Week Ending 1st May 2020

Welcome to the latest COVID-19 Update. Information with regards COVID-19 is emerging at a rapid pace, this evidence update will be produced weekly during the crisis. It will highlight a few sources of knowledge and appropriate documents – most websites are open access at the time of writing. Note at the moment most publishers are allowing free access to articles on COVID-19 that would normally be restricted to paid subscriptions. Please feel free to print and share the bulletin.

Should an article be difficult to obtain try accessing via your Athens account, or please contact us and we will obtain it on your behalf. If you do not have an NHS Open Athens account register at https://openathens.nice.org.uk/ Alternatively, RWT have an online document supply request form for requesting journal articles, leading to a faster and more efficient service. Register now at http://www.basedoc.co.uk with your Base Library card username and password. If you cannot access the full text or do not have a BASE Library card, please contact the library, who will be able to assist you at rwh-tr.Belllibrary@nhs.net

Note: there have been a few changes to the format of the update. Official publications (CEBM, NICE, Gov.) will have an abstract included, plus an indication of the type of publication, eg, treatment, diagnosis etc. Further, the bulletin will not include editorials, letters, comments unless it is deemed of interest due to new development in press. Finally, a contents page will help navigate through the bulletin.

RWT Libraries are no longer physically staffed due to the COVID-19 pandemic, but we are all working from home and will continue to support your information and knowledge needs. Please contact us on the library generic e-mail above. Thank you.

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**Official Publications**

**UK Government Reports**

Care Quality Commission. *CGC sets out next steps to support adult social care during the COVID-19 pandemic.* CQC, 16th April 2020.

Adult social care providers are telling us that COVID-19 is having a devastating impact on both the people they care for and their staff. We are escalating what we hear – including concerns about Personal Protective Equipment (PPE) and workforce – with local and national system partners in order to target additional resource and support where it’s needed. The new action plan for Adult Social Care, published by the Department of Health and Social Care (DHSC) sets out the Government’s response to many of these concerns. **News.** Freely available at: https://www.cqc.org.uk/news/stories/cgc-sets-out-next-steps-support-adult-social-care-during-covid-19-pandemic


We are publishing regular COVID-19 community health, hospital discharge and social care updates from NHS England and NHS Improvement. These bring together links to our recent publications, updates from our workstreams and a range of topical news from across the sector. **News.** Freely available at: https://www.england.nhs.uk/coronavirus/community-social-care-ambulance/community-health-hospital-discharge-social-care-weekly-update/


Public Health England have worked closely with HM Prison & Probation Service and NHS England to enhance social distancing, protect the most vulnerable, and increase compartmentalisation in prisons in England. Outbreaks of COVID-19 in prisons affecting staff and prisoners are being seen currently but early emerging data collected by PHE suggests that the ‘explosive outbreaks’ of COVID-19 which were feared at the beginning of the pandemic wave are not being seen. Instead, there is evidence of containment of outbreaks. **Guidance.** Freely available at: https://www.gov.uk/government/publications/covid-19-population-management-strategy-for-prisons

**Centre for Evidence Based Medicine (University of Oxford)**

Brassey, J. et al. *Do weather conditions influence the transmission of the coronavirus (SARS-CoV-2)?* CEBM, 22nd March 2020. [Online]. Emerging evidence appears to suggest that weather conditions may influence the transmission of the novel coronavirus (SARS-CoV-2), with cold and dry conditions appearing to boost the spread. This phenomenon may manifest itself through two mechanisms: the stability of the virus and the effect of the weather on the host. The weather effect is minimal, and all estimates are subject to significant biases reinforcing the need for robust public health measures. **Rapid Review.** Freely available at: https://www.cebm.net/covid-19/do-weather-conditions-influence-the-transmission-of-the-coronavirus-sars-cov-2/


