0.18$) by Bland-Altman plot analysis. Xpert HCV VL test was demonstrated as a POC platform with good performance for HCV diagnosis and treatment decision that would be beneficial for decentralized services in resource-limited areas. HCV testing sites, alongside additional GeneXpert modular systems distributed toward the fight against COVID-19, could ensure some continuity, once this pandemic is controlled.

Publication Type

Journal article.

<355>

Accession Number

20210271247

Author

Vicari, A. S.; Olson, D.; Vilajeliu, A.; Andrus, J. K.; Roper, A. M.; Morens, D. M.; Santos, I. J.; Azziz-Baumgartner, E.; Berman, S.

Title

Seasonal influenza prevention and control progress in Latin America and the Caribbean in the context of the global influenza strategy and the COVID-19 pandemic.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 105(1):93-101. 68 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Each year in Latin America and the Caribbean, seasonal influenza is associated with an estimated 36,500 respiratory deaths and 400,000 hospitalizations. Since the 2009 influenza A(H1N1) pandemic, the Region has made significant advances in the prevention and control of seasonal influenza, including improved surveillance systems, burden estimates, and vaccination of at-risk groups. The Global Influenza Strategy 2019-2030 provides a framework to strengthen these advances. Against the backdrop of this new framework, the University of Colorado convened in October 2020 its Immunization Advisory Group of Experts to review and discuss current surveillance, prevention, and control strategies for seasonal influenza in Latin America and the Caribbean, also in the context of the COVID-19 pandemic. This review identified five areas for action and made recommendations specific to each area. The Region should continue its efforts to strengthen surveillance and impact evaluations. Existing data on disease burden, seasonality patterns, and vaccination effectiveness should be used to inform decision-making at the country level as well as advocacy efforts for programmatic resources. Regional and country strategic plans should be prepared and include specific targets for 2030. Existing investments in influenza prevention and control, including for immunization programs, should be optimized. Finally, regional partnerships, such as the regional networks for syndromic surveillance and vaccine effectiveness evaluation (SARInet and REVELAC-i), should continue to play a critical role in continuous learning and standardization by sharing experiences and best practices among countries.

Publication Type

Journal article.

<356>

Accession Number

20210271245

Author

Ortiz-Prado, E.; Fernandez-Naranjo, R.; Torres-Berru, Y.; Lowe, R.; Torres, I.

Title

Exceptional prices of medical and other supplies during the COVID-19 pandemic in Ecuador.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 105(1):81-87. 33 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

Shortages of essential supplies used to prevent, diagnose, and treat COVID-19 have been a global concern, and price speculation and hikes may have negatively influenced access. This study identifies variability in prices of products acquired through government-driven contracts in Ecuador during the early pandemic response, when the highest mortality rates were registered in a single day. Data were obtained from the National Public Procurement Service (SERCOP) database between March 1 and July 31, 2020. A statistical descriptive analysis was conducted to extract relevant measures for commonly purchased products, medical devices, pharmaceutical drugs, and other goods. Among the most frequently purchased products, the greatest amounts were spent on face masks (US\$4.5 million), acetaminophen (US\$2.2 million), and reverse transcriptase quantitative polymerase chain reaction assay kits (US\$1.8 million). Prices varied greatly, depending on each individual contract and on the number of units purchased; some were exceptionally higher than their market value. Compared with 2019, the mean price of medical examination gloves increased up to 1,307%, acetaminophen 500 mg pills, up to 796%, and oxygen flasks, 30.8%. In a context of budgetary constraints that actually required an effective use of available funds, speculative price hikes may have limited patient access to health care and the protection of the general population and health care workers. COVID-19 vaccine allocations to privileged individuals have also been widely reported. Price caps and other forms of regulation, as well as greater scrutiny and transparency of government-driven purchases, and investment in local production, are warranted in Ecuador for improved infectious disease prevention.

Publication Type

Journal article.

<357>

Accession Number

20210271234

Author

Alvarez-Risco, A.; Del-Aguila-Arcentales, S.; Yanez, J. A.

Title

Telemedicine in Peru as a result of the COVID-19 pandemic: perspective from a country with limited internet access.

Source

American Journal of Tropical Medicine and Hygiene; 2021. 105(1):6-11. 100 ref.

Publisher

American Society of Tropical Medicine and Hygiene

Location of Publisher

Deerfield

Country of Publication

USA

Abstract

The COVID-19 pandemic contributed to the worldwide implementation of telemedicine because of the need for medical care for patients, especially those with chronic diseases. This perspective paper presents the current situation of telemedicine in Peru, showing advances in regulation, cases of successful implementation, and the current challenges. Access to health should be available to all, and more efforts need to be implemented to offer access to the internet to achieve high-quality telemedicine to all the vulnerable groups in Peru.

Publication Type

Journal article.

<358>

Accession Number

20210271161

Author

Song ZiGeng; Bai Yan; Wang DiFeng; Li Teng; He XianQiang

Title

Satellite retrieval of air pollution changes in central and eastern china during COVID-19 lockdown based on a machine learning model.

Source

Remote Sensing; 2021. 13(13). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

With the implementation of the 2018-2020 Clean Air Action Plan (CAAP) the and impact from COVID-19 lockdowns in 2020, air pollution emissions in central and eastern China have decreased markedly. Here, by combining satellite remote sensing, re-analysis, and ground-based observational data, we established a machine learning (ML) model to analyze annual and seasonal changes in primary air pollutants in 2020 compared to 2018 and 2019 over central and eastern China. The root mean squared errors (RMSE) for the PM_{2.5}, PM₁₀, O₃, and CO validation dataset were 9.027 g/m³, 20.312 g/m³, 10.436 g/m³, and 0.097 mg/m³, respectively. The geographical random forest (RF) model demonstrated good performance for four main air pollutants. Notably, PM_{2.5}, PM₁₀, and CO decreased by 44.1%, 43.2%, and 35.9% in February 2020, which was likely influenced by the COVID-19 lockdown and primarily lasted until May 2020. Furthermore, PM_{2.5}, PM₁₀, O₃, and CO decreased by 16.4%, 24.2%, 2.7%, and 19.8% in 2020 relative to the average values in 2018 and 2019. Moreover, the reduction in O₃ emissions was not universal, with a significant increase (~20-40%) observed in uncontaminated areas.

Publication Type

Journal article.

<359>

Accession Number

20210270961

Author

Tambyah, P. A.; Conly, J.; Voss, A.

Title

Community outbreak investigation of SARS-CoV-2 transmission among bus riders in eastern China - more detailed studies are needed.

Source

JAMA Internal Medicine; 2021. 181(5):719-720. 4 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

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Country of Publication

USA

Publication Type

Correspondence.

<360>

Accession Number

20210270954

Author

Chen YeaHung; Glymour, M. M.; Catalano, R.; Fernandez, A.; Tung Nguyen; Kushel, M.; Bibbins-Domingo, K.

Title

Excess mortality in California during the coronavirus disease 2019 pandemic, March to August 2020.

Source

JAMA Internal Medicine; 2021. 181(5):705-707. 6 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

Country of Publication

USA

Abstract

Few studies on excess deaths during the coronavirus disease 2019 (COVID-19) pandemic in the US have documented how excess mortality varies across population subgroups. Using time-series models, we estimated excess deaths in California between March and August 2020 by age, sex, race/ethnicity, and educational level. California has a population of 39.5 million, which is approximately 12% of the US population of 328.2 million.

Publication Type

Journal article.

<361>

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E: library@rcvsknowledge.org

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Accession Number

20210270950

Author

Harvey, R. A.; Rassen, J. A.; Kabelac, C. A.; Turenne, W.; Leonard, S.; Klesh, R.; Meyer, W. A., III; Kaufman, H. W.; Anderson, S.; Cohen, O.; Petkov, V. I.; Cronin, K. A.; Dyke, A. L. van; Lowy, D. R.; Sharpless, N. E.; Penberthy, L. T.

Title

Association of SARS-CoV-2 seropositive antibody test with risk of future infection.

Source

JAMA Internal Medicine; 2021. 181(5):672-679. 37 ref.

Publisher

American Medical Association

Location of Publisher

Chicago

Country of Publication

USA

Abstract

Importance: Understanding the effect of serum antibodies to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on susceptibility to infection is important for identifying at-risk populations and could have implications for vaccine deployment. **Background:** The study purpose was to evaluate evidence of SARS-CoV-2 infection based on diagnostic nucleic acid amplification test (NAAT) among patients with positive vs negative test results for antibodies in an observational descriptive cohort study of clinical laboratory and linked claims data. **Design, Setting, and Participants:** The study created cohorts from a deidentified data set composed of commercial laboratory tests, medical and pharmacy claims, electronic health records, and hospital chargemaster data. Patients were categorized as antibody-positive or antibody-negative according to their first SARS-CoV-2 antibody test in the database. **Main Outcomes and Measures:** Primary end points were post-index diagnostic NAAT results, with infection defined as a positive diagnostic test post-index, measured in 30-day intervals (0-30, 31-60, 61-90, >90 days). Additional measures included demographic, geographic, and clinical characteristics at the time of the index antibody test, including recorded signs and symptoms or prior evidence of coronavirus 2019 (COVID) diagnoses or positive NAAT results and recorded comorbidities. **Results:** The cohort included 3 257 478 unique patients with an index antibody test; 56% were female with a median (SD) age of 48 (20) years. Of these, 2 876 773 (88.3%) had a negative index antibody result, and 378 606 (11.6%) had a positive index antibody result. Patients with a negative antibody test result were older than those with a positive result (mean age 48 vs 44 years). Of index-positive patients, 18.4% converted to seronegative over the follow-up period. During the follow-up periods, the ratio (95% CI) of positive NAAT results among individuals who had a positive antibody test at index vs those with a negative antibody test at index was 2.85 (95% CI, 2.73-2.97) at 0 to 30 days, 0.67 (95% CI, 0.6-0.74) at 31 to 60 days, 0.29 (95% CI, 0.24-0.35) at 61 to 90 days, and 0.10 (95% CI, 0.05-0.19) at more than 90 days. **Conclusions and Relevance:** In this cohort study, patients with positive antibody test results were initially more likely to have positive NAAT results, consistent with prolonged RNA shedding, but became markedly less likely to have positive NAAT results over time, suggesting that seropositivity is associated with protection from infection. The duration of protection is unknown, and protection may wane over time.

Publication Type

Journal article.

<362>

Accession Number

20210270790

Author

Braam, D. H.; Srinivasan, S.; Church, L.; Sheikh, Z.; Jephcott, F. L.; Bukachi, S.

Title

Lockdowns, lives and livelihoods: the impact of COVID-19 and public health responses to conflict affected populations - a remote qualitative study in Baidoa and Mogadishu, Somalia.

Source

Conflict and Health; 2021. 15(47):(12 June 2021). 42 ref.

Publisher

BioMed Central Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

Background: Authorities in Somalia responded with drastic measures after the first confirmed COVID-19 case in mid-March 2020, closing borders, schools, limiting travel and prohibiting most group functions. However, the impact of the pandemic in Somalia thereafter remained unclear. This study employs a novel remote qualitative research method in a conflict-affected setting to look at how some of the most at-risk internally displaced and host populations were impacted by COVID-19, what determined their responses, and how this affected their health and socio-economic vulnerability. Methods: We conducted a remote qualitative study, using Katikati, a 1-to-1 conversation management and analysis platform using short message service (SMS) developed by Lark Systems with Africa's Voices Foundation (AVF), for semi-structured interviews over three months with participants in Mogadishu and Baidoa. We recruited a gender balanced cohort across age groups, and used an analytical framework on the social determinants of health for a narrative analysis on major themes discussed, triangulating data with existing peer-reviewed and grey literature. Results: The remote research approach demonstrated efficacy in sustaining trusted and meaningful conversations for gathering qualitative data from hard-to-reach conflict-affected communities. The major themes discussed by the 35 participants included health, livelihoods and education. Two participants contracted the disease, while others reported family or community members affected by COVID-19. Almost all participants faced a loss of income and/or education, primarily as a result of the strict public health measures. Some of those who were heavily affected economically but did not directly experienced disease, denied the pandemic. Religion played an important role in participants' beliefs in protection against and salvation from the disease. As lockdowns were lifted in August 2020, many believed the pandemic to be over. Conclusions: While the official COVID-19 burden has remained relatively low in Somalia, the impact to people's daily lives, income and livelihoods due to public health responses, has been significant. Participants describe those 'secondary' outcomes as the main impact of the pandemic, serving as a stark reminder of the need to broaden the public health response beyond disease prevention to include social and economic interventions to decrease people's vulnerability to future shocks.

Publication Type

Journal article.

<363>

Accession Number

20210270736

Author

Cheung ChiYuen; Pong MeiLan; Au Yeung SukFun; Chak WaiLeung

Title

Impact of COVID-19 pandemic on organ donation in Hong Kong: a single-center observational study.

Source

Transplantation Proceedings; 2021. 53(4):1143-1145.

Publisher

Elsevier

Location of Publisher

New York

Country of Publication

USA

Abstract

Introduction: The coronavirus disease 2019 (COVID-19) pandemic was expected to have a negative impact on organ donation. With the differences in health care systems and lockdown policies in various regions, the pandemic's effect on organ donation and transplant service may vary. Most of the deceased donor organ referrals in our hospital came from non-intensive care units (ICUs). The objective of this study is to report our experience and quantify the effects of the COVID-19 pandemic on deceased donor organ donation in our center. Methods: This was a retrospective observational study comparing the deceased donor organ donation activity during the period January 23 to November 30, 2020 with the same period in 2018 in Queen Elizabeth Hospital, Hong Kong. Results: There was a 26.9% reduction in deceased donor organ donor referral in 2020 compared with 2018. No significant difference in the proportion of referrals from ICU or non-ICU areas between the 2 time periods was observed. The brain death confirmation rate was significantly higher in 2020 (40.8% vs 20.2%, $P = .003$). Nine patients had family consent for organ donation in 2020 (vs 7 patients in the same period in 2018). There were no significant differences in consent rate and number of recovered organs between the 2 periods. Conclusions: With effective measures to limit the spread of COVID-19 in a community, it is possible to support the needs of both patients with COVID-19 and deceased donor organ donation services.

Publication Type

Journal article.

<364>

Accession Number

20210270318

Author

Bastard, P.; Orlova, E.; Sozaeva, L.; Levy, R.; James, A.; Schmitt, M. M.; Ochoa, S.; Kareva, M.; Rodina, Y.; Gervais, A.; Voyer, T. le; Rosain, J.; Philippot, Q.; Neehus, A. L.; Shaw, E.; Migaud, M.; Bizien, L.; Ekwall, O.; Berg, S.; Beccuti, G.; Ghizzoni, L.; Thiriez, G.; Pavot, A.; Goujard, C.; Fremond, M. L.; Carter, E.; Rothenbuhler, A.; Linglart, A.; Mignot, B.; Comte, A.; Cheikh, N.; Hermine, O.; Breivik, L.; Husebye, E. S.; Humbert, S.; Rohlich, P.; Coaquette, A.; Vuoto, F.; Faure, K.; Mahlaoui, N.; Kotnik, P.; Battelino, T.; Podkrajsek, K. T.; Kisand, K.; Ferre, E. M. N.; Dimaggio, T.; Rosen, L. B.; Burbelo, P. D.; McIntyre, M.; Kann, N. Y.; Shcherbina, A.; Pavlova, M.; Kolodkina, A.; Holland, S. M.; Zhang ShenYing; Crow, Y. J.; Notarangelo, L. D.; Su, H. C.; Abel, L.; Anderson, M. S.; Jouanguy, E.; Neven, B.; Puel, A.; Casanova, J. L.; Lionakis, M. S.

Title

Preexisting autoantibodies to type I IFNs underlie critical COVID-19 pneumonia in patients with APS-1.

Source

Journal of Experimental Medicine; 2021. 218(7). many ref.

Publisher

Rockefeller University Press

Location of Publisher

New York

Country of Publication

USA

Abstract

Patients with biallelic loss-of-function variants of AIRE suffer from autoimmune polyendocrine syndrome type-1 (APS-1) and produce a broad range of autoantibodies (auto-Abs), including circulating auto-Abs neutralizing most type I interferons (IFNs). These auto-Abs were recently reported to account for at least 10% of cases of life-threatening COVID-19 pneumonia in the general population. We report 22 APS-1 patients from 21 kindreds in seven countries, aged between 8 and 48 yr and infected with SARS-CoV-2 since February 2020. The 21 patients tested had auto-Abs neutralizing IFN- α subtypes and/or IFN- γ ; one had anti-IFN- β and another anti-IFN- τ , but none had anti-IFN- ω . Strikingly, 19 patients (86%) were hospitalized for COVID-19 pneumonia, including 15 (68%) admitted to an intensive care unit, 11 (50%) who required mechanical ventilation, and four (18%) who died. Ambulatory disease in three patients (14%) was possibly accounted for by prior or early specific interventions. Preexisting auto-Abs neutralizing type I IFNs in APS-1 patients confer a very high risk of life-threatening COVID-19 pneumonia at any age.

Publication Type

Journal article.

<365>

Accession Number

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF
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E: library@rcvsknowledge.org
www.rcvsknowledge.org

20210270267

Author

Nooraini Bte Mahat; Syukri Ahmad Zubaidi; Kyaw SoeHtooHtoo; Shireen Anne Nah

Title

Paediatric surgical response to an 'adult' COVID-19 pandemic.

Source

Medical Journal of Malaysia; 2021. 76(3):284-290. 27 ref.

Publisher

Malaysian Medical Association

Location of Publisher

Kuala Lumpur

Country of Publication

Malaysia

Abstract

Introduction: The Coronavirus Disease 2019 (COVID-19) has dramatically affected global healthcare systems. We aimed to determine the response of our paediatric surgical fraternity to a disease that overwhelmingly affects adults. Materials and Methods: We conducted a cross-sectional questionnaire-based study over 6 weeks during a federally mandated lockdown. Using snowball sampling, we recruited paediatric surgeons, trainees and medical officers from paediatric surgical units in Malaysia. The anonymous online questionnaire covered sociodemographic information, changes in patient care, redeployment, concerns regarding family members, and impact on training. Mental well-being was assessed using the Depression, Anxiety and Stress Scale (DASS-21). Kruskal-Wallis, ANOVA and multiple regression analysis was used, with significance level 0.05. Results: Of the 129 eligible participants, 100(77%) responded. Junior doctors had clinically higher levels of depression, anxiety, and stress. Age <30 years was significantly associated with anxiety. Junior doctors believed that redeployment led to loss of surgical skills ($p<0.001$) and trainees felt that clinical application of knowledge had reduced ($p<0.020$). Conclusion: Specific to our paediatric surgical community, this study highlights areas of concern, particularly among junior doctors. It is likely that recurrent cycles of the pandemic will occur soon. These issues must be addressed to preserve the mental and emotional well-being of all health care workers.

Publication Type

Journal article.

<366>

Accession Number

20210270105

Author

Kiat SimSze; Liang LauBik; Siti Rosnaini, Z. R.; Sijil Matrikulasi; Nur Hazira, A. M.; Sijil Asasi, S. H. U.; Nur Muzfirah, A. A. R.; Jevitha Panicker Balachandran; Alya Syafiqah Hamzah; Sijil Asasi, S. H.

Title

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

338

Psychological symptoms among healthcare workers handling COVID-19 patients.

Source

Medical Journal of Malaysia; 2021. 76(2):138-144. 15 ref.

Publisher

Malaysian Medical Association

Location of Publisher

Kuala Lumpur

Country of Publication

Malaysia

Abstract

Introduction: Healthcare workers serve as the frontliners against the coronavirus 2019 disease (COVID-19) and this puts them most at risk of infection as they attend to numerous patients with unknown status. This study aimed to examine stress, anxiety, and depression among healthcare workers caring for COVID-19 patients in Sarawak General Hospital (SGH), Malaysia. **Materials and Methods:** This cross-sectional observational study conducted in SGH during the pandemic with an online self-administered questionnaire composed of two parts, the socio-demographic characteristics, and the Depression Anxiety Stress Scale (DASS). **Results:** A total of 105 healthcare workers responded to this study. A questionnaire in both Bahasa Melayu and English was used. The findings showed that all healthcare workers had mild anxiety, with the majority experiencing mild stress (57.1%), and almost half of the respondents experiencing mild depression (41%). Female subjects had a significant higher mean score in anxiety level and stress level compared to male subjects (10.0+or-3.20 vs. 8.6+or-2.93, $p<0.05$; 14.1+or-4.76 vs. 10.7+or-3.70, $p<0.05$, respectively). Staff who were transferred from other units to handle COVID-19 cases experienced more psychological symptoms. There were significant correlations between the depression, anxiety and stress levels among the healthcare workers and the number of children they had ($r=0.739$, $p=0.001$; $r=0.642$, $p=0.001$; $r=1$, $p=0.001$ respectively). However, the stress level among the healthcare workers was reversely correlated with their years of working experience ($r=-0.199$, $p=0.042$). **Conclusion:** This study identified some socio-demographic factors associated with increased levels of stress, anxiety and depression among the healthcare workers during pandemic, which may lay ground for future interventions.