Given that many clinicians are already using macrolides to treat COVID-19 off-label, without recourse to robust evidence of safety or effectiveness, there is an urgent need for well-conducted, randomised clinical trials in this area.
These trials should ideally be double-blinded, and should ensure that safety data is collected and reported. The results of such studies will help to guide clinical practice during this pandemic. As hydroxychloroquine and macrolide antibiotics can prolong the QT interval, combining these treatments increases this risk. As we did not identify rigorous evidence of effectiveness of this combination, and did not identify safety data assessing this combination treatment for COVID-19. We would advise extreme caution to clinicians adopting this approach outside of research studies. We did not identify any trials that assessed the use of macrolides as a standalone treatment, and are therefore unable to determine the safety or efficacy of macrolides alone as a treatment for COVID-19. However, in the context of a suspected bacterial infection that has complicated COVID-19, we recognise that clinicians may wish to prescribe macrolide antibiotics, in line with their local/national antimicrobial guidelines. Rapid Review. Treatment. Freely available at: https://www.cebm.net/covid-19/what-is-the-evidence-for-use-of-macrolide-antibiotics-for-treatmentnof-covid-19/

Hartmann-Boyce, J. and Lindson, N. Smoking in COVID-19 and other acute respiratory infections. CEBM, 30th April 2020. [Online]. Smoking is a known risk factor for acute respiratory infections in general, and many public health bodies have encouraged people who smoke to quit in light of the COVID-19 pandemic (including Public Health England and the World Health Organization). However, contradictory evidence and news stories are emerging related to the possible role of smoking in COVID-19. The review covers the evidence on the relationship between smoking status and COVID-19 (new to this update). As this evidence is emerging and very limited, the review briefly summarise evidence on smoking and acute respiratory infections (ARI) more broadly. Finally, the study reviews effective interventions for quitting smoking which are feasible within the current pandemic context. Rapid Review. Prevention. Freely available at: https://www.cebm.net/covid-19/smoking-in-acute-respiratory-infections/


Heneghan, C., McCall, M. and Jefferson, T. Six countries: three-quarters of the COVID deaths. CEBM, 27th April 2020. [Online]. As of the 26th April, six countries accounted for 155,457 out of 206,008 (75.5%) COVID-19 deaths. These countries are Belgium, France, Italy, Spain, the UK and the US, which make up 7.5% of the global population (approx 569 million people). Rapid Review. Prevention. Freely available at: https://www.cebm.net/covid-19/six-countries-three-quarters-of-the-covid-deaths/

Hogan, U. and Jones, N.R. Is there an association between exposure to air pollution and severity of COVID-19 infection? CEBM, 29th April 2020. [Online]. Emerging evidence suggests there may be a positive association between long-term exposure to ambient air pollution and COVID-19 mortality. Although there is very limited data to date, considering the link between air pollution and COVID-19 might be of particular importance as international lockdown measures are eased. Rapid Review. Prevention. Freely available at: https://www.cebm.net/covid-19/is-there-an-association-between-exposure-to-air-pollution-and-severity-of-covid-19-infection/


Kernoan, A. et al. What are the mortality rate and predictors of mortality with COVID-19 patients with radiological changes on admission to hospital and who require supplemental oxygen? CEBM, 27th April 2020. [Online]. Clinical factors associated with increased mortality in a population requiring oxygen support were the

Oke, J., DeVito, N. and Heneghan, C. Tracking mortality over time – updated 28th April. CEBM, 3rd April 2020. Updated 28th April 2020. [Online]. How can we tell if COVID-19 is the principal cause of these deaths? Or if they would have occurred in the absence of COVID-19, particularly in the elderly and people with chronic health problems? One way is to examine the death rates and determine if more people are dying than we would expect. What we want to know is whether the reported COVID deaths represent an “excess” over the norm. Rapid Review. Statistics and Mortality. Freely available at: https://www.cebm.net/covid-19/tracking-mortality-over-time/