Publication Type

Journal article.

<367>

Accession Number

20210270103

Author

Ko, A. T. Y.; Chen LeanSeng; Pang IngXiang; Ling HweiSung; Wong TzeCheng; Sia LoongLoong [Sia, L. L. T.]; Koh KengTat

Title

Smartphone electrocardiogram for qt interval monitoring in Coronavirus disease 2019 (COVID-19) patients treated with hydroxychloroquine.

Source

Medical Journal of Malaysia; 2021. 76(2):125-130. 11 ref.

Publisher

Malaysian Medical Association

Location of Publisher

Kuala Lumpur

Country of Publication

Malaysia

Abstract

Introduction: The global pandemic of Corona Virus Disease 2019 (COVID-19) has led to the re-purposing of medications, such as hydroxychloroquine and lopinavir-ritonavir in the treatment of the earlier phase of COVID-19 before the recognized benefit of steroids and antiviral. We aim to explore the corrected QT (QTc) interval and 'torsadogenic' potential of hydroxychloroquine and lopinavir-ritonavir utilising a combination of smartphone electrocardiogram and 12-lead electrocardiogram monitoring. **Materials and Methods:** Between 16-April-2020 to 30-April- 2020, patients with suspected or confirmed for COVID-19 indicated for in-patient treatment with hydroxychloroquine with or without lopinavir-ritonavir to the Sarawak General Hospital were monitored with KardiaMobile smartphone electrocardiogram (AliveCorR, Mountain View, CA) or standard 12-lead electrocardiogram. The baseline and serial QTc intervals were monitored till the last dose of medications or until the normalization of the QTc interval. **Results:** Thirty patients were treated with hydroxychloroquine, and 20 (66.7%) patients received a combination of hydroxychloroquine and lopinavir-ritonavir therapy. The maximum QTc interval was significantly prolonged compared to baseline (434.6+or-28.2msec vs. 458.6+or-47.1msec, p=0.001). The maximum QTc interval (456.1+or-45.7msec vs. 464.6+or-45.2msec, p=0.635) and the delta QTc (32.6+or-38.5msec vs. 26.3+or-35.8msec, p=0.658) were not significantly different between patients on hydroxychloroquine or a combination of hydroxychloroquine and lopinavir-ritonavir. Five (16.7%) patients had QTc of 500msec or more. Four (13.3%) patients required discontinuation of hydroxychloroquine and 3 (10.0%) patients required discontinuation of lopinavirritonavir due to QTc prolongation. However, no torsade de pointes was observed. **Conclusions:** QTc monitoring using smartphone electrocardiogram was feasible in COVID-19 patients treated with hydroxychloroquine with or without lopinavir-ritonavir. The usage of hydroxychloroquine and lopinavir-ritonavir resulted in QTc prolongation, but no torsade de pointes or arrhythmogenic death was observed.

Publication Type

Journal article.

<368>

Accession Number

20210270054

Author

Keating, B. J.; Mukhtar, E. H.; Elftmann, E. D.; Eweje, F. R.; Gao, H.; Ibrahim, L. I.; Kathawate, R. G.; Lee, A. C.; Li, E. H.; Moore, K. A.; Nair, N.; Chaluvadi, V.; Reason, J.; Zandoni, F.; Honkala, A. T.; Al-Ali, A. K.; Alrubaish, F. A.; Al-Mozaini, M. A.; Al-Muhanna, F. A.; Al-Romaih, K.; Goldfarb, S. B.; Kellogg, R.; Kiryluk, K.; Kizilbash, S. J.; Kohut, T. J.; Kumar, J.; O'Connor, M. J.; Rand, E. B.; Redfield, R. R.; Rolnik, B.; Rossano, J.; Sanchez, P. G.; Alavi, A.; Bahmani, A.; Bogu, G. K.; Brooks, A. W.; Metwally, A. A.; Mishra, T.; Marks, S. D.; Montgomery, R. A.; Fishman, J. A.; Amaral, S.; Jacobson, P. A.; Wang Meng; Snyder, M. P.

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

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E: library@rcvsknowledge.org

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Title

Early detection of SARS-CoV-2 and other infections in solid organ transplant recipients and household members using wearable devices.

Source

Transplant International; 2021. 34(6):1019-1031. 54 ref.

Publisher

Wiley

Location of Publisher

Copenhagen

Country of Publication

Denmark

Abstract

The increasing global prevalence of SARS-CoV-2 and the resulting COVID-19 disease pandemic pose significant concerns for clinical management of solid organ transplant recipients (SOTR). Wearable devices that can measure physiologic changes in biometrics including heart rate, heart rate variability, body temperature, respiratory, activity (such as steps taken per day) and sleep patterns, and blood oxygen saturation show utility for the early detection of infection before clinical presentation of symptoms. Recent algorithms developed using preliminary wearable datasets show that SARS-CoV-2 is detectable before clinical symptoms in >80% of adults. Early detection of SARS-CoV-2, influenza, and other pathogens in SOTR, and their household members, could facilitate early interventions such as self-isolation and early clinical management of relevant infection(s). Ongoing studies testing the utility of wearable devices such as smartwatches for early detection of SARS-CoV-2 and other infections in the general population are reviewed here, along with the practical challenges to implementing these processes at scale in pediatric and adult SOTR, and their household members. The resources and logistics, including transplant-specific analyses pipelines to account for confounders such as polypharmacy and comorbidities, required in studies of pediatric and adult SOTR for the robust early detection of SARS-CoV-2, and other infections are also reviewed.

Publication Type

Journal article.

<369>

Accession Number

20210269635

Author

Barrat, A.; Cattuto, C.; Kivela, M.; Lehmann, S.; Saramaki, J.

Title

Effect of manual and digital contact tracing on COVID-19 outbreaks: a study on empirical contact data.

Source

Journal of the Royal Society Interface; 2021. 18(178). 50 ref.

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Publisher

The Royal Society

Location of Publisher

London

Country of Publication

UK

Abstract

Non-pharmaceutical interventions are crucial to mitigate the COVID-19 pandemic and contain re-emergence phenomena. Targeted measures such as case isolation and contact tracing can alleviate the societal cost of lock-downs by containing the spread where and when it occurs. To assess the relative and combined impact of manual contact tracing (MCT) and digital (app-based) contact tracing, we feed a compartmental model for COVID-19 with high-resolution datasets describing contacts between individuals in several contexts. We show that the benefit (epidemic size reduction) is generically linear in the fraction of contacts recalled during MCT and quadratic in the app adoption, with no threshold effect. The cost (number of quarantines) versus benefit curve has a characteristic parabolic shape, independent of the type of tracing, with a potentially high benefit and low cost if app adoption and MCT efficiency are high enough. Benefits are higher and the cost lower if the epidemic reproductive number is lower, showing the importance of combining tracing with additional mitigation measures. The observed phenomenology is qualitatively robust across datasets and parameters. We moreover obtain analytically similar results on simplified models.

Publication Type

Journal article.

<370>

Accession Number

20210269608

Author

Dhakal, N.; Poudyal, A.; Gyanwali, P.

Title

Pharmacological treatment for the management of COVID 19: a narrative review.

Source

JNMA, Journal of the Nepal Medical Association; 2021. 59(238):614-621. 77 ref.

Publisher

Nepal Medical Association

Location of Publisher

Kathmandu

Country of Publication

Nepal

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

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www.rcvsknowledge.org

Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections is alarming worldwide incurring tremendous loss of life and possession. Individuals are facing a terrible pandemic condition in the absence of appropriate medicines and vaccines to combat SARS-CoV-2 infection. This review aimed to provide details on potential treatment steps that can be taken in the current pandemic-fighting situation in Nepal. A massive review was performed including 60 articles from the relevant field. Preliminary results on the efficacy of some existing anti-viral agents were found, however, promising data on effective treatment regimen for COVID 19 are yet to be obtained. This review examines various drugs and their mechanism of actions which are currently used in clinical trials or may be used to treat COVID-19 in the near future.

Publication Type

Journal article.

<371>

Accession Number

20210269602

Author

Shrestha, G. S.; Bista, B.; Dhungana, A.; Poudel, N.; Bhattarai, S.; Shrestha, M.; Bhandari, S.; Vaidya, B.

Title

Tofacitinib as an adjunct immunomodulator for treatment of a patient with severe COVID-19: a case report.

Source

JNMA, Journal of the Nepal Medical Association; 2021. 59(238):593-596. 9 ref.

Publisher

Nepal Medical Association

Location of Publisher

Kathmandu

Country of Publication

Nepal

Abstract

Severe coronavirus disease 2019 can be associated with progressive respiratory failure. In addition to respiratory support and other supportive care, use of corticosteroids has shown to improve outcome. Despite the use of steroids, a significant proportion of patients progressively worsen. Adjunct immunomodulators have been studied in addition to steroids in these patients. Here we present a successful use of tofacitinib, a Janus Kinase inhibitor, in conjunction with dexamethasone for a patient with rapid worsening of respiratory status and with high level of serum inflammatory biomarkers.

Publication Type

Journal article.

<372>

Accession Number

20210269598

Author

Pokharel, K.; Dawadi, B. R.; Karki, A.

Title

Side effects after second dose of covishield vaccine among health care workers: a descriptive cross sectional study.

Source

JNMA, Journal of the Nepal Medical Association; 2021. 59(238):577-579. 7 ref.

Publisher

Nepal Medical Association

Location of Publisher

Kathmandu

Country of Publication

Nepal

Abstract

Introduction: COVID 19 vaccination will protect us from getting COVID-19. Some side effects are common which are signs that our body is building protection. This side effects will go away in a few days. The aim of this study is to find out side effects seen among health care workers after second dose of covishield vaccination. Methods: This was a descriptive cross-sectional study conducted at Kathmandu medical college and Teaching Hospital from 22nd April 2021 till 30th April 2021. Ethical approval was received from Institutional Committee of Institute. Convenient sampling was done. The second dose of covishield vaccine was administered 12 weeks after its first dose. The vaccine was administered intramuscularly (IM) into deltoid muscle. Statistical Package for the Social Sciences were used for analysis. Results: Out of 220 cases taken, 135 were male and 85 were female. In our study 178 (80.90%) complaint of pain at injection site after second dose of covishield vaccine followed by 97 (44.09%) complaint of fatigue, 43 (19.54%) complaint of headache, 18 (8.18%) complaint of chills, 11 (5.00%) complaint of fever, 6 (2.72%) complaint of dizziness and 5 (2.27%) complaint of nausea. Conclusions: Pain at injection site, fatigue and headache were common side effects seen after second dose of Covishield vaccination.

Publication Type

Journal article.

<373>

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF

T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

344

Accession Number

20210269595

Author

Adhikari, G.; Poudel, L.; Pokhrel, B.; Bhandari, G.; Shrestha, K. K.

Title

Stress among resident doctors working in different hospitals of Nepal in the face of COVID-19 pandemic: a descriptive cross-sectional study.

Source

JNMA, Journal of the Nepal Medical Association; 2021. 59(238):558-563. 28 ref.

Publisher

Nepal Medical Association

Location of Publisher

Kathmandu

Country of Publication

Nepal

Abstract

Introduction: The emergence and propagation of COVID-19 pandemic has subjected resident doctors to greater workload and consequent psychological implications. Many studies have illustrated various degrees of mental health issues among health care workers in general; however very limited ones have focused primarily on the resident doctors. Therefore, this study aimed to find out the prevalence of stress among the resident doctors of Nepal. **Methods:** A descriptive cross-sectional study was carried out in all the teaching hospitals of Nepal with ethical clearance from the Institutional Review Committee (Reference number-245). An online self-designed structured questionnaire developed using Google forms along with questions from stress subscale of Depression, Anxiety and Stress Scale - 21 was disseminated to the residents via social media platforms using Convenience sampling technique. Responses generated were analyzed with Statistical Package for the Social Sciences. Point estimate at 95% Confidence Interval was calculated along with frequency and proportion for binary data. **Results:** The prevalence of stress among resident doctors was found to be 16 (8.2%) (4.3-12.1 at 95% Confidence Interval). Greater prevalence of stress was seen among residents working outside Kathmandu valley, those in the frontline and those who were unmarried. Loss of collaborative study/professional and academic growth experiences was responsible for causing extremely severe stress among 60 (30.9%) residents, followed by stress due to uncertainty regarding COVID-19 58 (29.9%) and unavailability/lack of quality control of personal protective equipment 58 (29.9%). **Conclusions:** This study has shed light upon the prevalence of stress and its precipitating factors in Nepalese resident doctors due to COVID-19 pandemic. Our findings could help address these issues for their mitigation promptly.

Publication Type

Journal article.

<374>

Accession Number

20210269593

Author

Tiwari, B.; Ghimire, M.; Bhatta, G.; Banstola, H.; Tiwari, B.; Twayana, A.; Shrestha, K.

Title

Persistent symptoms in non-critical COVID-19 patients at two months follow-up in a district hospital: a descriptive cross-sectional study.

Source

JNMA, Journal of the Nepal Medical Association; 2021. 59(238):550-553. 12 ref.

Publisher

Nepal Medical Association

Location of Publisher

Kathmandu

Country of Publication

Nepal

Abstract

Introduction: The corona virus disease 2019 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 belonging to corona viruses which are enveloped positive stranded RNA viruses. Non-critical coronavirus disease 2019 patients often lack follow up visits which has led to incomplete understanding of disease process. The aim of this study was to find out the prevalence of persistent symptoms in such patients during two months follow-up to a district hospital. **Methods:** This descriptive cross-sectional study was conducted in a district hospital from September 2020 to February 2021 among non-critical corona virus disease 2019 patients admitted to the isolation center of Nepal. Ethical approval was taken from the ethical review board of Nepal Health Research Council (reference number: 1707). Convenience sampling was done. Data was collected using a structured questionnaire. Data analysis was done using Statistical Package for the Social Sciences version 26. Point estimate at 95% Confidence Interval was calculated along with frequency and proportion for binary data. **Results:** Out of 132 patients, 66 (50%) (41.5-58.5 at 95% Confidence Interval) patients had persistent symptoms at two-month follow-up. Forty-eight (36.4%) patients showed one symptom, 15 (11%) had two symptoms, and 3 (2%) had two or more symptoms. The most frequent symptom reported was fatigue in 17 (13%), cough in 15 (11%), myalgia in 9 (7%), and headache in 9 (7%). **Conclusions:** The prevalence of persistent symptoms at two months follow up in our study was lower than findings from other international studies.

Publication Type

Journal article.

<375>

Accession Number

20210269356

Author

Mansbach, R. A.; Chakraborty, S.; Nguyen, K.; Montefiori, D. C.; Korber, B.; Gnanakaran, S.

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

346

Title

The SARS-CoV-2 Spike variant D614G favors an open conformational state.

Source

Science Advances; 2021. 7(16):eabf3671-eabf3671. 55 ref.

Publisher

American Association for the Advancement of Science

Location of Publisher

Washington

Country of Publication

USA

Abstract

The COVID-19 (coronavirus disease 2019) pandemic underwent a rapid transition with the emergence of a dominant viral variant (from the "D-form" to the "G-form") that carried an amino acid substitution D614G in its "Spike" protein. The G-form is more infectious in vitro and is associated with increased viral loads in the upper airways. To gain insight into the molecular-level underpinnings of these characteristics, we used microsecond all-atom simulations. We show that changes in the protein energetics favor a higher population of infection-capable states in the G-form through release of asymmetry present in the D-form inter-protomer interactions. Thus, the increased infectivity of the G-form is likely due to a higher rate of profitable binding encounters with the host receptor. It is also predicted to be more neutralization sensitive owing to enhanced exposure of the receptor binding domain, a key target region for neutralizing antibodies. These results are critical for vaccine design.

Publication Type

Journal article.

<376>

Accession Number

20210269352

Author

Schuller, M.; Correy, G. J.; Gahbauer, S.; Fearon, D.; Wu TaiaSean; Diaz, R. E.; Young, I. D.; Martins, L. C.; Smith, D. H.; Schulze-Gahmen, U.; Owens, T. W.; Deshpande, I.; Merz, G. E.; Thwin, A. C.; Biel, J. T.; Peters, J. K.; Moritz, M.; Herrera, N.; Kratochvil, H. T.; Aimon, A.; Bennett, J. M.; Brandao Neto, J.; Cohen, A. E.; Dias, A.; Douangamath, A.; Dunnett, L.; Fedorov, O.; Ferla, M. P.; Fuchs, M. R.; Gorrie-Stone, T. J.; Holton, J. M.; Johnson, M. G.; Krojer, T.; Meigs, G.; Powell, A. J.; Rack, J. G. M.; Rangel, V. L.; Russi, S.; Skyner, R. E.; Smith, C. A.; Soares, A. S.; Wierman, J. L.; Zhu Kang; O'Brien, P.; Jura, N.; Ashworth, A.; Irwin, J. J.; Thompson, M. C.; Gestwicki, J. E.; Delft, F. von; Shoichet, B. K.; Fraser, J. S.; Ahel, I.

Title

Fragment binding to the Nsp3 macrodomain of SARS-CoV-2 identified through crystallographic screening and computational docking.

Source

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Science Advances; 2021. 7(16):eabf8711-eabf8711. 82 ref.

Publisher

American Association for the Advancement of Science

Location of Publisher

Washington

Country of Publication

USA

Abstract

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) macrodomain within the nonstructural protein 3 counteracts host-mediated antiviral adenosine diphosphate-ribosylation signaling. This enzyme is a promising antiviral target because catalytic mutations render viruses nonpathogenic. Here, we report a massive crystallographic screening and computational docking effort, identifying new chemical matter primarily targeting the active site of the macrodomain. Crystallographic screening of 2533 diverse fragments resulted in 214 unique macrodomain-binders. An additional 60 molecules were selected from docking more than 20 million fragments, of which 20 were crystallographically confirmed. X-ray data collection to ultra-high resolution and at physiological temperature enabled assessment of the conformational heterogeneity around the active site. Several fragment hits were confirmed by solution binding using three biophysical techniques (differential scanning fluorimetry, homogeneous time-resolved fluorescence, and isothermal titration calorimetry). The 234 fragment structures explore a wide range of chemotypes and provide starting points for development of potent SARS-CoV-2 macrodomain inhibitors.

Publication Type

Journal article.

<377>

Accession Number

20210268921

Author

Raji, Y. E.; Sanusi, Y. M.; Zamberi Bin Sekawi

Title

Viruses, coronaviruses and COVID-19: a note for non-virology specialists.

Source

African Journal of Microbiology Research; 2021. 15(1):20-28. many ref.

Publisher

Academic Journals

Location of Publisher

Lagos

Country of Publication

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www.rcvsknowledge.org

Nigeria

Abstract

An outbreak of a respiratory disease with severe acute respiratory syndrome (SARS) - like manifestations emerged in late December 2019 in the Wuhan city of China. The causative agent of this disease was later identified to be a novel Coronavirus. Subsequently, the disease was named coronavirus disease 2019 (COVID-19) by the World Health Organisation and later declared as a pandemic. The outbreak of COVID-19 came with many misinformation and misconceptions about viruses and the COVID-19 disease. Questions have been asked by non - virologists and the general public about what viruses are. Some wondered if viruses are living organisms or not. While some asked how big viruses are or if all viruses and the COVID-19 virus is artificially created. Yet others attributed the outbreak to the new quantum leap in the electromagnet field; the latest 5G technology. There are also concerns raised about the new virus being a bioweapon or an act of biowarfare. These numerous questions needed to be clarified concisely with available scientific knowledge. Thus, this review is providing answers to the 10 frequently asked questions aimed at informing the non - virologist in the academic field and beyond.

Publication Type

Journal article.

<378>

Accession Number

20210268464

Author

Figueiredo, J. G.; Estrela, M. A.

Title

Comparison between industrialized and manipulated ivermectin levels using absorption spectrophotometry. [Portuguese]

Source

Revista Cientifica Multidisciplinar RECIMA21; 2021. 2(5). 27 ref.

Publisher

Editora Revista Cientifica Multidisciplinar RECIMA21 LTDA

Location of Publisher

Jundiai

Country of Publication

Brazil

Abstract

Ivermectin is a potent antiparasitic which has activity against a large amount of viroses and was highlighted in 2020 as a drug with potential effectiveness for the treatment of Covid-2019. The work published by Caly (2020) leveraged the off-label use of ivermectin by the population by showing the drug from a test done with cells in vitro infected with the SARS-CoV-2 virus isolated. The present study aimed to quantify the content of ivermectin in manipulated and industrialized drugs, comparing the results with the value indicated on the

label. As it does not have a method already pre-established by the Brazilian Pharmacopoeia, the dosage was performed according to the methodology adapted by Costa and Pereira Netto (2019), using the spectrophotometry method in UV/VIS, which is recommended by the Regulatory Agency for the quantification of substances. The results showed that four of the six analyzed were not within the parameters required by the American regulatory agency in relation to the active ingredient content. It is intended to highlight the importance of quality control of medications in addition to warning of possible health risks associated with the administration of medications which indication differs from what appears in the package insert.

Publication Type

Journal article.

<379>

Accession Number

20210268210

Author

Papadopoulou, S. K.; Mantzourou, M.; Tassoulas, E.; Biskanaki, F.; Xatziapostolou, E.; Koutridou, D.; Sakellaropoulou, S.; Papandreou, D.

Title

COVID-19 disease, obesity and micronutrients: an updated narrative review of the literature.

Source

Nutrition & Food Science; 2021. 51(5):808-824.

Publisher

Emerald Publishing

Location of Publisher

Bingley

Country of Publication

UK

Abstract

Purpose: The purpose of this paper is to critically summarize the current data concerning the impact of obesity and micronutrient adequacy and supplementation on the risk and severity of COVID-19 disease, and their potential impact on treatment and rehabilitation. Design/methodology/approach: PubMed, Scopus and Google Scholar databases were thoroughly searched to identify studies concerning obesity and nutritional status, vitamin and other micronutrients adequacy with COVID-19 severity. Findings: Individuals with higher body mass index are in greater risk of severe disease and need for mechanical ventilation. Concerning micronutrient adequacy, no published studies at the present time have evaluated the effect of supplementation on the risk and the treatment of the novel disease. Originality/value: Recently, COVID-19 has monopolized the interest of the medical community regarding diet and nutritional status and it possibly plays an important role in disease severity.

Publication Type

Journal article.

<380>

Accession Number

20210268168

Author

Banerjee, I.; Robinson, J.; Asim, M.; Sathian, B.; Indraneel Banerjee

Title

Mucormycosis and COVID-19 an epidemic in a pandemic?

Source

Nepal Journal of Epidemiology; 2021. 11(2):1034-1039. 33 ref.

Publisher

Confederation of Epidemiological Associations

Location of Publisher

Kottayam

Country of Publication

India

Abstract

Mucormycosis and aspergillosis are rare, invasive and life-threatening infections primarily caused by *Rhizopus arrhizus* and *Aspergillus fumigatus* with higher case fatality rates (>50%), respectively. Invasive Aspergillosis and Mucormycosis have been established and recognized as complications of the SARS-CoV-2 infection. Such cases have been intimately linked and related to prior corticosteroid therapy. With the new highly infectious Delta strain (B.1.617.2 and B.1.617.2.1 or AY.1) of the coronavirus which is running rampant throughout India causing unprecedented death tolls, a new crisis is evolving. Invasive "black fungus" (Mucormycosis) is creating an epidemic within a global pandemic. The unique socio-economic, genetic and health status of Indian population culminates into a melting pot which sustains the viable triad for the "black fungus" infection to gain a stronghold. Diabetes mellitus, immunosuppression and the current COVID-19 global pandemic with its massive surges in the country have produced the "perfect storm." Ophthalmologist across India have reported a surge in invasive Mucormycosis cases with a rise in orbital compartment syndrome often calling for radical procedures such as enucleation surgeries. The "black fungus" pandemic and invasive Mucormycosis resulted in the sinister secondary infections and complications are closely linked with the COVID-19 infection in India. It is therefore of the utmost importance that neighbouring countries particularly Nepal and other Asiatic nations take great cognizance of this indolent "black fungus killer" and ensure new screening and testing protocols for early identification to ensure effective management.

Publication Type

Journal article.

<381>

Accession Number

20210268074

Author

Naydenova, K.; Muir, K. W.; Wu, L. F.; Zhang, Z.; Coscia, F.; Peet, M. J.; Castro-Hartmann, P.; Qian, P.; Sader, K.; Dent, K.; Kimanius, D.; Sutherland, J. D.; Lowe, J.; Barford, D.; Russo, C. J.

Title

Structure of the SARS-CoV-2 RNA-dependent RNA polymerase in the presence of favipiravir-RTP.

Source

Proceedings of the National Academy of Sciences of the United States of America; 2021. 118(7). 32 ref.

Publisher

National Academy of Sciences

Location of Publisher

Washington DC

Country of Publication

USA

Abstract

The RNA polymerase inhibitor favipiravir is currently in clinical trials as a treatment for infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), despite limited information about the molecular basis for its activity. Here we report the structure of favipiravir ribonucleoside triphosphate (favipiravir-RTP) in complex with the SARS-CoV-2 RNA-dependent RNA polymerase (RdRp) bound to a template:primer RNA duplex, determined by electron cryomicroscopy (cryoEM) to a resolution of 2.5 Å. The structure shows clear evidence for the inhibitor at the catalytic site of the enzyme, and resolves the conformation of key side chains and ions surrounding the binding pocket. Polymerase activity assays indicate that the inhibitor is weakly incorporated into the RNA primer strand, and suppresses RNA replication in the presence of natural nucleotides. The structure reveals an unusual, nonproductive binding mode of favipiravir-RTP at the catalytic site of SARS-CoV-2 RdRp, which explains its low rate of incorporation into the RNA primer strand. Together, these findings inform current and future efforts to develop polymerase inhibitors for SARS coronaviruses.

Publication Type

Journal article.

<382>

Accession Number

20210267866

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

352

Author

Waniganayake, Y. C.; Nadeeshani, H. K. D. K.; Buddhadasa, P. C. L. S.; Iresha, G. K.; Jayatilleke, S. K.

Title

Difficulties encountered by health care workers with the use of N95 disposable masks and elastomeric respirators during COVID 19 pandemic.

Source

Sri Lankan Journal of Infectious Diseases; 2021. 11(1):18-22. 7 ref.

Publisher

Sri Lankan Society for Microbiology

Location of Publisher

Kandy

Country of Publication

Sri Lanka

Abstract

Shortage of N95 face masks has become a global problem during the COVID-19 pandemic. The study objective was to assess the experience of health care workers (HCWs) on use of N95 disposable (N95D) masks and reusable elastomeric respirators (ER). A self-administered questionnaire was given to HCWs at Sri Jayewardenepura General Hospital who used N95D masks and ER during June 2020. The 46 participants comprised mainly of nurses. Most HCWs believed that N95 masks were required for non-aerosol generating procedures. Adverse events were reported by all who used ER compared to 66% of HCWs who used N95D masks ($p < 0.01$). HCWs who used N95D masks for a longer duration had experienced more adverse events ($p < 0.05$). N95D masks should be conserved for settings where aerosol generating procedures are performed, due to shortage and adverse events. Use of N95D masks should be limited to shorter durations to minimize discomfort.

Publication Type

Journal article.

<383>

Accession Number

20210267755

Author

Huang RuiLi; Xu Miao; Zhu Hu; Chen, C. Z.; Zhu Wei; Lee, E. M.; He ShiHua; Zhang Li; Zhao JingHua; Shamim, K.; Bougie, D.; Huang WenWei; Xia MengHang; Hall, M. D.; Lo, D.; Simeonov, A.; Austin, C. P.; Qiu XiangGuo; Tang HengLi; Zheng Wei

Title

Biological activity-based modeling identifies antiviral leads against SARS-CoV-2.

Source

Nature Biotechnology; 2021. 39(6):747-753. 33 ref.

Publisher

Nature Publishing Group

Location of Publisher

New York

Country of Publication

USA

Abstract

Computational approaches for drug discovery, such as quantitative structure-activity relationship, rely on structural similarities of small molecules to infer biological activity but are often limited to identifying new drug candidates in the chemical spaces close to known ligands. Here we report a biological activity-based modeling (BABM) approach, in which compound activity profiles established across multiple assays are used as signatures to predict compound activity in other assays or against a new target. This approach was validated by identifying candidate antivirals for Zika and Ebola viruses based on high-throughput screening data. BABM models were then applied to predict 311 compounds with potential activity against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Of the predicted compounds, 32% had antiviral activity in a cell culture live virus assay, the most potent compounds showing a half-maximal inhibitory concentration in the nanomolar range. Most of the confirmed anti-SARS-CoV-2 compounds were found to be viral entry inhibitors and/or autophagy modulators. The confirmed compounds have the potential to be further developed into anti-SARS-CoV-2 therapies.

Publication Type

Journal article.

<384>

Accession Number

20210267677

Author

Nur Khairlida, M. K.; Khai Ern Lee; Mazlin Mokhtar

Title

Community-based monitoring in the new normal: a strategy for tackling the COVID-19 pandemic in Malaysia.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 97 ref.

Publisher

MDPI AG

Location of Publisher

Basel

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www.rcvsknowledge.org

Country of Publication

Switzerland

Abstract

In 2020, the COVID-19 pandemic severely impacted the global public health system and led to many deaths worldwide. COVID-19 is highly contagious and can be spread by symptomatic or asymptomatic individuals. As such, determining the risk of infection within a community is difficult. To mitigate the risk of the spread of COVID-19, the government of Malaysia implemented seven phases of the movement control order (MCO) from 18 March to 31 December 2020. However, the socioeconomic cost was substantial despite the effectiveness of the MCO in bringing down cases of infection. As noted by the Prime Minister of Malaysia, the final criterion that should be met is community empowerment. In other words, community-based mitigation measures through which communities unite to contain the pandemic are essential before the completion of the vaccination program. As a measure for controlling the pandemic, mitigation strategies in the new normal should be feasible, practical, and acceptable to communities. In this paper, we present a deliberation of a set of community-based monitoring criteria to ensure health and well-being in communities, such as efficacy, technicality, feedback, and sustainability. The proposed criteria will be instrumental in developing community-based monitoring initiatives to achieve the desired goals in coping with the pandemic as well as in empowering communities to be part of the governance process.

Publication Type

Journal article.

<385>

Accession Number

20210267676

Author

Martinsson, E.; Garmy, P.; Einberg, E. L.

Title

School nurses' experience of working in school health service during the COVID-19 pandemic in Sweden.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 33 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has had a vast influence on Swedish society. Related recommendations and political decisions have greatly affected schools. This study aimed to describe school nurses' experience working in Sweden during the pandemic in 2020. The study used a qualitative method with an inductive

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approach. Interviews with 17 school nurses in five focus groups and one individual interview were conducted. Qualitative content analysis was used. The impact of the pandemic on school nurses can be described through three categories: "Changes in working methods in relation to the students/guardians", "Impact on cooperation with school staff", and "The school nurse's prerequisites for major changes". Overall, school nurses experienced a transition to a digital way of working. Policies and decisions on global and local levels affected the work situations of school nurses as well as the school nurses' social, cultural, and professional experience. The highest priority for school nurses is students, and school nurses adapted their working methods to give support to students during the changing circumstances. School nurses are both pragmatic and highly creative. Cooperation with other school professions is critical, as is support and guidance during crisis situations.

Publication Type

Journal article.

<386>

Accession Number

20210267669

Author

Hung ShukYu [Hung, S. Y. M.]; Lam KamKi [Lam, K. K. S.]; Chan ChuiKing [Chan, C. K. L.]; Liu PuiShan [Liu, P. S. S.]; Chow ChumMing [Chow, C. M. M.]

Title

The psychological and quality of life impacts on women in Hong Kong during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 38 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus (COVID-19) pandemic has caused a global health crisis. The adverse impacts on Asian women, including those in Hong Kong, are substantial. This cross-sectional online study examined the impacts of COVID-19 on Hong Kong women, including psychological effects, self-belief in coping, and quality of life, and was conducted over 4 weeks from July to August 2020. Females aged over 18, living in Hong Kong, and that could read Chinese, were included. Among 417 participants, 50.8% were aged below 50, 66.7% were married, 57.1% were caregivers, 61.4% had a family income of <USD 2600, and 70.3% attained higher secondary education or above. The results show that 32.2%, 42.4%, and 44.9% of participants had negative emotions of stress, anxiety, and depression. There are significant negative correlations between emotional state and different aspects of quality of life, but positive correlations between general self-efficacy and different aspects of quality of life. COVID-19 induced significant psychological and quality of life impacts on females in Hong Kong. The policymakers, healthcare professionals, and social support organizations

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should establish appropriate strategies and policies to support women during the COVID-19 pandemic or similar future crises.

Publication Type

Journal article.

<387>

Accession Number

20210267666

Author

Kotsiou, O. S.; Saharidis, G. K. D.; Kalantzis, G.; Fradelos, E. C.; Gourgoulialis, K. I.

Title

The impact of the lockdown caused by the COVID-19 pandemic on the fine particulate matter (PM2.5) air pollution: the Greek paradigm.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Introduction: Responding to the coronavirus pandemic, Greece implemented the largest quarantine in its history. No data exist regarding its impact on PM2.5 pollution. We aimed to assess PM2.5 levels before, during, and after lockdown (7 March 2020-16 May 2020) in Volos, one of Greece's most polluted industrialized cities, and compare PM2.5 levels with those obtained during the same period last year. Meteorological conditions were examined as confounders. Methods: The study period was discriminated into three phases (pre-lockdown: 7 March-9 March, lockdown: 10 March-4 May, and post-lockdown period: 5 May-16 May). A wireless sensors network was used to collect PM2.5, temperature, relative humidity, rainfall, and wind speed data every 2 s. Results: The lockdown resulted in a significant drop of PM2.5 by 37.4% in 2020, compared to 2019 levels. The mean daily concentrations of PM2.5 exceeded the WHO's guideline value for 24-h mean levels of PM2.5 35% of the study period. During the strictest lockdown (23 March to 4 May), the mean daily PM2.5 levels exceeded the standard 41% of the time. The transition from the pre-lockdown period into lockdown or post-lockdown periods was associated with lower PM2.5 concentrations. Conclusions: A reduction in the mean daily PM2.5 concentration was found compared to 2019. Lockdown was not enough to avoid severe exceedances of air pollution in Volos.

Publication Type

Journal article.

<388>

Accession Number

20210267658

Author

Kim Juah; Kim YeongHun; Ha JiYeon

Title

Changes in daily life during the COVID-19 pandemic among South Korean older adults with chronic diseases: a qualitative study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 48 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Amid the COVID-19 pandemic, older adults are considered a high-risk group and have been advised to stay home or practice social distancing. This qualitative study examined the effects of strong quarantine measures and social distancing on older adults' lifestyles. The participants in this study were 13 people aged 65 and older with chronic diseases who resided in South Korean communities. Qualitative content analysis was conducted to interpret the data collected from in-depth interviews. Four themes and 13 subthemes were identified. The four themes were "lifestyle changes", "increased cautiousness in daily life", "psychological changes", and "adaptation to life during the COVID-19 pandemic." The participants followed quarantine rules strictly and noted lifestyle changes, such as increased time spent at home due to social distancing guidelines, a smaller radius of daily activity, and changes in exercise and dietary habits. They also reported increased caution toward other people and objects that other people interacted with due to their fear of COVID-19 infection. They expressed fear about COVID-19 infection and anxiety about COVID-19-related news, and they often felt bored and depressed; however, the participants accepted, endured, and gradually adapted to these lifestyle changes. Non-face-to-face community support is urgently needed for older adults facing reduced levels of physical activity and psychological hardships due to the COVID-19 pandemic.

Publication Type

Journal article.

<389>

Accession Number

20210267641

Author

Yue Han; Hu Tao

Title

Geographical detector-based spatial modeling of the COVID-19 mortality rate in the continental United States.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Investigating the spatial distribution patterns of disease and suspected determinants could help one to understand health risks. This study investigated the potential risk factors associated with COVID-19 mortality in the continental United States. We collected death cases of COVID-19 from 3108 counties from 23 January 2020 to 31 May 2020. Twelve variables, including demographic (the population density, percentage of 65 years and over, percentage of non-Hispanic White, percentage of Hispanic, percentage of non-Hispanic Black, and percentage of Asian individuals), air toxins (PM2.5), climate (precipitation, humidity, temperature), behavior and comorbidity (smoking rate, cardiovascular death rate) were gathered and considered as potential risk factors. Based on four geographical detectors (risk detector, factor detector, ecological detector, and interaction detector) provided by the novel Geographical Detector technique, we assessed the spatial risk patterns of COVID-19 mortality and identified the effects of these factors. This study found that population density and percentage of non-Hispanic Black individuals were the two most important factors responsible for the COVID-19 mortality rate. Additionally, the interactive effects between any pairs of factors were even more significant than their individual effects. Most existing research examined the roles of risk factors independently, as traditional models are usually unable to account for the interaction effects between different factors. Based on the Geographical Detector technique, this study's findings showed that causes of COVID-19 mortality were complex. The joint influence of two factors was more substantial than the effects of two separate factors. As the COVID-19 epidemic status is still severe, the results of this study are supposed to be beneficial for providing instructions and recommendations for the government on epidemic risk responses to COVID-19.

Publication Type

Journal article.

<390>

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

359

Accession Number

20210267627

Author

Belsey-Priebe, M.; Lyons, D.; Buonocore, J. J.

Title

COVID-19's impact on American women's food insecurity foreshadows vulnerabilities to climate change.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic is wreaking havoc on human lives and the global economy, laying bare existing inequities, and galvanizing large numbers to call for change. Women are feeling the effects of this crisis more than others. This paper explores the pre-COVID relationships and amplified negative feedback loops between American women's economic insecurity, lack of safety, and food insecurity. We then examine how COVID-19 is interacting with these intersecting risks and demonstrate how climate change will likely similarly intensify these feedback loops. The COVID-19 pandemic may be revealing vulnerabilities that societies will face in the wake of an increasingly warming world. It is also an opportunity to build resilience, inclusiveness, and equity into our future, and can help inform how to include gender equity in both COVID-19 and climate recovery policies. Finally, we identify possible strategies to build resilience, specifically highlighting that gendered economic empowerment may create a buffer against environmental health hazards and discuss how these strategies could be integrated into a women-centered Green New Deal.

Publication Type

Journal article.

<391>

Accession Number

20210267620

Author

Meda-Lara, R. M.; Juarez-Rodriguez, P.; Carrasco-Tapias, N. E.; Barrales-Diaz, C. R.; Palomera-Chavez, A.; Gonzalez-Diaz, E.; Llanta-Abreu, M. del C.; Lorenzana-Montenegro, L.; Herrero, M.; Moreno-Jimenez, B.

Title

Precautionary behaviors during the second and third phases of the COVID-19 pandemic: comparative study in the Latin American population.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 53 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The population's behavioral responses to containment and precautionary measures during the COVID-19 pandemic have played a fundamental role in controlling the contagion. A comparative analysis of precautionary behaviors in the region was carried out. A total of 1184 people from Mexico, Colombia, Chile, Cuba, and Guatemala participated through an online survey containing a questionnaire on sociodemographic factors, precautionary behaviors, information about COVID-19, concerns, maintenance of confinement, and medical symptoms associated with COVID-19. Cubans reported the highest scores for information about COVID-19. Colombians reported less frequent usage of precautionary measures (e.g., use of masks), but greater adherence to confinement recommendations in general, in contrast to the low levels of these behaviors in Guatemalans. Chileans reported greater pandemic-related concerns and the highest number of medical symptoms associated with COVID-19. These findings allow a partial characterization of the Latin American population's responses during the second and third phases of the COVID-19 pandemic and highlight the importance of designing and managing public health policies according to the circumstances of each population when facing pandemics.

Publication Type

Journal article.

<392>

Accession Number

20210267605

Author

Valenti, G. D.; Faraci, P.; Magnano, P.

Title

Emotional intelligence and social support: two key factors in preventing occupational stress during COVID-19.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Emotional intelligence (EI) and social support are among the most investigated hypothesized variables that affect stress at work. The current study aims to evaluate the direct association between EI and occupational stress and its indirect relationship mediated by three sources of social support during the spread of the COVID-19. The total sample was composed of 367 individuals (53.7% males), aged from 20 to 68 ($M = 37.84$, $SD = 10.39$), who filled out an online questionnaire. A mediation analysis was performed to test the hypothesized relationships. Our findings showed that EI has a direct effect on psychological effects and an indirect effect on almost all the facets of occupational stress. The significant mediators were social support from both family and friends. Theoretical and practical implications are discussed and directions for future studies are suggested.

Publication Type

Journal article.

<393>

Accession Number

20210267598

Author

Bertuzzi, V.; Semonella, M.; Bruno, D.; Manna, C.; Edbrook-Childs, J.; Giusti, E. M.; Castelnuovo, G.; Pietrabissa, G.