Oke, J. and Heneghan, C. COVID-19 – collateral damage in Scotland. CEBM, 24th April 2020. [Online]. The term collateral damage refers to any death, injury, or other damage as an unintended result of military operations. It is not a pleasant concept but one that has now been used in the context of COVID-19 and the side-effects of the lockdown. Professor Sikora warned this week that screening and delays in diagnosis and cutbacks to cancer treatment could lead to excess cancer deaths as a result of the pandemic. If the lockdown means those who most need medical help don’t seek it – either because they can’t or are reluctant too will inevitably result in avoidable deaths. Rapid Review. Statistics and Mortality. Freely available at: https://www.cebm.net/covid-19/covid-collateral-damage-in-scotland/


Tierney, S. and Mahtani, K.R. Volunteering during the COVID-19 pandemic: what are the potential benefits of people’s wellbeing? CEBM, 23rd April 2020. [Online]. There is weak evidence linking volunteering to positive well-being. In order to benefit, people may need to feel that what they do is likely to make a difference and that it is valued. This idea of “mattering” highlights the fact that although not an explicit reason for volunteering, reciprocity may be important for someone to continue undertaking such work and gain psychologically from it. Rapid Review. Primary Care Practice. Freely available at: https://www.cebm.net/covid-19/volunteering-during-the-covid-19-pandemic-what-are-the-potential-benefits-to-peoples-wellbeing/

Cochrane Reviews
None identified this week.

NICE
None identified this week.
Uncover (University of Edinburgh)

This review sought to answer two sub-questions: which high proximity activities in the UK might benefit from mask wearing to reduce the transmission of COVID-19? and which occupations, outside of those already advised to wear a face mask in the UK, might benefit from wearing a face mask at work to reduce the transmission of COVID-19? Rapid Review. Freely available at: https://www.learn.ed.ac.uk/webapps/blackboard/execute/content/file?cmd=view&content_id=4651670_1&course_id=_77596_1

The purpose of this review is to assess the evidence of effectiveness of homemade or improvised facemasks. Specifically, it will address the following questions: do homemade or improvised facemasks prevent the transmission of respiratory viruses?; what materials work (what are the virus filtration properties of different materials)?; what design(s) of mask work (in terms of fit and comfort)? and can these masks be safely washed and reused? This study will not look at behavioural aspects of facemask use, beyond issues related to fit and comfort. Those issues are explored elsewhere. Rapid Review. Freely available at: https://www.learn.ed.ac.uk/webapps/blackboard/execute/content/file?cmd=view&content_id=4651667_1&course_id=_77596_1

Community face mask use was part of successful control policies in China, South Korea and Vietnam, but it is not possible to disentangle their separate contribution to reducing transmission. This rapid review was carried out to establish whether there is evidence for the use of face masks in the general population to reduce the spread of infection with SARS-COV-2. Rapid Review. Freely available at: https://www.learn.ed.ac.uk/webapps/blackboard/execute/content/file?cmd=view&content_id=4651862_1&course_id=_77596_1

UpToDate


This topic will discuss the management of COVID-19 in hospitalized adults. Our approach to hospital management is based on limited data and evolves rapidly as clinical data emerge. Clinicians should consult their own local protocols for management, which may differ from our approach. Synthesis of Current Practice. Freely available at: https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19-management-in-hospitalized-adults


Covid-19 Evidence Update, Issue 6 1st May 2020

Invasive mechanical ventilation is traditionally delivered with the patient in the supine position. Prone ventilation is ventilation that is delivered with the patient lying in the prone position. Prone ventilation may be used for the treatment of acute respiratory distress syndrome (ARDS) mostly as a strategy to improve oxygenation when more traditional modes of ventilation fail (eg, lung protective ventilation). The physiologic effects of, selection of patients for, and the outcomes associated with prone ventilation are reviewed here. **Synthesis of Current Practice.** Freely available at: https://www.uptodate.com/contents/prone-ventilation-for-adult-patients-with-acute-respiratory-distress-syndrome


Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease it causes, coronavirus disease 2019 (COVID-19), have reached pandemic scale worldwide in 2020 [1]. The disease is associated with multiple psychiatric problems in clinicians who care for patients with COVID-19 and suspected cases [2,3]. In addition, COVID-19 may precipitate anxiety, depression, and sleep problems in patients with COVID-19 and may adversely affect patients with established psychiatric disorders. This topic addresses the epidemiology and management of psychiatric issues that are associated with the COVID-19 pandemic. **Synthesis of Current Practice.** Freely available at: https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19-psychiatric-issues


Delivering cancer care during this crisis is challenging given the competing risks of death from cancer versus death or serious complications from SARS-CoV-2, and the likely higher lethality of COVID-19 in immunocompromised hosts [3,4]. Many patients with cancer are struggling to receive treatment for their cancers due to hospitals canceling or delaying surgeries and other procedures, including chemotherapy and radiation therapy. There is also concern that patients who are otherwise healthy and have curable cancers that require timely implementation of surgery, chemotherapy, or radiation have unfortunately concluded that the risk of contracting COVID-19 may outweigh the benefits of cancer treatment [5]. Inadequate supplies of personal protective equipment (PPE) for health care providers, limited hospital capacity, including intensive care units (ICUs), and lack of point-of-care testing further complicate the difficulty. This topic will discuss issues related to balancing the risk from treatment delay versus harm from COVID-19, ways to minimize the compromise of social distancing during care delivery, how limited healthcare resources can be appropriately and fairly allocated, and reviews the recommendations for cancer care during the COVID-19 epidemic from expert groups. **Synthesis of Current Practice.** Freely available at: https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19-cancer-care-during-the-pandemic

**World Health Organisation**

None identified this week

Covid-19 Evidence Update, Issue 6 1st May 2020
Coronavirus disease 2019 (COVID-19) is a newly emerged disease that has become a global public health concern as it rapidly spread around the world. The etiologic agent responsible for this disease has been named as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) by the International Committee on Taxonomy of Viruses as it shows similar genomic features to that of SARS-CoV which caused a pandemic in 2002. This disease first appeared in Hubei province of China and it follows human-to-human transmission but the path this virus took to set up human infection remains a mystery. By 17 April 2020, globally there have been 2,074,529 confirmed cases with 139,378 deaths because of COVID-19. SARS-CoV-2 shows several similarities with SARS-CoV, and Middle East Respiratory Syndrome Coronavirus (MERS-CoV) with its clinical presentations. This can vary from asymptomatic infection to severe disease and mortality. Real-time reverse-transcription polymerase chain reaction (rRT-PCR) screening is considered as the standard laboratory test for the diagnosis of COVID-19. There is no proven antiviral agent against SARS-CoV-2 so the treatment for COVID-19 is symptomatic, aiming for the management of the symptoms and prevention of the complications. The outbreak of COVID-19 has led to the implementation of extraordinary public health measures throughout the world. Numerous antiviral compounds used to treat other infections are being clinically researched to find possible treatment. Similarly, the traditional public health outbreak response strategy of isolation, quarantine, social distancing and community containment has been implemented in multiple countries and has played an important role in the prevention of new outbreaks. This review aims to enhance our understanding of COVID 19. Review. Abstract only available. Contact the library for full text.

Business as Usual Post Covid

As the COVID-19 crisis has abruptly halted most of the orthopaedic activities both in the outpatient clinic and the operating room, a progressive start-up scenario needs to be planned. The exact timing largely depends on factors outside of our control. After restrictions will be lifted, clinical and surgical volume will progressively increase. This paper offers key points and possible strategies to provide the highest level of safety to both the orthopaedic patient and the orthopaedic team including administrative staff and nurses, during the start-up phase. Review. Freely available at: https://link.springer.com/article/10.1007%2Fs00167-020-06031-3