Title

Psychological support interventions for healthcare providers and informal caregivers during the COVID-19 pandemic: a systematic review of the literature.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 60 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

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Background: During the COVID-19 pandemic, healthcare providers and informal caregivers were at an increased risk of adverse mental health effects. This systematic review provides a summary of the available evidence on the content and efficacy of the psychological support interventions in increasing mental health among healthcare providers and informal caregivers during the COVID-19 pandemic. Methods: PubMed, Google Scholar, PsychINFO, and Scopus databases were systematically searched for relevant articles, and the methodological quality of selected articles was assessed using the Quality Assessment Tool for Quantitative Studies. Results: A search of electronic databases identified five reports based on inclusion and exclusion criteria. All psychological support interventions for caregivers were delivered digitally. Despite the large heterogeneity of the selected studies, the findings support the efficacy of mental health interventions in reducing distress and burnout, while promoting self-efficacy and well-being in both healthcare providers and informal caregivers. Conclusion: Since mental health problems are expected to increase during, and as a result of, the COVID-19 pandemic, and digital tools might offer a range of mental health treatments to meet the unique and immediate needs of people, further research is needed to test the cost-effectiveness of digital psychological interventions.

Publication Type

Journal article.

<394>

Accession Number

20210267589

Author

Pollard, C. M.; Landrigan, T. J.; Gray, J. M.; McDonald, L.; Creed, H.; Booth, S.

Title

Using the food stress index for emergency food assistance: an Australian case series analysis during the COVID-19 pandemic and natural disasters.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Food insecurity increases with human and natural disasters. Two tools were developed to assist effective food relief in Western Australia: the Food Stress Index (similar to rental stress, predicts the likelihood of household food insecurity by geographic location) and a basic and nutritious Food Basket Recommendation (that quantifies the types and amounts of food to meet dietary recommendations for different family types). This study aims to understand and compare the processes and impact of using these tools for organisations and their clients involved in emergency food assistance and/or disaster preparedness. A multiple case-study design analysed organisation's use of the tools to assist the response to COVID-19 pandemic restrictions

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and the catastrophic bushfires in Australia. Qualitative interviews were conducted by telephone and Zoom (a cloud-based video conferencing service) in July-August 2020. A purposeful sample of eight interviewees representing seven cases (government, food relief and community organisations involved in emergency food assistance and/or disaster preparedness). Three themes emerged from the analysis, (1) organisations are confident users of the tools; (2) Collaborations were "Ready to Go" and (3) Food Stress Index is a "game changer". Findings demonstrate the intrinsic value of the tools in the provision of emergency food relief under both normal circumstances and in times of increased need, i.e., COVID-19 pandemic. The study highlights the value and importance of ongoing intersectoral collaborations for food relief and food security (e.g., the Western Australian Food Relief Framework) and suggests that upscaling of the Food Stress Index and food baskets will increase the effectiveness of measures to address food insecurity in Australia.

Publication Type

Journal article.

<395>

Accession Number

20210267587

Author

Chandler-Jeanville, S.; Nohra, R. G.; Loizeau, V.; Lartigue-Malgouyres, C.; Zintchem, R.; Naudin, D.; Rothan-Tondeur, M.

Title

Perceptions and experiences of the COVID-19 pandemic amongst frontline nurses and their relatives in France in six paradoxes: a qualitative study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 44 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Due to their frontline position to fight the coronavirus disease 2019 (COVID-19), the professional and personal life of nurses was severely disrupted. To understand and describe their lived experiences and perceptions during the pandemic's first wave in France, we interviewed 49 nurses, including 16 nursing students, and 48 of their family members from June to July 2020. Using a purposeful sampling, the semi-structured interviews were scripted according to Abric's method with probing questions. The interview analysis led to the identification of six paradoxical perceptions concerning the pandemic's consequences: the Silence Paradox, the Hero Paradox, the Workforce Paradox, the Learning Paradox, the Symbolic Exchange Paradox, and the Uncertainty Paradox. However, despite different experiences, the nurses perceived their frontline position both as a burden jeopardizing their safety and well-being and as a spotlight of nurses' tough working conditions. Indeed, because they were in the frontline position, nurses and nursing students were

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psychologically vulnerable, even more so when they felt alone and inadequately protected. Besides, their families were vulnerable too, as they were also exposed to the consequences of the nurses' frontline engagement. Thus, to preserve their safety and well-being, institutions should also provide them with better organizational support and inclusive leadership, without neglecting their families.

Publication Type

Journal article.

<396>

Accession Number

20210267585

Author

Cabezas, J.; Moctezuma, D.; Fernandez-Isabel, A.; Diego, I. M. de

Title

Detecting emotional evolution on Twitter during the COVID-19 pandemic using text analysis.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 53 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Early in 2020, an unexpected and hazardous situation occurred threatening and challenging all of humankind. A new coronavirus called SARS-CoV-2 was first identified in Wuhan, China, and its related disease, called COVID-19, has induced one of the most dangerous crises at a global level since World War II. The ultra-fast transmission rate of the virus and the high mortality rate led the World Health Organization (WHO) to officially declare the situation a pandemic. Governments, for their part, were forced to implement unprecedented mobility restrictions and cease a large part of their economic activities. These facts triggered multiple reactions from people who expressed their feelings mainly through social networks (like Twitter), using them as vectors of information and opinion. In this paper, a study carried out in different Spanish speaking countries (Chile, Mexico, Peru, and Spain) is presented, which addresses the manner in which the evolution of the pandemic outbreak has affected the emotions expressed by individuals on Twitter over the last 13 months (from March 2020 to March 2021). We used a total of 3 million tweets to achieve this task. We made use of a well-known framework called EmoWeb to capture the dynamic variation in the sentimental value of pandemic-related words. The results reflect to what degree the pandemic and its derived problems have influenced and affected the population of the selected countries in different ways. The outcomes also illustrate the evolution over time of opinions published on Twitter regarding several topics related to COVID-19.

Publication Type

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Journal article.

<397>

Accession Number

20210267584

Author

Carrillo-Diaz, M.; Lacomba-Trejo, L.; Romero-Maroto, M.; Gonzalez-Olmo, M. J.

Title

Facial self-touching and the propagation of COVID-19: the role of gloves in the dental practice.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: Despite facial self-touching being a possible source of transmission of SARS-Co-V-2 its role in dental practice has not been studied. Factors such as anxiety symptoms or threat perception of COVID-19 may increase the possibility of contagion. The objective was to compare the impact of control measures, such as gloves or signs in the reduction in facial self-touching. Methods: An intra-subject design was undertaken with 150 adults. The patients' movements in the waiting room were monitored with Microsoft Kinect software on three occasions: without any control measures, using plastic gloves or using advisory signs against self-touching. Additionally, the participants completed the sub-scale of STAI (State-Anxiety) and the BIP-Q5 (Brief Illness Perception Questionnaire); their blood pressure and heart rate were recorded. Results: The lowest incidence of facial self-touching occurred in the experimental situation in which gloves were introduced. The subjects with elevated anxiety symptoms realized more facial self-touching regardless of the control measures. However, the threat perception of COVID-19 is associated negatively with facial self-touching. Conclusions: The use of gloves is a useful control measure in the reduction in facial touching. However, people with anxiety symptoms regardless of whether they have greater threat perception for COVID-19 exhibit more facial touching.

Publication Type

Journal article.

<398>

Accession Number

20210267555

Author

Larribere, L.; Gordejewa, J.; Kuhnhenh, L.; Kurscheidt, M.; Pobiruchin, M.; Vladimirova, D.; Martin, M.; Roser, M.; Schramm, W.; Martens, U. M.; Eigenbrod, T.

Title

Assessment of SARS-CoV-2 infection among healthcare workers of a German COVID-19 treatment center.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 53 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

To date, more than 160 million people have been infected with COVID-19 worldwide. In the present study, we investigated the history of SARS-CoV-2 infection among 3067 healthcare workers (HCW) in a German COVID-19 treatment center during the early phase of the pandemic (July 2020) based on the seroprevalence of SARS-CoV-2 antibodies and self-reported previous PCR results. The results demonstrate a low prevalence of SARS-CoV-2 infection (n = 107 [3.5%]) with no increased risk for employees with a high level of patient exposure in general or working in COVID-19-confined areas in particular. This suggests that the local hygiene standards implemented in our hospital during the first wave of COVID-19 pandemic were effective in preventing patient-to-HCW transmission. No evidence for highly mobile staff serving as a vector for SARS-CoV-2 transmission could be found. In addition, impairment of smell and/or taste was strongly associated with SARS-CoV-2 history.

Publication Type

Journal article.

<399>

Accession Number

20210267550

Author

Fama, F.; Giudice, R. lo; Vita, G. di; Tribst, J. P. M.; Giudice, G. lo; Sindoni, A.

Title

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367

COVID-19 and the impact on the cranio-oro-facial trauma care in Italy: an epidemiological retrospective cohort study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 35 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus disease 2019 (COVID-19) has deeply modified the organization of hospitals, health care centers, and the patient's behavior. The aim of this epidemiological retrospective cohort study is to evaluate if and how the COVID-19 pandemic has determined a modification in cranio-oro-facial traumatology service. Methods: The dataset included hospital emergency room access of a six-month pre-pandemic period and six months into pandemic outbreak. The variables collected were: patient age, gender, type of emergency access with relative color code, Glasgow Coma Scale Score, type of discharge. Results: 537 vs. 237 (pre-pandemic vs. pandemic) patients accessed the hospital emergency room and the mean age decreased from 60.79 +or- 25.34 to 56.75 +or- 24.50 year. Yellow and green code access went from 28.9% and 66.1% to 37.5% and 57.7% (pre-pandemic vs. pandemic). Glasgow Coma Scale (GCS) shows an increase of 16.6% vs. 27.8% of 15 grade score, a 28.7% vs. 28.5% of the 14 grade score and reduction of 13 and 12 grade 40.2% and 14.5% vs. 37.1 and 9.7% (pre-pandemic vs. pandemic). Conclusions: Since the COVID-19 outbreak continues, epidemiological data are still necessary to perform public health intervention strategies and to appropriately predict the population needs, in order to properly manage the COVID-19 related to oral pathologies as well as the most common health problems.

Publication Type

Journal article.

<400>

Accession Number

20210267548

Author

Sandoval-Reyes, J.; Idrovo-Carlier, S.; Duque-Oliva, E. J.

Title

Remote work, work stress, and work-life during pandemic times: a Latin America situation.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 51 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic affected the relationship between work and life almost everywhere on the planet. Suddenly, remote work became the mainstream way of working for millions of workers. In this context, we explore how the relationship between remote work, work stress, and work-life developed during pandemic times in a Latin America context. In a sample of 1285 responses collected between April and May 2020, through a PLS-SEM model, we found that remote work in pandemic times increased perceived stress (beta = 0.269; $p < 0.01$), reduced work-life balance (beta = -0.225; $p < 0.01$) and work satisfaction (beta = -0.190; $p < 0.01$), and increased productivity (beta = 0.120; $p < 0.01$) and engagement (beta = 0.120; $p < 0.01$). We also found a partial moderating effect, competitive and complementary, of perceived stress, and one significant gender difference: when working remotely, perceived stress affects men's productivity more acutely than women's productivity.

Publication Type

Journal article.

<401>

Accession Number

20210267536

Author

Adu, M. K.; Wallace, L. J.; Lartey, K. F.; Arthur, J.; Oteng, K. F.; Dwomoh, S.; Owusu-Antwi, R.; Larsen-Reindorf, R.; Agyapong, V. I. O.

Title

Prevalence and correlates of likely major depressive disorder among the adult population in Ghana during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 80 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: Emerging research suggests that the novel coronavirus disease (COVID-19) pandemic and associated public health restrictions have caused psychological distress in many contexts. In order for public health authorities and policy makers to effectively address the psychological distress associated with the pandemic, it is important to determine the prevalence and correlates of mental disorders, including depression. Objectives: We aimed to determine the prevalence, and demographic, social, clinical and other COVID-19 related correlates of major depressive disorder symptoms among the general population in Ghana during the COVID-19 pandemic. Method: The study was a cross-sectional survey using online data collection methods. The survey assessed demographic, social and clinical variables as well as COVID-19 related variables. Major depressive disorder symptoms were assessed using the Patient Health Questionnaire-9. The survey link was distributed primarily through WhatsApp-based platforms. Data were analyzed using descriptive and inferential statistics. Results: The overall prevalence of likely MDD symptoms among the sample population was 12.3%. Variables such as employment, loss of jobs during the pandemic and rate of exposure to COVID-related news were independently and significantly associated with the likelihood that respondents had likely MDD. Variables such as gender, relationship, housing status and having a family member or friend who was sick from COVID-19 were not independently significantly associated with the likelihood that respondents had likely MDD, when all other factors in the model were controlled. Conclusion: This study has identified the prevalence and correlates of depression symptoms in Ghana during the COVID-19 pandemic. There is the urgent need for mental health policy makers and the government of Ghana to have policies in place to alleviate the potential threat to the mental health of the population.

Publication Type

Journal article.

<402>

Accession Number

20210267535

Author

Ahmad, M.; Vismara, L.

Title

The psychological impact of COVID-19 pandemic on women's mental health during pregnancy: a rapid evidence review.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 68 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: The perinatal period is a particularly vulnerable period in women's lives that implies significant physiological and psychological changes that can place women at higher risk for depression and anxiety

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symptoms. In addition, the ongoing pandemic of coronavirus disease 2019 (COVID-19) is likely to increase this vulnerability and the prevalence of mental health problems. This review aimed to investigate the existing literature on the psychological impact of the COVID-19 pandemic on women during pregnancy and the first year postpartum. Method: The literature search was conducted using the following databases: Pubmed, Scopus, WOS - web of science, PsycInfo and Google Scholar. Out of the total of 116 initially selected papers, 17 have been included in the final work, according to the inclusion criteria. Results: The reviewed contributions report a moderate to severe impact of the COVID-19 outbreak on the mental health of pregnant women, mainly in the form of a significant increase in depression - up to 58% in Spain - and anxiety symptoms - up to 72% in Canada. In addition to the common psychological symptoms, COVID-19-specific worries emerged with respect to its potential effects on pregnancy and the well-being of the unborn child. Social support and being engaged in regular physical activities appear to be protective factors able to buffer against the effects of the pandemic on maternal mental health. Conclusions: Despite the limitations of the study design, the evidence suggests that it is essential to provide appropriate psychological support to pregnant women during the emergency in order to protect their mental health and to minimize the risks of long-term effects on child development.

Publication Type

Journal article.

<403>

Accession Number

20210267531

Author

Giessing, L.; Kannen, J.; Strahler, J.; Frenkel, M. O.

Title

Direct and stress-buffering effects of COVID-19-related changes in exercise activity on the well-being of German sport students.

Source

International Journal of Environmental Research and Public Health; 2021. 18(13). 116 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Maintaining or initiating exercise activity in the COVID-19 pandemic may act as a buffer against the observed stress-related deterioration in well-being, with emotion regulation (ER) discussed as a possible moderator. Therefore, the present study investigated the interaction between stress, exercise activity (EA), and ER on mood. In an online survey, 366 German sports science students (56% women, Mage = 23.04, SD = 2.87) reported their stress levels (general and COVID-19-specific), mood (energy, valence, calmness), EA before and during the pandemic, and use of ER strategies in spring 2020. Pandemic-related change in EA

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was calculated as residual change. Due to gender differences in mental health and EA, the main and interaction effects were tested in twelve hierarchical regression analyses, separately for men and women. Overall, EA significantly decreased during the pandemic and was positively associated with energy in both men and women. ER was positively associated with women's energy, but negatively with all three mood dimensions in men. Only one three-way interaction appeared significant: in the case of high stress, low levels of EA and high use of ER were associated with the greatest deteriorations in energy in men. Our findings suggest that EA may buffer deteriorations in energy in men with high stress and difficulties in ER.

Publication Type

Journal article.

<404>

Accession Number

20210266870

Author

Tilliridou, V.; Kirkbride, R.; Dickinson, R.; Tiernan, J.; Yong GuoLiang; Beek, E. J. R. van; Murchison, J. T.; Williams, M. C.

Title

Pulmonary embolism severity before and during the COVID-19 pandemic.

Source

British Journal of Radiology; 2021. 94(1123). 41 ref.

Publisher

British Institute of Radiology

Location of Publisher

London

Country of Publication

UK

Abstract

Objectives: Early in the coronavirus 2019 (COVID-19) pandemic, a high frequency of pulmonary embolism was identified. This audit aims to assess the frequency and severity of pulmonary embolism in 2020 compared to 2019. **Methods:** In this retrospective audit, we compared computed tomography pulmonary angiography (CTPA) frequency and pulmonary embolism severity in April and May 2020, compared to 2019. Pulmonary embolism severity was assessed with the Modified Miller score and the presence of right heart strain was assessed. Demographic information and 30-day mortality was identified from electronic health records. **Results:** In April 2020, there was a 17% reduction in the number of CTPA performed and an increase in the proportion identifying pulmonary embolism (26%, n = 68/265 vs 15%, n = 47/320, p < 0.001), compared to April 2019. Patients with pulmonary embolism in 2020 had more comorbidities (p = 0.026), but similar age and sex compared to 2019. There was no difference in pulmonary embolism severity in 2020 compared to 2019, but there was an increased frequency of right heart strain in May 2020 (29 vs 12%, p = 0.029). Amongst 18 patients with COVID-19 and pulmonary embolism, there was a larger proportion of males and an increased 30 day mortality (28% vs 6%, p = 0.008). **Conclusion:** During the COVID-19 pandemic, there was a reduction in the number of CTPA scans performed and an increase in the frequency

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of CTPA scans positive for pulmonary embolism. Patients with both COVID-19 and pulmonary embolism had an increased risk of 30-day mortality compared to those without COVID-19. Advances in knowledge: During the COVID-19 pandemic, the number of CTPA performed decreased and the proportion of positive CTPA increased. Patients with both pulmonary embolism and COVID-19 had worse outcomes compared to those with pulmonary embolism alone.

Publication Type

Journal article.

<405>

Accession Number

20210266620

Author

Jesus, T. S.; Bhattacharjya, S.; Papadimitriou, C.; Bogdanova, Y.; Bentley, J.; Arango-Lasprilla, J. C.; Sureshkumar Kamalakannan

Title

Lockdown-related disparities experienced by people with disabilities during the first wave of the COVID-19 pandemic: scoping review with thematic analysis.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 124 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

People with disabilities may be disproportionately affected by the COVID-19 pandemic. We synthesize the literature on broader health and social impacts on people with disabilities arising from lockdown-related measures. Methods: Scoping review with thematic analysis. Up to mid-September 2020, seven scientific databases and three pre-print servers were searched to identify empirical or perspective papers addressing lockdown-related disparities experienced by people with disabilities. Snowballing searches and experts' consultation also occurred. Two independent reviewers took eligibility decisions and performed data extractions. Results: Out of 1026 unique references, 85 addressed lockdown-related disparities experienced by people with disabilities. Ten primary and two central themes were identified: (1) Disrupted access to healthcare (other than for COVID-19); (2) Reduced physical activity leading to health and functional decline; (3) From physical distance and inactivity to social isolation and loneliness; (4) Disruption of personal assistance and community support networks; (5) Children with disabilities disproportionately affected by school closures; (6) Psychological consequences of disrupted routines, activities, and support; (7) Family and informal caregiver burden and stress; (8) Risks of maltreatment, violence, and self-harm; (9) Reduced employment and/or income exacerbating disparities; and (10) Digital divide in access to health, education, and support services. Lack of disability-inclusive response and emergency preparedness and structural, pre-

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pandemic disparities were the central themes. Conclusions: Lockdown-related measures to contain the COVID-19 pandemic can disproportionately affect people with disabilities with broader impact on their health and social grounds. Lack of disability-inclusive response and emergency preparedness and pre-pandemic disparities created structural disadvantages, exacerbated during the pandemic. Both structural disparities and their pandemic ramifications require the development and implementation of disability-inclusive public health and policy measures.

Publication Type

Journal article.

<406>

Accession Number

20210266584

Author

Shalaby, R.; Adu, M. K.; Andreychuk, T.; Eboreime, E.; Gusnowski, A.; Vuong Wesley, Surood, S.; Greenshaw, A. J.; Agyapong, V. I. O.

Title

Prevalence, demographic, and clinical correlates of likely PTSD in subscribers of Text4Hope during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 46 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: During the COVID-19 pandemic, people may experience increased risk of adverse mental health, particularly post-traumatic stress disorder (PTSD). Methods: A survey measured stress, anxiety, depression, and PTSD symptoms in Text4Hope subscribers using the Perceived Stress Scale, Generalized Anxiety Disorder 7-Item Scale, Patient Health Questionnaire-9, and PTSD Checklist for DSM-5 Part 3, respectively. A Chi-square test and multivariate logistic regression were employed. Results: Most respondents were 41-60 years old (49.5%), Caucasian (83.3%), with post-secondary education (92.1%), employed (70.3%), married/cohabiting/partnered (64.9%), and homeowners (71.7%). Likely PTSD was reported in 46.8% of the respondents. Those who were afraid to contract the coronavirus had a history of depression before the pandemic, and those who received counselling during the pandemic exhibited a high prevalence of likely PTSD (OR (1.7 to 2.2)). Significant lower odds of likely PTSD were observed among subscribers who received absolute support from family/friends. Conclusions: This paper presents findings on the prevalence of likely PTSD and identified vulnerable groups during the COVID-19 pandemic. Our results support the proposal that public health advice should incorporate mental health wellness campaigns aiming to reduce the psychological impact of pandemics.

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Publication Type

Journal article.

<407>

Accession Number

20210266578

Author

Brogardh, C.; Hammarlund, C. S.; Eek, F.; Stigmar, K.; Lindgren, I.; Schouenborg, A. T.; Hansson, E. E.

Title

Self-perceived life satisfaction during the first wave of the COVID-19 pandemic in Sweden: a cross-sectional study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Currently, there is limited knowledge on how the Swedish strategy with more lenient public health restrictions during the COVID-19 pandemic has influenced people's life satisfaction. Here, we investigated self-reported life satisfaction during the first wave of the pandemic in Sweden, and perceived changes in life satisfaction in relation to various sociodemographic factors. A total of 1082 people (mean age 48 (SD 12.2); 82% women) responded to an online survey during autumn 2020 including the "Life Satisfaction Questionnaire-11". A majority (69%) were satisfied with life as a whole, and with other important life domains, with the exception of contact with friends and sexual life. An equal share reported that life as a whole had either deteriorated (28%) or improved (29%). Of those that perceived a deterioration, 95% considered it to be due to the pandemic. Regarding deteriorated satisfaction with life as a whole, higher odds were found in the following groups: having no children living at home; being middle aged; having other sources of income than being employed; and having a chronic disease. The Swedish strategy might have contributed to the high proportion of satisfied people. Those who perceived a deterioration in life satisfaction may, however, need attention from Swedish Welfare Authorities.

Publication Type

Journal article.

<408>

Accession Number

20210266571

Author

Kou HuaiYun; Zhang SiChu; Li WenJia; Liu YueLai

Title

Participatory action research on the impact of community gardening in the context of the COVID-19 pandemic: investigating the seeding plan in Shanghai, China.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 33 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study aims to examine the impacts of community gardening on the daily life of residents and the management organisation of pandemic prevention in the context of the COVID-19 pandemic, a major public health scourge in 2020. The research team applied a participatory action research approach to work with residents to design and implement the Seeding Plan, a contactless community gardening program. The authors carried out a study to compare the everyday conditions reflecting residents' mental health of the three subject groups during the pandemic: the participants of the Seeding Plan (Group A), the non-participants living in the same communities that had implemented the Seeding Plan (Group B), and the non-participants in other communities (Group C). According to the results, group A showed the best mental health among the three; Group B, positively influenced by seeding activities, was better than Group C. The interview results also confirmed that the community connections established through gardening activities have a significant impact on maintaining a positive social mentality under extraordinary circumstances. From this, the study concluded that gardening activities can improve people's mental health, effectively resist negative impacts, and it is a convenient tool with spreading influence on the entire community, so as to support the collective response to public health emergencies in a bottom-up direction by the community.

Publication Type

Journal article.

<409>

Accession Number

20210266540

Author

Bonsaksen, T.; Thygesen, H.; Leung, J.; Ruffolo, M.; Schoultz, M.; Price, D.; Geirdal, A. O.

Title

Video-based communication and its association with loneliness, mental health and quality of life among older people during the COVID-19 outbreak.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 42 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The aim of the study was to examine the use of video-based communication and its association with loneliness, mental health and quality of life in older adults (60-69 years versus 70+ years) during the COVID-19 pandemic. A cross-sectional online survey was conducted in Norway, UK, USA and Australia during April/May 2020, and 836 participants in the relevant age groups were included in the analysis. Multiple regression analyses were conducted to examine associations between the use of video-based communication tools and loneliness, mental health and quality of life within age groups, while adjusting by sociodemographic variables. Video-based communication tools were found to be more often used among participants aged 60-69 years (60.1%), compared to participants aged 70 or above (51.8%, $p < 0.05$). Adjusting for all variables, the use of video-based communication was associated with less loneliness (beta = -0.12, $p < 0.01$) and higher quality of life (beta = 0.14, $p < 0.01$) among participants aged 60-69 years, while no associations were observed for participants in the oldest age group. The use of video-based communication tools was therefore associated with favorable psychological outcomes among participants in their sixties, but not among participants in the oldest age group. The study results support the notion that age may influence the association between the use of video-based communication tools and psychological outcomes amongst older people.

Publication Type

Journal article.

<410>

Accession Number

20210266538

Author

Abdoli, N.; Farnia, V.; Jahangiri, S.; Radmehr, F.; Alikhani, M.; Abdoli, P.; Davarinejad, O.; Dursteler, K. M.; Bruhl, A. B.; Sadeghi-Bahmani, D.; Brand, S.

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377

Title

Sources of sleep disturbances and psychological strain for hospital staff working during the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 87 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Hospital staff members reported increased stress-related workload when caring for inpatients with COVID-19 ("frontline hospital staff members"). Here, we tested if depression, anxiety, and stress were associated with poor sleep and lower general health, and if social support mediated these associations. Furthermore, we compared current insomnia scores and general health scores with normative data. A total of 321 full-time frontline hospital staff members (mean age: 36.86; 58% females) took part in the study during the COVID-19 pandemic. They completed a series of questionnaires covering demographic and work-related information, symptoms of depression, anxiety, stress, social support, self-efficacy, and symptoms of insomnia and general health. Higher symptoms of depression, anxiety, and stress were associated with higher symptoms of insomnia and lower general health. Higher scores of depression, anxiety, and stress directly predicted higher insomnia scores and lower general health scores, while the indirect effect of social support was modest. Compared to normative data, full-time frontline hospital staff members had a 3.14 higher chance to complain about insomnia and a significantly lower general health. Symptoms of insomnia and general health were unrelated to age, job experience, educational level, and gender. Given this background, it appears that the working context had a lower impact on individuals' well-being compared to individual characteristics.

Publication Type

Journal article.

<411>

Accession Number

20210266519

Author

Seong Mihyeon; Park Juyoung; Chung Soojin; Sok Sohyune

Title

Development of the Adult Pandemic Attitude Scale (A-PAS).

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). many ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This study aimed to develop an instrument for measuring the attitudes that reflect the characteristics of the pandemic (Adult Pandemic Attitude Scale (A-PAS)) and verifying its validity and reliability. This study used a methodological research design and was conducted with a development step and an evaluation step. The development step included development of preliminary items, content validity, face validity, and preliminary investigation. The evaluation step included item analysis, construct validity, convergent validity, discriminant validity, criterion validity, factor naming, reliability, and completion of the final instrument. The A-PAS developed in this study consisted of a total of 20 items in five dimensions. The internal consistency of 20 items of the A-PAS, Cronbach's α was 0.92 for 20 items, Cronbach's α for each factor, a subscale of instrument, was 0.61–0.87 and Raykov's ρ coefficient of each factor, which is a subscale of the tool, was found to be 0.60 to 0.88. Analysis of construct validity showed the results as follows: $\chi^2(p) = 134.05 (p < 0.001)$, RMSEA = 0.02, RMR = 0.02, GFI = 0.94, CFI = 0.99. The study findings suggest that the developed instrument can be utilized to measure the attitudes of adults toward pandemics, and reflect the reality of the pandemic situation. The outcomes can be used as valuable data for intervention, prevention activities, and policy preparation. The instrument will be applied in the event of a pandemic, such as COVID-19, and will be helpful in promoting the health of the people.

Publication Type

Journal article.

<412>

Accession Number

20210266514

Author

Amram, O.; Borah, P.; Kubsad, D.; McPherson, S. M.

Title

Media exposure and substance use increase during COVID-19.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 25 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: Lockdown measures because of COVID-19 are likely to result in deteriorating physical and mental health. In this study, our aim was to assess the impact of media exposure on increases in substance use during the COVID-19 pandemic. Methods: A nationally representative online survey of 1264 adults was collected during the pandemic in the United States. Logistic regression was used to explore the association between an increase in substance use since the beginning of the COVID-19 pandemic and exposure to cable news or social media together with COVID-19 knowledge, while controlling for covariates. Results: In the multivariable-adjusted models, participants with the highest exposure to social media (at least daily) and low knowledge of COVID-19 were 9.9 times more likely to experience an increase in substance use since the pandemic began (OR = 9.90, 95% CI = 4.27-23.06). Participants with the highest exposure to cable news and low knowledge of COVID-19 were over 11 times more likely to experience an increase in substance use (OR = 11.64, 95% CI = 4.01-24.45). Conclusion: Based on our findings, we recommend that media organizations should aim to reduce uncertainty and also provide positive coverage to counter the negative information associated with pandemics.

Publication Type

Journal article.

<413>

Accession Number

20210266496

Author

Constantinou, M.; Kagialis, A.; Karekla, M.

Title

COVID-19 scientific facts vs. conspiracy theories: is science failing to pass its message?

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 43 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Science may be failing to convince a significant number of people about COVID-19 scientific facts and needed public health measures. Individual and social factors are behind believing conspiracy theories. Adults (N = 1001) were asked to rate their beliefs in various conspiracy theories circulating in social media, rate their psychological distress relating to COVID-19, rate their trust in science to solve COVID-19

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problems, and rate their willingness to adhere to measures regarding social distancing and quarantine. The findings showed conspiracy theories are widely believed and related to lower age, lower education, living in less densely populated areas, and lower income. Stronger conspiracy theory beliefs predicted science mistrust and unwillingness to adhere to public health measures. Psychological state was a strong predictor of conspiracy beliefs. Recommendations, stemming from the findings, for reducing such beliefs and better serving public health are discussed.

Publication Type

Journal article.

<414>

Accession Number

20210266465

Author

Dembech, M.; Katz, Z.; Szilard, I.

Title

Strengthening country readiness for pandemic-related mass movement: policy lessons learned.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has thus far restricted the large movement of people; nonetheless, we cannot exclude the disruptive power of a virus with similar characteristics to COVID-19 affecting both high- and low-income countries, as a factor for future mass migrations. Indeed, the top 15 countries affected by COVID-19 host about 9 million refugees, and it is, therefore, important to investigate and strengthen the readiness of countries' health policies to ensure they are well equipped to deal with potential large influxes of 'epidemic-related refugees and migrants.' Using the Bardach Policy Framework as a tool for analysis, this article investigates the readiness of countries for a potential public health event (mass migration generated by future pandemics), therefore, aiming at a health response forecasting exercise. The article reviews the policies put in place by countries who faced large influxes of migrants between 2011 and 2015 (the policy-prolific years between the Arab Spring migration and the introduction of stringent measures in Europe) and new evidence generated in response to the COVID-19 pandemic (including the 'ECDC Guidance on infection prevention and control of COVID-19 in migrant and refugee reception and detention centres in the EU/EEA and the UK' and the 'WHO Lancet priority for dealing with migration and COVID-19') to formulate a policy option able to strengthen national system capacities for responding to influxes of epidemic-related migrants and the management of highly infectious diseases.

Publication Type

Journal article.

<415>

Accession Number

20210266396

Author

Ko Youngsuk; Lee Jacob; Kim Yeonju; Kwon Donghyok; Jung Eunok

Title

COVID-19 vaccine priority strategy using a heterogenous transmission model based on maximum likelihood estimation in the republic of Korea.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 30 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

(1) Background: The vaccine supply is likely to be limited in 2021 due to constraints in manufacturing. To maximize the benefit from the rollout phase, an optimal strategy of vaccine allocation is necessary based on each country's epidemic status. (2) Methods: We first developed a heterogeneous population model considering the transmission matrix using maximum likelihood estimation based on the epidemiological records of individual COVID-19 cases in the Republic of Korea. Using this model, the vaccine priorities for minimizing mortality or incidence were investigated. (3) Results: The simulation results showed that the optimal vaccine allocation strategy to minimize the mortality (or incidence) was to prioritize elderly and healthcare workers (or adults) as long as the reproductive number was below 1.2 1.2 (or over 0.9 0.9). (4) Conclusion: Our simulation results support the current Korean government vaccination priority strategy, which prioritizes healthcare workers and senior groups to minimize mortality, under the condition that the reproductive number remains below 1.2 1.2. This study revealed that, in order to maintain the current vaccine priority policy, it is important to ensure that the reproductive number does not exceed the threshold by concurrently implementing nonpharmaceutical interventions.

Publication Type

Journal article.

<416>

Accession Number

20210266390

Author

Kim Dosup; Ko JaeHoon; Peck KyongRan; Baek JinYang; Moon HeeWon; Ki HyunKyun; Yoon JiHyun; Kim HyoJin; Choi JeongHwa; Park GaEun

Title

A COVID-19 exposure at a dental clinic where healthcare workers routinely use particulate filtering respirators.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 29 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Asymptomatic/mildly symptomatic coronavirus disease 2019 (COVID-19) patients produce a considerable amount of virus and transmit severe acute respiratory syndrome virus 2 (SARSCoV- 2) through close contact. Preventing in-hospital transmission of SARS-CoV-2 is challenging, since symptom-based screening protocols may miss asymptomatic/mildly symptomatic patients. In particular, dental healthcare workers (HCWs) are at high risk of exposure, as face-to-face contact and exposure to oral secretions is unavoidable. We report exposure of HCWs during dental procedures on a mild symptomatic COVID-19 patient. A 32-year-old male visited a dental clinic at a tertiary care hospital. He experienced mild cough, which started three days before the dental visit, but did not report his symptom during the entrance screening. He underwent several dental procedures and imaging for orthognathic surgery without wearing a mask. Seven HCWs were closely exposed to the patient during dental procedures that could have generated droplets and aerosols. One HCW had close contact with the patient during radiologic exams, and seven HCWs had casual contact. All HCWs wore particulate filtering respirators with 94% filter capacity and gloves, but none wore eye protection or gowns. The next day, the patient experienced dysgeusia and was diagnosed with COVID-19 with high viral load. All HCWs who had close contact with the patient were quarantined for 14 days, and polymerase chain reaction and antibody tests for SARS-CoV-2 were negative. This exposure event suggests the protective effect of particulate filtering respirators in dental clinics. The recommendations of different levels of personal protective equipment (PPE) for dental HCWs according to the procedure types should be established according to the planned procedure, the risk of COVID-19 infection of the patient, and the outbreak situation of the community.

Publication Type

Journal article.

<417>

Accession Number

20210266384

Author

Deng Wen; Yang Yi

Title

Cross-platform comparative study of public concern on social media during the COVID-19 pandemic: an empirical study based on Twitter and Weibo.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 80 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The COVID-19 pandemic has created a global health crisis that has affected economies and societies worldwide. During these times of uncertainty and crisis, people have turned to social media platforms as communication tools and primary information sources. Online discourse is conducted under the influence of many different factors, such as background, culture, politics, etc. However, parallel comparative research studies conducted in different countries to identify similarities and differences in online discourse are still scarce. In this study, we combine the crisis lifecycle and opinion leader concepts and use data mining and a set of predefined search terms (coronavirus and COVID-19) to investigate discourse on Twitter (101,271 tweets) and Sina Weibo (92,037 posts). Then, we use a topic modeling technique, Latent Dirichlet Allocation (LDA), to identify the most common issues posted by users and temporal analysis to research the issue's trend. Social Network Analysis (SNA) allows us to discover the opinion leader on the two different platforms. Finally, we find that online discourse reflects the crisis lifecycle according to the stage of COVID-19 in China and the US. Regarding the status of the COVID-19 pandemic, users of Twitter tend to pay more attention to the economic situation while users of Weibo pay more attention to public health. The issues focused on in online discourse have a strong relationship with the development of the crisis in different countries. Additionally, on the Twitter platform many political actors act as opinion leaders, while on the Weibo platform official media and government accounts control the release of information.

Publication Type

Journal article.

<418>

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20210266346

Author

Kim MinYoung; Yang YunYi

Title

Mental health status and its influencing factors: the case of nurses working in COVID-19 hospitals in South Korea.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 24 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The mental health of nurses participating in patient care is under threat amid the coronavirus disease 2019 (COVID-19) pandemic. This study aimed to identify the mental health status (depression, anxiety, and stress) and its influencing factors on nurses who provided patient care at a specialized hospital for COVID-19 in South Korea. Of the 180 nurses who participated in this study, 30.6% had moderate or higher levels of depression, 41% had moderate or higher anxiety levels, and 19.4% had moderate or higher stress levels. In this study, stigma influenced nurses' mental health, such that the higher the stigma, the higher the nurses' depression, anxiety, and stress. Depression was higher in female nurses than in male nurses, and stress was higher in charge nurses than nurses in other job positions. Therefore, a management program should be designed to improve the mental health of nurses during the current pandemic. In particular, a solution to reduce stigma is required, and the mental health of female nurses and nurses in leadership roles requires special attention.

Publication Type

Journal article.

<419>

Accession Number

20210266342

Author

Ribes, J.; Gonzalez-Pachon, J.

Title

Risk attitude in multicriteria decision analysis: a compromise approach.

Source

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International Journal of Environmental Research and Public Health; 2021. 18(12). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In fields on which decisions need to be taken including health, as we are seeing nowadays in the COVID-19 crisis, decision-makers face multiple criteria and results with a random component. In stochastic multicriteria decision-making models, the risk attitude of the decision maker is a relevant factor. Traditionally, the shape of a utility function is the only element that represents the decision maker's risk attitude. The education process of multi-attribute utility functions implies some operational drawbacks, and it is not always easy. In this paper, we propose a new element with which the decision maker's risk attitude can be implemented: the selection of the stochastic efficiency concept to be used during a decision analysis. We suggest representing the risk attitude as a conflict between two poles: risk neutral attitude, associated with best expectations, and risk aversion attitude, associated with a lower uncertainty. The Extended Goal Programming formulation has inspired the parameter that is introduced in a new risk attitude formulation. This parameter reflects the trade-off between the two classical poles with respect to risk attitude. Thus, we have produced a new stochastic efficiency concept that we call Compromise Efficiency.

Publication Type

Journal article.

<420>

Accession Number

20210266336

Author

Burwell-Naney, K.; Mortiboy, M.; Zitta, J. P.; Stevens, E.; Patterson, K.; Salter, J. C.; Easterling, M.; Bock, L. B.; Wood, H.; Rayner, M.; Jenkins, R.

Title

Local government approaches to combating COVID-19 inequities: a Durham county department of public health perspective.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 11 ref.

Publisher

MDPI AG

Location of Publisher

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386

Country of Publication

Switzerland

Abstract

When a novel coronavirus disease (COVID-19) made major headlines in 2020, it further exposed an existing public health crisis related to inequities within our communities and health care delivery system. Throughout the COVID-19 pandemic, populations of color had higher infection and mortality rates, and even experienced greater disease severity compared to whites. Populations of color often bear the brunt of COVID-19 and other health inequities, due to the multifaceted relationship between systemic racism and the social determinants of health. As this relationship continues to perpetuate health inequities, the local health department is an agency that has the jurisdiction and responsibility to prevent disease and protect the health of the communities they serve. When equity is integrated into a health department's operational infrastructure as a disease prevention strategy, it can elevate the agency's response to public health emergencies. Collecting, reporting, and tracking demographic data that is necessary to identify inequities becomes a priority to facilitate a more robust public health response. The purpose of this paper is to present strategies of how a local health department operationalized equity in various stages of COVID-19 response and apply these methods to future public health emergencies to better serve vulnerable communities.

Publication Type

Journal article.

<421>

Accession Number

20210266319

Author

Aw SiewBee; Teh BorTsong; Ling HohTeck [Ling, H. T. G.]; Leng PauChung; Chan WengHowe; Mohd Hamdan Ahmad

Title

The COVID-19 pandemic situation in Malaysia: lessons learned from the perspective of population density.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 36 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

This paper attempts to ascertain the impacts of population density on the spread and severity of COVID-19 in Malaysia. Besides describing the spatio-temporal contagion risk of the virus, ultimately, it seeks to test the hypothesis that higher population density results in exacerbated COVID-19 virulence in the community. The

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population density of 143 districts in Malaysia, as per data from Malaysia's 2010 population census, was plotted against cumulative COVID-19 cases and infection rates of COVID-19 cases, which were obtained from Malaysia's Ministry of Health official website. The data of these three variables were collected between 19 January 2020 and 31 December 2020. Based on the observations, districts that have high population densities and are highly inter-connected with neighbouring districts, whether geographically, socio-economically, or infrastructurally, tend to experience spikes in COVID-19 cases within weeks of each other. Using a parametric approach of the Pearson correlation, population density was found to have a moderately strong relationship to cumulative COVID-19 cases (p-value of 0.000 and R2 of 0.415) and a weak relationship to COVID-19 infection rates (p-value of 0.005 and R2 of 0.047). Consequently, we provide several non-pharmaceutical lessons, including urban planning strategies, as passive containment measures that may better support disease interventions against future contagious diseases.