Cancer and Haematology Services

The Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) associated disease (COVID-19) outbreak seriously challenges globally all health care systems and professionals. Expert projections estimate that despite social distancing and lockdown being practiced, we have yet to feel the full impact of COVID-19. In this manuscript we provide guidance to prepare for the impact of COVID-19 pandemic on breast cancer patients and advise on how to triage, prioritize and organize diagnostic procedures, surgical, radiation and medical treatments. Evidence Based guideline. Freely available at: https://www.thebreastonline.com/article/S0960-9776(20)30093-X/pdf

COVID-19 pandemic has strained human and material resources around the world. Practices in surgical oncology had to change in response to these resource limitations, triaging based on acuity, expected oncologic outcomes,
availability of supportive resources, and safety of healthcare personnel. These guidelines are intended to help clinicians caring for HNC patients appropriately allocate resources during a healthcare crisis, such as the COVID-19 pandemic. We continue to advocate for individual consideration of cases in a multidisciplinary fashion based on individual patient circumstances and resource availability. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1002/hed.26206

Sikora, K. and Weeks, R. “60,000 cancer patients could die because of lack of treatment or diagnosis”: oncologist on coronavirus dilemma. ITV Report, 22nd April 2020. [Online]. Coronavirus will steal the headlines, but cancer kills 450 people a day in the UK - there is no peak and the numbers aren’t coming down. Unless we act urgently, that number will rise. A group of oncologists, including myself, estimate that 60,000 cancer patients could die because of a lack of treatment or diagnosis. News. FREELY AVAILABLE AT: https://www.itv.com/news/2020-04-22/60-000-cancer-patients-could-die-because-of-lack-of-treatment-or-diagnosis-oncologist-on-coronavirus-dilemma/


Tchelebi, L.T. et al. Recommendations on the use of radiation therapy in managing patients with gastrointestinal malignancies in the era of COVID-19. Radiotherapy and Oncology, 13th April 2020. [Epub ahead of print]. According to the Centers for Disease Control (CDC), the most effective means of minimizing the spread of the virus is through reducing interactions between individuals.[2] We performed a review of the literature, as well as national and international treatment guidelines, seeking data in support of the RADS principle (Remote visits, Avoid radiation, Defer radiation, Shorten radiation)[3] as it applies to gastrointestinal cancers. The purpose of the present work is to guide radiation oncologists managing patients with gastrointestinal cancers during the COVID-19 crisis in order to maintain the safety of our patients, while minimizing the impact of the pandemic on cancer outcomes. Evidence Based Guideline. FREELY AVAILABLE AT: https://www.thegreenjournal.com/article/S0167-8140(20)30191-2/pdf

Co-Morbidities

Borchert, A. et al. Managing urology consultations during COVID-19 pandemic: application of a structured care pathway. Urology, 21st April 2020. [Epub ahead of print]. The objective of this study was to describe and evaluate a risk-stratified triage pathway for inpatient urology consultations during the SARS-CoV-2 (COVID-19) pandemic. This pathway seeks to outline a urology patient care strategy that reduces the transmission risk to both healthcare providers and patients, reduces the healthcare burden, and maintains appropriate patient care. Quality improvement. FREELY AVAILABLE AT: https://www.goldjournal.net/article/S0090-4295(20)30395-2/pdf

Ceriello, A., Stoian, A.P and Rizzo, M. COVID-19 and diabetes management: what should be considered? Diabetes Research and Clinical Practice. 163 (May) 2020. [Online]. People with diabetes are particularly exposed to a worse prognosis if infected. Therefore, it is a scientific and clinical need to obtain data on the antidiabetic treatments used so far in T2DM patients affected by COVID-19, and particularly to clarify whether the use of the new therapies in such people is correlated, or not, to a better prognosis and less severe forms of the disease. Commentary. FREELY AVAILABLE AT: https://www.diabetessciencejournal.com/article/S0168-8227(20)30401-0/fulltext