Publication Type

Journal article.

<422>

Accession Number

20210266311

Author

Aguglia, A.; Amerio, A.; Costanza, A.; Parodi, N.; Copello, F.; Serafini, G.; Amore, M.

Title

Hopelessness and post-traumatic stress symptoms among healthcare workers during the COVID-19 pandemic: any role for mediating variables?

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 58 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The Coronavirus-19 (COVID-19) pandemic has many psychological consequences for the population, ranging from anxious-depressive symptoms and insomnia to complex post-traumatic syndromes. This study aimed to evaluate the impact of the Covid-19 pandemic on the mental well-being of healthcare workers, focusing on the association between hopelessness, death anxiety, and post-traumatic symptomatology. Eight hundred forty-two healthcare workers were recruited between 21 March 2020 and 15 May 2020. A specific questionnaire was administered to assess socio-demographic and clinical characteristics, together with psychometric scales: Beck Hopelessness Scale, Death Anxiety Scale (DAS), and Davidson Trauma Scale (DTS). Respondents with hopelessness scored higher in the DAS and DTS than respondents without hopelessness. Furthermore, death anxiety was identified as a potential mediator of the significant association between hopelessness and post-traumatic symptomatology. The impact of death anxiety should be

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recognized in vulnerable populations, such as frontline healthcare workers. Therefore, pharmacological and non-pharmacological strategies could be useful to attenuate the negative psychological consequences and reduce the burden worldwide.

Publication Type

Journal article.

<423>

Accession Number

20210266288

Author

Aguilar-Palacio, I.; Maldonado, L.; Malo, S.; Sanchez-Recio, R.; Marcos-Campos, I.; Magallon-Botaya, R.; Rabanaque, M. J.

Title

COVID-19 inequalities: individual and area socioeconomic factors (Aragon, Spain).

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 40 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

It is essential to understand the impact of social inequalities on the risk of COVID-19 infection in order to mitigate the social consequences of the pandemic. With this aim, the objective of our study was to analyze the effect of socioeconomic inequalities, both at the individual and area of residence levels, on the probability of COVID-19 confirmed infection, and its variations across three pandemic waves. We conducted a retrospective cohort study and included data from all individuals tested for COVID-19 during the three waves of the pandemic, from March to December 2020 (357,989 individuals) in Aragon (Spain). We studied the effect of inequalities on the risk of having a COVID-19 confirmed diagnosis after being tested using multilevel analyses with two levels of aggregation: individuals and basic healthcare area of residence (deprivation level and type of zone). Inequalities in the risk of COVID-19 confirmed infection were observed at both the individual and area level. There was a predominance of low-paid employees living in deprived areas. Workers with low salaries, unemployed and people on minimum integration income or who no longer receive the unemployment allowance, had a higher probability of COVID-19 infection than workers with salaries 18,000 per year. Inequalities were greater in women and in the second wave. The deprivation level of areas of residence influenced the risk of COVID-19 infection, especially in the second wave. It is necessary to develop individual and area coordinated measures by areas in the control, diagnosis and treatment of the epidemic, in order to avoid an increase in the already existing inequalities.

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Journal article.

<424>

Accession Number

20210266242

Author

Seah, B.; Ho Ben; Liaw SokYing; Ang NeoKim [Ang, N. K. E.]; Lau SiewTiang

Title

To volunteer or not? Perspectives towards pre-registered nursing students volunteering frontline during COVID-19 pandemic to ease healthcare workforce: a qualitative study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(12). 31 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

COVID-19 has caused a shortage of healthcare workers and has strained healthcare systems globally. Pre-registered healthcare students with training have a duty of care and can support the healthcare workforce. This study explored factors influencing the willingness of final-year nursing students to volunteer during the COVID-19 pandemic, the role of professional identity in volunteering as healthcare workers, and strategies to improve future volunteering uptakes and processes. A qualitative study using focus-group discussions was conducted. Final-year nursing students who volunteered, students who did not volunteer, and lecturers who supervised student volunteers were recruited. Interviews were conducted online, video-recorded, and transcribed verbatim. A thematic analysis was used. The themes were "wavering thoughts on volunteering", "bringing out 'the nurse' in students through volunteering" and "gearing up to volunteer". Findings suggested the need to look beyond the simplicity of altruism to the role of professional identity, operational, and motivational factors to explain nursing students' decision to volunteer and their volunteer behavior. Providing accommodation, monetary and academic-related incentives, supporting the transitional phase from students to "professional volunteers", promoting cohesive and positive staff-student volunteer relationships, and establishing a volunteer management team are strategies identified to improve volunteering uptake and operational processes. Our findings advocate strategic partnerships between hospitals/communities and academic institutions in providing various healthcare services during pandemics.

Publication Type

Journal article.

<425>

Accession Number

20210264723

Author

Larrea-Araujo, C.; Ayala-Granja, J.; Vinueza-Cabezas, A.; Acosta-Vargas, P.

Title

Ergonomic risk factors of teleworking in Ecuador during the COVID-19 pandemic: a cross-sectional study.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Due to the COVID-19 global pandemic, guidelines for people's confinement have been implemented to prevent the disease's spread. As a result of this, companies have implemented teleworking as an emerging way to work from home using information technology. This cross-sectional study was conducted in Ecuador, with a sample of 204 teleworkers in the city of Quito. The results show that the teleworkers rearranged their bedrooms to carry out their activities. The respondents in each age group stated they did not perceive more significant ailments than those experienced before beginning teleworking. The relationships between the variables were analyzed utilizing the Chi-Square test and Fisher's exact test, finding a relationship between neck ailments and age of $p = 0.031$ * and between arm/forearm ailments of $p = 0.032$ *. This study contributes to a greater understanding of the ergonomic situation of the teleworkers and provides us with information to mitigate the ergonomic risks to which they are exposed.

Publication Type

Journal article.

<426>

Accession Number

20210264720

Author

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Huijghebaert, S.; Vanham, G.; Winckel, M. van; Allegaert, K.

Title

Does trypsin oral spray (ViruprotectR/ColdZymeR) protect against COVID-19 and common colds or induce mutation? Caveats in medical device regulations in the European Union.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 93 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Background: nasal or oral sprays are often marketed as medical devices (MDs) in the European Union to prevent common cold (CC), with ColdZymeR/ViruprotectR (trypsin/glycerol) mouth spray claiming to prevent colds and the COVID-19 virus from infecting host cells and to shorten/reduce CC symptoms as an example. We analyzed the published (pre)-clinical evidence. Methods: preclinical: comparison of in vitro tests with validated host cell models to determine viral infectivity. Clinical: efficacy, proportion of users protected against virus (compared with non-users) and safety associated with trypsin/glycerol. Results: preclinical data showed that exogenous trypsin enhances SARS-CoV-2 infectivity and syncytia formation in host models, while culture passages in trypsin presence induce spike protein mutants. The manufacturer claims >98% SARS-CoV-2 deactivation, although clinically irrelevant as based on a tryptic viral digest, inserting trypsin inactivation before host cells exposure. Efficacy and safety were not adequately addressed in clinical studies or leaflets (no COVID-19 data). Protection was obtained among 9-39% of users, comparable to or lower than placebo-treated or non-users. Several potential safety risks (tissue digestion, bronchoconstriction) were identified. Conclusions: the current European MD regulations may result in insufficient exploration of (pre)clinical proof of action. Exogenous trypsin exposure even raises concerns (higher SARS-CoV-2 infectivity, mutations), whereas its clinical protective performance against respiratory viruses as published remains poor and substandard.

Publication Type

Journal article.

<427>

Accession Number

20210264718

Author

Porrovecchio, A.; Olivares, P. R.; Masson, P.; Peze, T.; Lombi, L.

Title

The effect of social isolation on physical activity during the COVID-19 pandemic in France.

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Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 37 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The objective of this cross-sectional study is to analyze the changes in physical activity (PA) practice of a sample of 2099 French adults, mostly females, who answered an online questionnaire during the first COVID-19 lockdown (March-May 2020). A descriptive analysis of participants was performed using relative frequencies. Chi-squared tests were performed to compare the responses of selected variables. Multinomial logistic regressions were performed to compare the variations of PA with all the variables identified. The age of participants ranged from 18 to 88. Among people who practiced PAs before the first lockdown, the probability to keep practicing PAs is higher among those with a lower level of education, among housewives and retirees and among those who lived in cities of 10,000-19,999 inhabitants. For those who did not practice PAs before the social distancing, the probability of starting to practice is greater in those with a lower level of education and for those who suffered from a chronic disease. Our results place the emphasis on the complexity and multifactoriality of the changes that emerged during the first lockdown. The "education" factor emerges, as a significant determinant of PA that should certainly be explored further.

Publication Type

Journal article.

<428>

Accession Number

20210264709

Author

Jo Yun; Hong, A.; Sung HyunGun

Title

Density or connectivity: what are the main causes of the spatial proliferation of COVID-19 in Korea?

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 65 ref.

Publisher

MDPI AG

Location of Publisher

Basel

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Country of Publication

Switzerland

Abstract

COVID-19 has sparked a debate on the vulnerability of densely populated cities. Some studies argue that high-density urban centers are more vulnerable to infectious diseases due to a higher chance of infection in crowded urban environments. Other studies, however, argue that connectivity rather than population density plays a more significant role in the spread of COVID-19. While several studies have examined the role of urban density and connectivity in Europe and the U.S., few studies have been conducted in Asian countries. This study aims to investigate the role of urban spatial structure on COVID-19 by comparing different measures of urban density and connectivity during the first eight months of the outbreak in Korea. Two measures of density were derived from the Korean census, and four measures of connectivity were computed using social network analysis of the Origin-Destination data from the 2020 Korea Transport Database. We fitted both OLS and negative binomial models to the number of confirmed COVID-19 patients and its infection rates at the county level, collected individually from regional government websites in Korea. Results show that both density and connectivity play an important role in the proliferation of the COVID-19 outbreak in Korea. However, we found that the connectivity measure, particularly a measure of network centrality, was a better indicator of COVID-19 proliferation than the density measures. Our findings imply that policies that take into account different types of connectivity between cities might be necessary to contain the outbreak in the early phase.

Publication Type

Journal article.

<429>

Accession Number

20210264705

Author

Kotsiou, O. S.; Kotsios, V. S.; Lampropoulos, I.; Zidros, T.; Zarogiannis, S. G.; Gourgoulianis, K. I.

Title

PM2.5 pollution strongly predicted COVID-19 incidence in four high-polluted urbanized Italian cities during the pre-lockdown and lockdown periods.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 59 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

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Belgravia House 62 – 64 Horseferry Road London SW1P 2AF
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www.rcvsknowledge.org

Background: The coronavirus disease in 2019 (COVID-19) heavily hit Italy, one of Europe's most polluted countries. The extent to which PM pollution contributed to COVID-19 diffusion is needing further clarification. We aimed to investigate the particular matter (PM) pollution and its correlation with COVID-19 incidence across four Italian cities: Milan, Rome, Naples, and Salerno, during the pre-lockdown and lockdown periods. Methods: We performed a comparative analysis followed by correlation and regression analyses of the daily average PM10, PM2.5 concentrations, and COVID-19 incidence across four cities from 1 January 2020 to 8 April 2020, adjusting for several factors, taking a two-week time lag into account. Results: Milan had significantly higher average daily PM10 and PM2.5 levels than Rome, Naples, and Salerno. Rome, Naples, and Salerno maintained safe PM10 levels. The daily PM2.5 levels exceeded the legislative standards in all cities during the entire period. PM2.5 pollution was related to COVID-19 incidence. The PM2.5 levels and sampling rate were strong predictors of COVID-19 incidence during the pre-lockdown period. The PM2.5 levels, population's age, and density strongly predicted COVID-19 incidence during lockdown. Conclusions: Italy serves as a noteworthy paradigm illustrating that PM2.5 pollution impacts COVID-19 spread. Even in lockdown, PM2.5 levels negatively impacted COVID-19 incidence.

Publication Type

Journal article.

<430>

Accession Number

20210264697

Author

Area, I.; Lorenzo, H.; Marcos, P. J.; Nieto, J. J.

Title

One year of the COVID-19 pandemic in Galicia: a global view of age-group statistics during three waves.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 32 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

In this work we look at the past in order to analyze four key variables after one year of the COVID-19 pandemic in Galicia (NW Spain): new infected, hospital admissions, intensive care unit admissions and deceased. The analysis is presented by age group, comparing at each stage the percentage of the corresponding group with its representation in the society. The time period analyzed covers 1 March 2020 to 1 April 2021, and includes the influence of the B.1.1.7 lineage of COVID-19 which in April 2021 was behind 90% of new cases in Galicia. It is numerically shown how the pandemic affects the age groups 80+, 70+ and 60+, and therefore we give information about how the vaccination process could be scheduled and hints at why the pandemic had different effects in different territories.

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Publication Type

Journal article.

<431>

Accession Number

20210264696

Author

Zavras, D.

Title

Feeling uncertainty during the lockdown that commenced in March 2020 in Greece.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 62 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

The coronavirus disease 2019 (COVID-19) pandemic has resulted in significant uncertainty for the global population. However, since not all population groups experience the impacts of the pandemic in the same way, the objective of this study was to identify the individual characteristics associated with the feeling of uncertainty during the lockdown that commenced in March 2020 in Greece. The study used data from the "Public Opinion in the European Union (EU) in Time of Coronavirus Crisis" survey. The sample consisted of 1050 individuals aged between 16 and 54 years. According to the analysis, which was based on a logistic regression model, the emotional status of older individuals, those who experienced income and job losses since the beginning of the pandemic, and middle-class and high-class individuals, is more likely to be described as a feeling of uncertainty. In addition, the emotional status of individuals with less concern for their own health and that of family and friends is less likely to be described as a feeling of uncertainty. Although the results related to age, income, and job losses, as regards concern for health, agree with the international literature, the limited health literacy of lower-class individuals may explain the reduced likelihood of their experiencing feelings of uncertainty. The results confirm the international literature describing several aspects of uncertainty due to the COVID-19 crisis.

Publication Type

Journal article.

<432>

Accession Number

20210264695

Author

Kaneda, K.; Maeda, N.; Suzuki, Y.; Fukui, K.; Urabe, Y.

Title

Impact of the COVID-19 pandemic on life space extent and apathy: a comparison of competitive Japanese swimmers with and without disabilities.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 34 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Changes in the daily lives and mental health of people with disabilities due to the coronavirus disease (COVID-19) pandemic have not been reported. The Japanese government closed public facilities, including swimming pools, during the first wave of COVID-19, and many competitive swimmers lost their places of activities. This study aimed to investigate the impact of the COVID-19 pandemic on life space and apathy among swimmers and investigated differences in the impact on swimmers with and without disabilities. A total of 39 competitive swimmers participated in this study, including 11 male and nine female swimmers with disabilities (swimmers with disabilities = para-swimmers), and 11 male and eight female swimmers without disabilities. Baseline and follow-up web-based questionnaire surveys were conducted, and changes in life space and apathy scale (AS) were assessed. Female para-swimmers showed significantly lower apathy than female able-bodied subjects (para, during; 16.0 \pm 1.9; after, 12.8 \pm 3.2; non-disabled; during, 10.5 \pm 4.4; after, 10.6 \pm 4.8; $p < 0.05$). Female swimmers with disabilities may be more likely to experience worsening mental health due to changes in their lifestyle.

Publication Type

Journal article.

<433>

Accession Number

20210264673

Author

Gutierrez, M. M. C.; Duran-Vila, A.; Ruiz-Labarta, J.; Paya-Martinez, P.; Recarte, P. P.; Bujan, J.; Ortega, M. A.; Leon-Luis, J. de

Title

A new multiplatform model for outpatient prenatal and postpartum care in a cohort of COVID-19-affected obstetric patients.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 23 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Spain was one of the epicenters of the first wave of the COVID-19 pandemic. We describe in this article the design and results of a new telephone-and-telematic multiplatform model of systematic prenatal and postpartum follow-up for COVID-19-affected women implemented in a tertiary reference hospital in Madrid. We included patients with RT-PCR-confirmed COVID-19 during pregnancy or delivery from 10 March 2020 to 15 December 2020. We had a total of 211 obstetric patients: 148 (70.1%) were tested at the onset of suspicious clinical manifestations and 62 (29.4%) were tested in the context of routine screening. Of all the patients, 60 women (28.4%) were asymptomatic and 97 (46%) presented mild symptoms. Fifty-one women (24.2%) were admitted to our hospital for specific treatment because of moderate or severe symptoms. We had no missed cases and a good adherence. The mean number of calls per patient was 2.3. We performed 55 in-person visits. We analyzed the complexity of our program over time, showing a two-wave-like pattern. One patient was identified as needing hospitalization and we did not record major morbidity. Telemedicine programs are a strong and reproducible tool to reach to pregnant population affected by COVID-19, to assess its symptoms and severity, and to record for pregnancy-related symptoms both in an outpatient regime and after discharge from hospital.

Publication Type

Journal article.

<434>

Accession Number

20210264617

Author

Mattei, V. E. di; Perego, G.; Milano, F.; Mazzetti, M.; Taranto, P.; Pierro, R. di; Panfilis, C. de; Madeddu, F.; Preti, E.

Title

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398

The "healthcare workers' wellbeing (Benessere Operatori)" project: a picture of the mental health conditions of Italian healthcare workers during the first wave of the COVID-19 pandemic.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 41 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

During the last year, the COVID-19 outbreak put all the healthcare workers around the world at risk of physical and psychological sequelae. The general purpose of the present study was to assess the mental health of Italian healthcare workers during the COVID-19 outbreak and to identify high-risk groups. Here, we present results from the baseline assessment of the "Healthcare workers' wellbeing (Benessere Operatori)" project on a sample of 1055 healthcare workers. Participants completed the Depression Anxiety Stress Scale-21, the Insomnia Severity Index, the Impact of Event Scale-Revised, the State-Trait Anger Expression Inventory-2, and the Maslach Burnout Inventory. Healthcare workers who worked in COVID wards reported higher levels of anxiety, insomnia, post-traumatic stress, anger, and burnout, compared to those reported by the healthcare workers who worked in non-COVID wards. Moreover, nurses, both in COVID and non-COVID wards, were at higher risk of experiencing psychological distress compared to other groups of healthcare workers. These findings highlight the importance of implementing targeted psychological interventions for healthcare workers operating in COVID wards and nurses, who seem to be the most vulnerable categories.

Publication Type

Journal article.

<435>

Accession Number

20210264597

Author

Kotera, Y.; Maxwell-Jones, R.; Edwards, A. M.; Knutton, N.

Title

Burnout in professional psychotherapists: relationships with self-compassion, work-life balance, and Telepressure.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). many ref.

Publisher

MDPI AG

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Location of Publisher

Basel

Country of Publication

Switzerland

Abstract

Though negative impacts of COVID-19 on occupational mental health have been reported, the mental health of psychotherapists has not been evaluated in depth. As this occupational group treats ever-increasing mental health problems, it is essential to appraise key factors for their mental health. Accordingly, this study aimed to explore burnout of professional psychotherapists. A total of 110 participants completed self-report measures regarding burnout, self-compassion, work-life balance and telepressure. Correlation, regression and moderation analyses were conducted. Both of the burnout components-emotional exhaustion and depersonalisation-were positively associated with weekly working hours and telepressure, and negatively associated with age, self-compassion and work-life balance. Weekly working hours and work-life balance were significant predictors of emotional exhaustion and depersonalisation. Lastly, self-compassion partially mediated the relationship between work-life balance and emotional exhaustion but did not mediate the relationship between work-life balance and depersonalisation. The findings suggest that maintaining high work-life balance is particularly important for the mental health of psychotherapists, protecting them from burnout. Moreover, self-compassion needs to be cultivated to mitigate emotional exhaustion. Mental health care for this occupational group needs to be implemented to achieve sustainable mental health care for workers and the public.

Publication Type

Journal article.

<436>

Accession Number

20210264533

Author

Myers, B.; Carney, T.; Rooney, J.; Malatesta, S.; White, L. F.; Parry, C. D. H.; Bouton, T. C.; Ragan, E. J.; Horsburgh, C. R., Jr.; Warren, R. M.; Jacobson, K. R.

Title

Alcohol and tobacco use in a tuberculosis treatment cohort during South Africa's COVID-19 sales bans: a case series.

Source

International Journal of Environmental Research and Public Health; 2021. 18(10). 33 ref.

Publisher

MDPI AG

Location of Publisher

Basel

Country of Publication

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Switzerland

Abstract

Background: South Africa temporarily banned alcohol and tobacco sales for about 20 weeks during the COVID-19 lockdown. We described changes in alcohol and tobacco consumption after implementation of these restrictions among a small number of participants in a tuberculosis treatment cohort. **Method:** The timeline follow-back procedure and Fagerstrom test for nicotine dependence was used to collect monthly alcohol and tobacco use information. We report changes in heavy drinking days (HDD), average amount of absolute alcohol (AA) consumed per drinking day, and cigarettes smoked daily during the alcohol and tobacco ban compared to use prior to the ban. **Results:** Of the 61 participants for whom we have pre-ban and within-ban alcohol use information, 17 (27.9%) reported within-ban alcohol use. On average, participants reported one less HDD per fortnight (interquartile range (IQR): -4, 1), but their amount of AA consumed increased by 37.4 g per drinking occasion (IQR: -65.9 g, 71.0 g). Of 53 participants who reported pre-ban tobacco use, 17 (32.1%) stopped smoking during the ban. The number of participants smoking >10 cigarettes per day decreased from 8 to 1. **Conclusions:** From these observations, we hypothesize that policies restricting alcohol and tobacco availability seem to enable some individuals to reduce their consumption. However, these appear to have little effect on the volume of AA consumed among individuals with more harmful patterns of drinking in the absence of additional behavior change interventions.

Publication Type

Journal article.

<437>

Accession Number

20210264340

Author

Raisi-Estabragh, Z.; McCracken, C.; Cooper, J.; Fung, K.; Paiva, J. M.; Khanji, M. Y.; Rauseo, E.; Biasioli, L.; Raman, B.; Piechnik, S. K.; Neubauer, S.; Munroe, P. B.; Harvey, N. C.; Petersen, S. E.

Title

Adverse cardiovascular magnetic resonance phenotypes are associated with greater likelihood of incident coronavirus disease 2019: findings from the UK Biobank.

Source

Anging, Clinical and Experimental Research; 2021. 33(4):1133-1144. 42 ref.

Publisher

Springer International Publishing AG

Location of Publisher

Cham

Country of Publication

Switzerland

Abstract

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Background: Coronavirus disease 2019 (COVID-19) disproportionately affects older people. Observational studies suggest indolent cardiovascular involvement after recovery from acute COVID-19. However, these findings may reflect pre-existing cardiac phenotypes. Aims: We tested the association of baseline cardiovascular magnetic resonance (CMR) phenotypes with incident COVID-19. Methods: We studied UK Biobank participants with CMR imaging and COVID-19 testing. We considered left and right ventricular (LV, RV) volumes, ejection fractions, and stroke volumes, LV mass, LV strain, native T1, aortic distensibility, and arterial stiffness index. COVID-19 test results were obtained from Public Health England. Co-morbidities were ascertained from self-report and hospital episode statistics (HES). Critical care admission and death were from HES and death register records. We investigated the association of each cardiovascular measure with COVID-19 test result in multivariable logistic regression models adjusting for age, sex, ethnicity, deprivation, body mass index, smoking, diabetes, hypertension, high cholesterol, and prior myocardial infarction. Results: We studied 310 participants (n = 70 positive). Median age was 63.8 [57.5, 72.1] years; 51.0% (n = 158) were male. 78.7% (n = 244) were tested in hospital, 3.5% (n = 11) required critical care admission, and 6.1% (n = 19) died. In fully adjusted models, smaller LV/RV end-diastolic volumes, smaller LV stroke volume, and poorer global longitudinal strain were associated with significantly higher odds of COVID-19 positivity. Discussion: We demonstrate association of pre-existing adverse CMR phenotypes with greater odds of COVID-19 positivity independent of classical cardiovascular risk factors. Conclusions: Observational reports of cardiovascular involvement after COVID-19 may, at least partly, reflect pre-existing cardiac status rather than COVID-19 induced alterations.

Publication Type

Journal article.

<438>

Accession Number

20210259737

Author

Wingard, J.; Belajcic, S.; Samal, M.; Rock, K.; Custodio, M. L.; Heise, M.; Fiennes, S.; Machalaba, C.; Aguirre, A. A.

Title

Wildlife trade, pandemics and the law: fighting this year's virus with last year's law.

Source

Wildlife trade, pandemics and the law: Fighting this year's virus with last year's law; 2021. 94 pp.

Publisher

Legal Atlas, LLC and George Mason University Department of Environmental Science and Policy, George Mason University, Fairfax

Location of Publisher

Virginia

Country of Publication

USA

Abstract

This work describes the interactions between the trade in animals, regulations and the incidence of zoonoses, with emphasis on the current COVID-19 pandemic. The specific topics include the involvement of the World Health Organization, World Organization for Animal Health, CITES and other international organizations; national law assessments on animal health, animal welfare, animal quarantine, CITES implementing laws, customs, food safety, indigenous rights, meat industry, pet trade and wildlife conservation and trade; areas of concern; future opportunities and the next steps to be undertaken. This paper is the follow-up to a brief survey of legislation conducted by Legal Atlas in June 2020 regarding the existing legal approaches to controlling zoonotic disease risk in the context of wildlife trade.

Publication Type

Miscellaneous.

<439>

Accession Number

20210259217

Author

Vos, R.; Cattaneo, A.

Title

Poverty reduction through the development of inclusive food value chains. (Special Issue: Paths out of poverty.)

Source

Journal of Integrative Agriculture; 2021. 20(4):964-978. many ref.

Publisher

Elsevier B.V.

Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Propelled by urbanization, rising incomes, and changing diets, food markets have been expanding in Africa and South Asia, creating the vast potential for job and income opportunities along food supply chains and, hence, for poverty reduction. The novel coronavirus (COVID-19) that spread to a pandemic in early 2020 provokes enormous setbacks to this expansion. This, however, should provide lessons regarding the importance of resilient and inclusive food systems. Emergency responses to COVID-19 should consider interventions towards that end and leverage the opportunities provided by food markets growth as economies recover from the present economic recession. This paper assesses options of how this could be done by facilitating the better functioning and interconnectedness of the many small and medium-sized enterprises that are proliferating along the "hidden middle" of food value chains in storage, logistics, transportation, and wholesale and retail distribution. It also explores how policies can help smallholder farmers connect to this "hidden middle" in more gainful ways and help them climb out of poverty as well.

Publication Type

Journal article.

<440>

Accession Number

20210251774

Author

Coopmans, I.; Bijttebier, J.; Marchand, F.; Mathijs, E.; Messely, L.; Rogge, E.; Sanders, A.; Wauters, E.

Title

COVID-19 impacts on Flemish food supply chains and lessons for agri-food system resilience.

Source

Agricultural Systems; 2021. 190.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Context: Resilience represents the ability of systems to anticipate, withstand, or adapt to challenges. Times of great stress and disturbance offer opportunity to identify and confirm key contributors to agri-food system resilience. The COVID-19 pandemic and its related consequences constituted major shock, challenging the resilience of many agri-food systems worldwide. Background: This paper aimed to report the immediate effects of the COVID-19 crisis on various key actors from Flemish food supply chains. By analysing and assessing the observed impacts of and reactions to this crisis from a resilience perspective, it also aimed to gain empirical evidence on resilience-enhancing characteristics of agri-food systems to sudden shocks. Methods: A first, quantitative step of our mixed method approach measured 718 farmers' experienced impacts and applied strategies following the crisis through an online survey. A second, qualitative step captured impacts and responses from other key actors downstream the food supply chain through 22 in-depth interviews and 18 on-line questionnaires. Data gathering and interpretation followed a conceptual framework for analysing resilience of agri-food systems to external challenges, that we developed based on the literature. The framework states that resilience actions stem from three types of resilience capacities: anticipatory, coping and responsive capacities. These are determined by both resources allocated by system actors, as well as by resilience attributes from the system. Results and conclusions: The COVID-19 crisis induced a simultaneous dropped demand for food products in the hospitality industry and risen demand in retail. This shifted demand significantly disturbed food production, processing and marketing processes in terms of labour organization, planning, operation, logistics, and economic returns. Perceived impacts varied extensively across actors from the agri-food system, mostly depending on their marketing strategy, customer base, and flexibility and diversity of their practices. Reported reactions to this crisis revealed that resilience capacities varied according to actors' abilities to negotiate prices, adjust production processes, and maintain or reorient sales. Some agri-food sectors showed higher responsive capacity because of a higher connectivity and self-organization within the system. Significance: Our findings suggest that flexibility and diversity, despite their tendency to diminish price optimums, increase resilience capacities, which may be

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more beneficial to systems for thriving in turbulent and uncertain environments. A more tangible, operationalized understanding of resilience is necessary to effectively improve agri-food system resilience. Our conceptual framework proved a valuable tool for operationalizing resilience assessments to major shocks.

Publication Type

Journal article.

<441>

Accession Number

20210251761

Author

Tittonell, P.; Fernandez, M.; El-Mujtar, V. E.; Preiss, P. V.; Sarapura, S.; Laborda, L.; Mendonca, M. A.; Alvarez, V. E.; Fernandes, G. B.; Petersen, P.; Cardoso, I. M.

Title

Emerging responses to the COVID-19 crisis from family farming and the agroecology movement in Latin America - a rediscovery of food, farmers and collective action.

Source

Agricultural Systems; 2021. 190. 26 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

CONTEXT: In Latin America, the so-called informal sector associated with family farming and the agroecology movements were instrumental at coping with and adapting to the COVID-19 challenges. **OBJECTIVE** To assess the nature and extent of the early initiatives (first three months) deployed by this informal sector to cope with and adapt to the impacts of the COVID-19 pandemic on food production and consumption in several countries of the region. **METHODS:** We used key informant consultation (n = 168), an online survey (n = 125) and the detailed characterisation of regional case studies (n = 4). Textual data was analysed and categorised using Reinert's method, combined with similarity analysis. **RESULTS AND CONCLUSIONS:** 65% of the initiatives were 'local' in terms of geographic reach, 30% of them started within the first month after the pandemic and most of them were urban or urban-rural, whereas only 29% of them were exclusively rural. The analysis of the textual information captured through the survey revealed four major types of initiatives that were deployed or adapted in response to COVID-19: 1. Direct producer-to-consumer food sales, generally existing before the COVID-19 crisis but adapted/strengthened to cope with it; 2. Short value chains that linked rural and urban organisations and individuals supported by national or local governments, readapted through new health and safety protocols; 3. Newly developed support and training programs on sustainable food production for self-consumption or local commerce, in rural, urban or peri-urban settings; 4. Food assistance and aid initiatives focusing on vulnerable populations, relying on solidarity

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networks associated with the agroecological movement. SIGNIFICANCE: The pandemic highlighted the key role played by local food systems and value chains and the need to strengthening them through public policies, as a way to build food resilience in times of crisis.

Publication Type

Journal article.

<442>

Accession Number

20210251756

Author

Tougeron, K.; Hance, T.

Title

Impact of the COVID-19 pandemic on apple orchards in Europe.

Source

Agricultural Systems; 2021. 190. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

CONTEXT: The COVID-19 pandemic, caused by the SARS-CoV-2 virus, has affected global agricultural chains and intensified the issue of food insecurity worldwide. OBJECTIVE: We propose a short retrospective of the reported effects of the COVID-19 pandemic from its beginning in March 2020 in Europe, on orchard management and harvest, sales and agricultural chains, monitoring and research in orchards, and we expose some of the solutions undertaken to tackle down these issues. RESULTS AND CONCLUSION: In Europe, the fruit and vegetable sector has been affected by the pandemic in terms of production, distribution, and disturbance in market performance. Concerning apple, the most harvested and exported fruit in Europe, national governments, European institutions, the industry and producers have undertaken actions to ensure production and supply demand. Yet, stakeholders have faced several difficulties and additional costs for growth and harvest, sales, but also monitoring and research. However, European Union demand for fresh apples has increased during the pandemic. In addition, apple harvest has started a couple of months after the end of the first lockdown in most countries, and European apple orchards are usually in more flexible smallholder or family farms. Finally, the fruit itself has relatively long shelf-life comparatively to other fruits. For these main reasons, we argue that the apple sector might be more resilient than other fruit sectors or other cultures, despite the negative effects of seasonal workforce shortage and unstable market. The apple sector may suffer more from side-effects such as increasing labor, distribution, and packaging costs, than from actual stock and production issues. SIGNIFICANCE: The pandemic could be an opportunity to reconsider production modes and to innovate for the future of food production in different crop systems in Europe, including apple orchards.

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T: +44 (0) 20 7202 0752

E: library@rcvsknowledge.org

www.rcvsknowledge.org

Publication Type

Journal article.

<443>

Accession Number

20210251737

Author

Jha, P. K.; Araya, A.; Stewart, Z. P.; Faye, A.; Traore, H.; Middendorf, B. J.; Prasad, P. V. V.

Title

Projecting potential impact of COVID-19 on major cereal crops in Senegal and Burkina Faso using crop simulation models.

Source

Agricultural Systems; 2021. 190. many ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Context: The rapid emergence of COVID-19 could have direct and indirect impacts on food production systems and livelihoods of farmers. From the farming perspective, disruption of critical input availability, supply chains and labor, influence crop management. Disruptions to food systems can affect (a) planting area; and (b) crop yields. **Objectives:** To quantify the impacts of COVID-19 on major cereal crop's production and their cascading impact on national economy and related policies. **Methods:** We used the calibrated crop simulation model (DSSAT suite) to project the impact of potential changes in planting area and grain yield of four major cereal crops (i.e., rice, maize, sorghum, and millet) in Senegal and Burkina Faso in terms of yield, total production, crop value and contribution to agricultural gross domestic product (GDP). Appropriate data (i.e., weather, soil, crop, and management practices) for the specific agroecological zones were used as an input in the model. **Results and conclusions:** The simulated yields for 2020 were then used to estimate crop production at country scale for the matrix of different scenarios of planting area and yield change (-15, -10, -5, 0, +5, +10%). Depending on the scenario, changes in total production of four cereals combined at country levels varied from 1.47 M tons to 2.47 M tons in Senegal and 4.51 M tons to 7.52 M tons in Burkina Faso. The economic value of all four cereals under different scenarios ranged from \$771 Million (M) to \$1292 M in Senegal and from \$1251 M to \$2098 M in Burkina Faso. These estimated total crop values under different scenarios were compared with total agricultural GDP of the country (in 2019 terms which was \$3995 M in Senegal and \$3957 M in Burkina Faso) to assess the economic impact of the pandemic on major cereal grain production. Based on the scenarios, the impact on total agricultural GDP can change -7% to +6% in Senegal and - 8% to +9% in Burkina Faso. **Significance:** Results obtained from this modeling exercise will be valuable to policymakers and end-to-end value chain practitioners to prepare and develop appropriate policies to cope or manage the impact of COVID-19 on food systems.

Publication Type

Journal article.

<444>

Accession Number

20210251736

Author

Middendorf, B. J.; Faye, A.; Middendorf, G.; Stewart, Z. P.; Jha, P. K.; Prasad, P. V. V.

Title

Smallholder farmer perceptions about the impact of COVID-19 on agriculture and livelihoods in Senegal.

Source

Agricultural Systems; 2021. 190. 22 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

CONTEXT: The global COVID-19 pandemic has produced a variety of unanticipated shocks to farming and socio-economic systems around the world. In case of Senegal, the country was already facing number of challenges at the inception of the pandemic, including high rates of poverty, prevalence of food insecurity, combined with other biophysical and socioeconomic challenges faced generally in Sub-Saharan Africa. **OBJECTIVE:** To understand farmer perceptions of the potential impacts of COVID-19 on agricultural systems and social well-being of smallholder farmers in Senegal. Particular attention was given to potential vulnerabilities and resilience in the targeted farming systems. **METHODS:** A survey was developed to better understand smallholder farmer perceptions regarding the anticipated impacts of COVID-19 on their agriculture practices and social well-being. The survey was administered (between June 5 and June 20) with smallholder farmers (n = 872) in 14 regions covering all agroecological zones. Variables of interest included perceptions of potential impact on farming systems, agricultural productivity, communities, economics, markets, labor, gendered division of labor, food security, and community well-being. **RESULTS AND CONCLUSIONS:** Across the three farming systems examined (cropping, livestock, and horticulture) significant majorities expressed concerns related to access to inputs, ability to plant (cropping, horticulture), reduction of yields (cropping, horticulture), ability to feed livestock, ability to sell livestock, and the ability to hire labor (horticulture). The majority of respondents also expressed concern that COVID-19 would make it more difficult to get enough food on a regular basis for their household (82.5%); that the markets where they purchase food will either be closed or significantly disrupted (79.5%); that the price of food would increase (73.5%); and the market where they sell their produce/livestock will be either closed or significantly disrupted (73.2%). **SIGNIFICANCE:** Anticipated impacts of COVID-19 on agriculture will be felt on both the biophysical aspects such as production and access to inputs and socioeconomic aspects such as access to labor, markets, or rapid shifts in demand. Results support the need to use farming systems approach to gather perceived and actual impacts of COVID-19 and warrants a more in-depth examination of agronomic and

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biophysical issues as well as the impact on the livelihoods and social well-being of families at community and household levels. Further examination will help identify the characteristics that strengthen smallholder farming systems resilience to adjust to anticipated and unanticipated shocks, such as COVID-19, to decrease the negative impacts and increase the rate of recovery.

Publication Type

Journal article.

<445>

Accession Number

20210251734

Author

Zhan Yue; Chen, K. Z.

Title

Building resilient food system amidst COVID-19: responses and lessons from China.

Source

Agricultural Systems; 2021. 190. 45 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

CONTEXT: The COVID-19 pandemic continues to spread over the world and has heightened concerns over global food security risks. As the first country hit by COVID-19, China has adopted a series of stringent mitigation policies to contain the spread of virus. This has led to food system disruptions due to restrictions on labor and interruption of transport, processing, retailing, and input distribution. OBJECTIVE: The objective of this contribution is to report evidence for initial impacts and resilience of China's food system amid the COVID-19 pandemic and to discuss government's responses as well as long-term efforts that promoted resilience. METHODS: We reviewed a range of publications, government released reports and official information, blogs, and media articles, and whenever possible, we complemented this qualitative information with quantitative data from China's National Bureau of Statistics and finally empirical data obtained from a simulation study. RESULTS AND CONCLUSIONS: We identified China's earlier responses in each key food system activities including ensuring effective logistics of agricultural products and inputs, supporting production and processing, matching supply with demand, and mitigating consumer's income loss. In particular, innovative information and communications technology (ICT) applications along the food system had been highlighted. Coupled with China's long-term efforts in investing in agriculture, building emergency response systems, and adopting governor's responsibility mechanisms, there has been little panic in the food system with largely sufficient supplies and stable prices. In the second quarter of 2020, after registered negative growth in the first quarter, primary agriculture grew by 3.4% and the negative growth of livestock production was narrowed significantly by 8.7 percentage points. Food prices rose by a modest 0.6% and

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returned to normal after a surge in February 2020. SIGNIFICANCE: We expect that China's experiences on building resilient food systems could improve understanding of the challenges posed by COVID-19 from a retrospective perspective and provide lessons to other countries that are experiencing disruptions in the food systems worldwide. The lessons are also important for strengthening the resilience of food systems over longer time horizons.

Publication Type

Journal article.

<446>

Accession Number

20210228446

Author

Haggag, W. M.

Title

Agricultural digitalization and rural development in COVID-19 response plans: a review article.

Source

International Journal of Agricultural Technology; 2021. 17(1):67-74. 17 ref.

Publisher

Association of Agricultural Technology in Southeast Asia (AATSEA)

Location of Publisher

Ladkrabang

Country of Publication

Thailand

Abstract

COVID-19 has led to spread economic adversity throughout the world since it effects on food security. After COVID-19 there is necessary to suggest the novel direction and combination of new input, information and telecommunication technologies for agricultural growth and development. Agricultural digitalization is able to impact rapidly to mitigate some of the negative effect of the COVID-19 pandemic. In developing countries, rural information and services are the most important of effective agricultural and development. The "Internet of Things" and electronic networks offer very promising technologies and many services and solutions including the agricultural fields. The application of digital technology is of great importance because it has the ability to provide technologies, innovations and acquired sustainability to the agricultural sector and increase productivity as an alternative and complement to agricultural extension. Mobile application have developed rapidly for enhancing telecommunication, information, input, development, invention in service transmission and their quality. However, many stakeholders have known the need for digital agriculture. The most countries have already taken a national strategy for the agricultural sector's use of information and communication technologies. These reviews explain the possibility of agricultural digitalization for rural services and development in COVID-19 response plans.

Publication Type

Journal article.

<447>

Accession Number

20210219367

Author

Meuwissen, M. P. M.; Feindt, P. H.; Slijper, T.; Spiegel, A.; Finger, R.; Mey, Y. de; Paas, W.; Termeer, K. J. A. M.; Poortvliet, P. M.; Peneva, M.; Urquhart, J.; Vigani, M.; Black, J. E.; Nicholas-Davies, P.; Maye, D.; Appel, F.; Heinrich, F.; Balmann, A.; Bijttebier, J.; Coopmans, I.; Wauters, E.; Mathijs, E.; Hansson, H.; Lagerkvist, C. J.; Rommel, J.; Manevska-Tasevska, G.; Accatino, F.; Pineau, C.; Soriano, B.; Bardaji, I.; Severini, S.; Senni, S.; Zinnanti, C.; Gavrilesco, C.; Bruma, I. S.; Dobay, K. M.; Matei, D.; Tanasa, L.; Voicilas, D. M.; Zawalinska, K.; Gradziuk, P.; Krupin, V.; Martikainen, A.; Herrera, H.; Reidsma, P.

Title

Impact of COVID-19 on farming systems in Europe through the lens of resilience thinking.

Source

Agricultural Systems; 2021. 191. 23 ref.

Publisher

Elsevier Ltd

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Context: Resilience is the ability to deal with shocks and stresses, including the unknown and previously unimaginable, such as the Covid-19 crisis. Background: This paper assesses (i) how different farming systems were exposed to the crisis, (ii) which resilience capacities were revealed and (iii) how resilience was enabled or constrained by the farming systems' social and institutional environment. Methods: The 11 farming systems included have been analysed since 2017. This allows a comparison of pre-Covid-19 findings and the Covid-19 crisis. Pre-Covid findings are from the SURE-Farm systematic sustainability and resilience assessment. For Covid-19 a special data collection was carried out during the early stage of lockdowns. Results and conclusions: Our case studies found limited impact of Covid-19 on the production and delivery of food and other agricultural products. This was due to either little exposure or the agile activation of robustness capacities of the farming systems in combination with an enabling institutional environment. Revealed capacities were mainly based on already existing connectedness among farmers and more broadly in value chains. Across cases, the experience of the crisis triggered reflexivity about the operation of the farming systems. Recurring topics were the need for shorter chains, more fairness towards farmers, and less dependence on migrant workers. However, actors in the farming systems and the enabling environment generally focused on the immediate issues and gave little real consideration to long-term implications and challenges. Hence, adaptive or transformative capacities were much less on display than coping capacities. The comparison with pre-Covid findings mostly showed similarities. If challenges, such as shortage of labour, already loomed before, they persisted during the crisis. Furthermore, the eminent role of resilience attributes was confirmed. In cases with high connectedness and diversity we found that these

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system characteristics contributed significantly to dealing with the crisis. Also the focus on coping capacities was already visible before the crisis. We are not sure yet whether the focus on short-term robustness just reflects the higher visibility and urgency of shocks compared to slow processes that undermine or threaten important system functions, or whether they betray an imbalance in resilience capacities at the expense of adaptability and transformability. Significance: Our analysis indicates that if transformations are required, e.g. to respond to concerns about transnational value chains and future pandemics from zoonosis, the transformative capacity of many farming systems needs to be actively enhanced through an enabling environment.

Publication Type

Journal article.

<448>

Accession Number

20210214324

Author

McCartney, E.

Title

Join the association of veterinary consultants.

Source

Veterinary Record; 2021. 188(9):358-359.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

This article briefly describes the activities of the Association of Veterinary consultants regarding human and animal health and welfare, food safety, drug resistance and the current COVID-19 pandemic, with members from the UK, European Union, Russia, Asia, North America, Africa and Australia. An invitation for other veterinarians to join the organization is also offered.

Publication Type

Correspondence.

<449>

Accession Number

20210214246

Author

George, D.

Title

Bristol class of '60 reunions continue.

Source

Veterinary Record; 2021. 188(10):398-398.

Publisher

Wiley

Location of Publisher

Chichester

Country of Publication

UK

Abstract

This article briefly describes the effects of the COVID-19 pandemic on the holding and number of attendees of veterinary alumni reunions in Bristol, UK.

Publication Type

Correspondence.

<450>

Accession Number

20210205753

Author

Panzone, L. A.; Larcom, S.; She PoWen

Title

Estimating the impact of the first COVID-19 lockdown on UK food retailers and the restaurant sector.

Source

Global Food Security; 2021. 28. 32 ref.

Publisher

Elsevier B.V.

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Location of Publisher

Amsterdam

Country of Publication

Netherlands

Abstract

Using an approach normally used to estimate cumulative excess deaths, we measure the impact of the COVID-19 shock on sales of UK food retailers and restaurants. To control the spread of COVID-19, travel and social interactions were restricted, putting significant pressure on retailers, who had to adapt whilst complying with a fast-changing marketplace. Results show that in the period March-August 2020, COVID-19 restrictions accounted for a Pound Sterling4 billion increase in sales for food retailers, and Pound Sterling4 billion in non-store retailers; and a Pound Sterling20 billion loss in sales in non-food stores, and Pound Sterling25 billion loss in turnover for food and beverage serving services.

Publication Type

Journal article.

<451>

Accession Number

20210177241

Author

Thilmany, D.; Canales, E.; Low, S. A.; Boys, K.

Title

Local food supply chain dynamics and resilience during COVID-19. (Special Issue: Covid-19.)

Source

Applied Economic Perspectives and Policy; 2021. 43(1):86-104. many ref.

Publisher

Wiley

Location of Publisher

Oxford

Country of Publication

UK

Abstract

Local and regional food systems (LRFS) innovated during COVID-19 to respond to market demand and policy changes. Given their unique characteristics, we identify drivers that explain why local responses to COVID-19 vary when compared with the national dialogue on food supply chain disruptions. We suggest LRFS enterprises are nimble and connected to supply chain partners, allowing them to innovate quickly with a targeted approach. Considering the shorter supply chains and smaller operations typical of LRFS, we

assert the current regulatory environment's fairness and relevance may be scrutinized. In conclusion, we articulate an updated research and technical assistance agenda for LRFS.

Publication Type

Journal article.

<452>

Accession Number

20210164026

Author

Cariappa, A. G. A.; Acharya, K. K.; Adhav, C. A.; Sendhil, R.; Ramasundaram, P.

Title

Impact of COVID-19 on the Indian agricultural system: a 10-point strategy for post-pandemic recovery.

Source

Outlook on Agriculture; 2021. 50(1):26-33. 34 ref.

Publisher

Sage Publications Ltd

Location of Publisher

London

Country of Publication

UK

Abstract

COVID-19 pandemic has disrupted the Indian agricultural system extensively. Nevertheless, the recent quarterly GDP estimates post-COVID scenario showcase robustness and resilience in Indian agriculture, the only sector to register a positive growth of 3.4% during the financial year (FY here after) 2020-21 (Quarter 1: April 2020 to June 2020). At the same time, the immediate past quarter growth was estimated at 5.9% witnessing a decline by 2.5% point. In this context, we aim to synthesize the early evidence of the COVID-19 impact on the Indian agricultural system viz., production, marketing and consumption followed by a set of potential strategies to recover and prosper post-pandemic. Survey findings indicate that the pandemic has affected production and marketing through labour and logistical constraints, while the negative income shock restricted access to markets and increased prices of food commodities affecting the consumption pattern. The pandemic wreaked a substantial physical, social, economic and emotional havoc on all the stakeholders of Indian agricultural system. Seizing the crisis as an opportunity, the state announced a raft of measures and long-pending reforms. We propose a 10-point strategy ranging from social safety nets, family farming, monetizing buffer stock, staggered procurement to secondary agriculture to revive and prosper post-pandemic.

Publication Type

Journal article.

<453>

Accession Number

20210158613

Author

Sa, F. Z. de; Gastal, S. de A.

Title

Mobility, immobility and a-mobility: to discuss tourism in COVID-19 times.

Source

Revista Brasileira de Pesquisa em Turismo; 2021. 15(1). many ref.

Publisher

Associacao Nacional de Pesquisa e Pos-Graduacao em Turisme (ANPTUR)

Location of Publisher

Sao Paulo

Country of Publication

Brazil

Abstract

Mobility has been revisited in recent years, associated with the themes of space, time, territory, and place, but rarely involving Tourism more directly. Analyzing Tourism under the mobility bias, broadens its theoretical scope, among others, by allowing to add to it the concepts of immobility and a-mobility. In these terms, this article aims to discuss the relations between Tourism and the triad Mobility, Immobility, and A-mobility, reviewed against the backdrop of the Covid-19 Pandemic and the issues of social isolation associated with it. The study introduces the concept of a-mobility, using the figure of the panopticon as a metaphor. The investigation procedures resume a review carried out in databases, last June, using the terms Turismo, Tourism Coronavirus and Covid-19, when the absence of the mobility issue was observed, in the corpus resulting from the initial review. At the present time, the question of mobility is taken up again. It is going that during the Pandemic and its immediate aftermath there was a crisis of and in mobility, dramatically affecting tourism practices. The crisis implies that displacements will gain new form and content in the near future, without abandoning mobility.

Publication Type

Journal article.

<454>

Accession Number

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20210145485

Author

Havitz, M.; Pritchard, M. P.; Dimanche, F.

Title

Leisure matters: cross continent conversations in a time of crisis. (Special Issue: Leisure in the time of Covid-19.)

Source

Leisure Sciences; 2021. 43(1/2):323-329. 24 ref.

Publisher

Routledge

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Months after COVID-19 emerged as a newsmaker in Asia, a new strain of March Madness emerged in North America. Incredulity followed as leisure activities, hallowed as venues and expressions of individual and collective identity were closed. Freedoms, real and perceived, were curtailed. Like others, we sought to maintain social connections. For the first time in decades, our weekly on-line conversations became normative. Two authors remain working to sustain the academy's work during this crisis and the other is retired. Spatially we reside in a major metropolitan area of 6 million, a small west coast college town, and a Great Lakes region vacation community. Our discussion connects leisure research and the context of basic rights that North Americans have long taken for granted. This commentary emerged from integrated discussion regarding how the crisis affects and may change leisure behavior from multiple perspectives.

Publication Type

Journal article.

<455>

Accession Number

20210145466

Author

Hebblethwaite, S.; Young, L.; Rubio, T. M.

Title

Pandemic precarity: aging and social engagement. (Special Issue: Leisure in the time of Covid-19.)

Source

Leisure Sciences; 2021. 43(1/2):170-176. 28 ref.

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Publisher

Routledge

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

Social isolation of older adults was identified as a key public health issue prior to the onset of COVID-19. The current crisis raises serious questions about how societies are organized and function in relation to aging populations. Drawing on resources in critical gerontology on "precarious aging" (Butler, 2009; Grenier & Phillipson) and an intersectional approach (Crenshaw, University of Chicago Legal Forum, 1(8), 139-167, 1989) that recognizes aging as an axis of oppression, we will (1) outline how this pandemic provides opportunities for candid dialogue about systemic institutional failures within leisure and social services sectors as they relate to older adults, taking important intersections of race, class, gender and ability into account; (2) examine how leisure and the arts have been positioned in response to social isolation of older people during a pandemic and (3) explore the risks of further marginalization inherent in these activities even as they are potentially crucial and transformative social lifelines for older adults. We call the further marginalization of older adults already precariously positioned "pandemic precarity".

Publication Type

Journal article.

<456>

Accession Number

20210145454

Author

Mackenzie, S. H.; Goodnow, J.

Title

Adventure in the age of COVID-19: embracing microadventures and locavism in a post-pandemic world. (Special Issue: Leisure in the time of Covid-19.)

Source

Leisure Sciences; 2021. 43(1/2):62-69. 32 ref.

Publisher

Routledge

Location of Publisher

Philadelphia

Country of Publication

USA

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Abstract

Unprecedented mobility restrictions due to COVID-19 have frozen the adventure travel and tourism industry. These restrictions have forced many to embrace 'hyperlocal' approaches to adventure and provided an opportunity to reimagine our adventure travel philosophies and practices. Despite claims that traditional adventure travel could address some of the "world's most pressing challenges", it has largely failed to realize its potential to provide a range of social, economic, and environmental benefits. Conversely, microadventure, which espouses adventures in nearby nature that are low-carbon and human-scaled, is an enticing alternative for both current and post-pandemic conditions. This essay first critiques pre-pandemic adventure travel and describes the hazards of this approach in age of COVID-19. It then explores creative 'lockdown' microadventures; envisions what post-pandemic adventure may look like; and explains why we not only need to embrace microadventures in a post-pandemic world, but also why we may prefer them to traditional adventure travel.

Publication Type

Journal article.

<457>

Accession Number

20210145449

Author

Mukherjee, U.

Title

Rainbows, teddy bears and 'others': the cultural politics of children's leisure amidst the COVID-19 pandemic. (Special Issue: Leisure in the time of Covid-19.)

Source

Leisure Sciences; 2021. 43(1/2):24-30. 24 ref.

Publisher

Routledge

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

In countries currently under lockdown, schools and leisure facilities have closed their gates to the vast majority of children. Having to stay indoors for most of the day, children's leiscapes have been radically transformed. In these circumstances, instances have emerged from across the globe of children adapting to the lockdown in creative ways and constructing leiscapes within the limits of the home, by putting up rainbows and teddy bears on windows and porches. Drawing upon media reports about children's rainbow drawings and teddy bear hunts, in this paper, I deploy a sociological lens to demonstrate how children are using these leisure narratives as tools for participating in the wider conversation around the pandemic. At the same time, however, in pinning romanticized notions of hope and 'national spirit' upon the normative image

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of the child at play, media narratives are obfuscating the inequalities that fracture lived childhoods in the developed world.

Publication Type

Journal article.

<458>

Accession Number

20210145448

Author

Grimwood, B. S. R.

Title

On not knowing: COVID-19 and decolonizing leisure research. (Special Issue: Leisure in the time of Covid-19.)

Source

Leisure Sciences; 2021. 43(1/2):17-23. 20 ref.

Publisher

Routledge

Location of Publisher

Philadelphia

Country of Publication

USA

Abstract

The COVID-19 pandemic has enfolded waves of uncertainty-intense doses of not knowing-into our daily experience. In this commentary, I stutter into the discomfort of not knowing as a mode of relation. Recognizing that the collective uncertainty surrounding the pandemic has marshaled vital desires to know how to respond, to cope, and even to survive, I think and write toward productive possibilities that arise when we tune attention away from knowing more and knowing better. The journey I take hitches to conceptual anchor points from settler colonial studies, and to moments of personal upheaval associated with both the current pandemic and learning to take responsibility for settler colonization. As I navigate this route of not knowing, I churn up potential decolonizing pathways for leisure researchers to debate, discard, pick up, or move through.

Publication Type

Journal article.

<459>

Accession Number

20210145026

Author

Neuburger, L.; Egger, R.

Title

Travel risk perception and travel behaviour during the COVID-19 pandemic 2020: a case study of the DACH region. (Special Issue: COVID-19 and tourism.)

Source

Current Issues in Tourism; 2021. 24(7):1003-1016. 68 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

The study examined the relationship between perception of COVID-19, travel risk perception and travel behaviour among travellers in the DACH region (Germany, Austria, Switzerland) - an important tourism market and, after Italy, the second region in Europe that was impacted by COVID-19. Data were collected at two points of time: the sample of the study in Period 1 (n = 1158) was collected at a critical point in time in the beginning of March 2020, when Italy was already massively affected by COVID-19; the sample of the study in Period 2 (n = 212) was collected two weeks later, when Europe has seen immense impacts and COVID-19 was declared a pandemic. Cluster analysis was performed and defined three unique clusters in both periods with distinctive characteristics. In addition, results revealed a significant increase in risk perception of COVID-19, travel risk perception and travel behaviour over a short period of time.

Publication Type

Journal article.

<460>

Accession Number

20210145023

Author

Asif Khan; Bibi, S.; Lyu JiaYing; Abdul Latif; Lorenzo, A.

Title

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COVID-19 and sectoral employment trends: assessing resilience in the US leisure and hospitality industry. (Special Issue: COVID-19 and tourism.)

Source

Current Issues in Tourism; 2021. 24(7):952-969. 83 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

This study explores the vulnerability and resilience of the US Leisure and Hospitality industry sector-wise by taking employment levels in seven different business segments. An autoregressive distributed lag (ARDL) model approach was applied to daily time series data of employment and COVID-19 to assess each sector's fragility and resilience. The findings reveal that museums and historical places, performing arts, and sports are the worst influenced sectors and exhibit low resilience. The accommodation sector initially shows high vulnerability; however, it bounces back by showing high resilience compared to some of the other sectors. The rest of the sector presents the same story negatively influenced by pandemic but eventually reveals a sign of recovery. A detailed discussion with the theoretical and practical implications is provided.

Publication Type

Journal article.

<461>

Accession Number

20210145020

Author

Gurlek, M.; Kilic, I.

Title

A true friend becomes apparent on a rainy day: corporate social responsibility practices of top hotels during the COVID-19 pandemic. (Special Issue: COVID-19 and tourism.)

Source

Current Issues in Tourism; 2021. 24(7):905-918. 81 ref.

Publisher

Routledge

Location of Publisher

Abingdon

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E: library@rcvsknowledge.org

www.rcvsknowledge.org

Country of Publication

UK

Abstract

This research aims to reveal the Corporate Social Responsibility (CSR) activities carried out by the world's top-ranking hotels during the COVID-19 pandemic. To accomplish this goal, the websites of the 100 hotels in the world were examined using the content analysis method. The findings reveal that hotels carried out 40 different CSR activities to reduce the negative effects of the COVID-19 pandemic. These activities are divided into 11 categories. Three main CSR themes were then formed based on these categories: community, employees and customers. According to the findings, 50% of hotels organized CSR activities for the community and 76% for their employees and 87% for their customers. Based on these findings, this research has also provided key practical implications for hotel managers to effectively implement CSR practices in the pandemic period.

Publication Type

Journal article.

<462>

Accession Number

20210136189

Author

Chua BeeLia; Al-Ansi, A.; Lee MyongJae; Han Heesup

Title

Tourists' outbound travel behavior in the aftermath of the COVID-19: role of corporate social responsibility, response effort, and health prevention.

Source

Journal of Sustainable Tourism; 2021. 29(6):879-906. 142 ref.

Publisher

Routledge

Location of Publisher

Abingdon

Country of Publication

UK

Abstract

Little is known regarding how the tourists will perceive the post-pandemic travel particularly when planning to travel to the most affected global destinations. This study was designed in response to the COVID-19 pandemic and its adverse impact on the travel and tourism industry. It primarily investigated the key factors of the U.S. tourists' destination attachment and the intentions to return to European and Asian destinations after the pandemic. A total of 367 participants were involved in the web-based survey. The results of the structural equation modeling demonstrated that in the event of a pandemic (1) the corporate social responsibility and the perceived response efforts were critical to generate the destination attachment and the

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approach behavioral intentions, (2) monetary promotions were not sufficient to generate the destination attachment and approach the behavioral intentions to the international destinations, and (3) the health preventive behavior and the destination attachment were important direct predictors of the approach behavioral intentions. These key findings could assist the travel and tourism companies to more effectively overcome the adverse impact of the pandemic on their businesses.

Publication Type

Journal article.

<463>

Accession Number

20210038678

Author

Anup Malani; Daksha Shah; Gagandeep Kang; Lobo, G. N.; Jayanthi Shastri; Manoj Mohanan; Rajesh Jain; Sachee Agrawal; Sandeep Juneja; Sofia Imad; Kolthur-Seetharam, U.

Title

Seroprevalence of SARS-CoV-2 in slums versus non-slums in Mumbai, India.

Source

Lancet Global Health; 2021. 9(2):e110-e111. 5 ref.

Publisher

Elsevier

Location of Publisher

Oxford

Country of Publication

UK

Abstract

This article estimated prevalence in six slum and non-slum communities across three wards (one each from the three zones) of Mumbai, India. Consent rates in slums were comparable with other studies. For instance, in slums in Matunga, they recruited 45.6% of households visited. Based on field notes, over half of the households not sampled were due to homes being empty rather than non-consent. Recruitment fell short of sample-size targets in non-slum areas due to low consent rates. However, such rates cannot be quantified because they do not have information on the number of flats per building. Mapping the estimates to locations showed sharp differences over distances as little as 100 m. The estimates of seroprevalence suggest a high reproductive rate of SARS-CoV-2 in slums. Combined with reported COVID-19 cases and numbers of death in sampled wards, our findings suggest a high asymptomatic spread of the infection and an infection fatality rate of 0.076% in slums and 0.263% in non-slums. The higher prevalence in slums could be driven by population density, lower adherence to distancing measures, and poorer hygiene. This stark variation in prevalence within wards also highlights the importance of geographic variation for epidemiological modelling and policy discussions of herd immunity. Although moderate consent rates might bias the estimates of proportions of positive tests, the unadjusted age-weighted and sex-weighted proportions are not significantly different. The proportions of positive tests by age and sex in different sites show markedly higher proportions in slums than in non-slums. Regression estimates suggest that unadjusted positive proportions were higher

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among women than among men. Intriguingly, although proportions of positive tests among individuals aged older than 60 years were lower in non-slums vs slum areas.

Publication Type

Correspondence.