Drucker, D.J. Coronavirus infections and type 2 diabetes – shared pathways with therapeutic implications. Endocrine Review, 15th April 2020. [Epub ahead of print]. Individuals with diabetes are at increased risk for bacterial, mycotic, parasitic and viral infections. The severe acute respiratory syndrome (SARS)-CoV2 (also referred to as COVID-19) coronavirus pandemic highlights the importance of understanding shared disease pathophysiology potentially informing therapeutic choices in individuals with Type 2
diabetes (T2D). Two coronavirus receptor proteins, Angiotensin Converting Enzyme 2 (ACE2) and Dipeptidyl Peptidase-4 (DPP4) are also established transducers of metabolic signals and pathways regulating inflammation, renal and cardiovascular physiology, and glucose homeostasis. Moreover, glucose-lowering agents such as the DPP4 inhibitors, widely used in subjects with T2D, are known to modify the biological activities of multiple immunomodulatory substrates. Here we review the basic and clinical science spanning the intersections of diabetes, coronavirus infections, ACE2, and DPP4 biology, highlighting clinical relevance and evolving areas of uncertainty underlying the pathophysiology and treatment of T2D in the context of coronavirus infection. Review. https://academic.oup.com/edrv/advance-article/doi/10.1210/endrev/bnaa011/5820492

French J.A. et al. Keeping people with epilepsy safe during the Covid-19 pandemic. Neurology, 23rd April 2020. [Epub ahead of print]. To provide information on the impact of the COVID-19 pandemic on people with epilepsy and provide consensus recommendations on how to provide the best possible care for people with epilepsy while avoiding visits to urgent care facilities and hospitalizations during the Novel Coronavirus pandemic. Evidence based guideline. Freely available: https://n.neurology.org/content/neurology/early/2020/04/22/WNL.000000000009632.full.pdf


Klimek, L. et al. Handling of allergen immunotherapy in the COVID-19 pandemic: an ARIA-EAACI statement. Allergy, 24th April 2020. [Epub ahead of print]. The current COVID-19 pandemic influences many areas of social life, medical treatments and the way allergy is performed. Allergen-specific immunotherapy (AIT) is one of the most important treatment options for IgE-mediated allergies and is based on immunological effects on the diseased patient. Evidence based guideline. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/all.14336

Korobelnik, J-F. et al. Guidance for anti-VEGF intravitreal injections during the COVID-19 pandemic. Graefe’s Archive for Clinical and Experimental Ophthalmology, 23rd April 2020. [Epub ahead of print]. There is an urgent need to address how to best provide ophthalmic care for patients with retinal disease receiving intravitreal injections with anti-vascular endothelial growth factor agents during the ongoing global COVID-19 pandemic. This article provides guidance for ophthalmologists on how to deliver the best possible care for patients while minimizing the risk of infection. Review. Evidence based guideline. Freely available at: https://link.springer.com/article/10.1007%2Fs00417-020-04703-x

Mantovani, A., Beatrice, G. and Dalbeni, A. Coronavirus disease 2019 and prevalence of chronic liver disease: a meta-analysis. Liver International, 4th April 2020. [Epub ahead of print]. At present, there is scarce information regarding the global prevalence of chronic liver disease in individuals with coronavirus disease 2019 (COVID-19) disease, which is becoming a global pandemic. The aim of this study was to assess the overall prevalence of chronic liver disease among patients with COVID-19 disease by meta-analysing data in observational studies and to investigate the relationship between liver damage and COVID-19 disease. We included 11 observational studies for a total of 2034 adult individuals (median age 49 years [IQR 45-54], 57.2% men). The overall prevalence of chronic liver disease at baseline was 3% (95% CI 2%-4%; I² = 29.1%). Individuals with severe COVID-19 disease had relevant alterations of liver enzymes and coagulative profile, probably due to the innate immune response against the virus. Further studies are needed to better investigate the causes of liver injury in patients with COVID-19 disease and the effect of treatment for COVID-19 on the liver. Review. Meta-Analysis. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1111/liv.14465


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Procedures putting healthcare workers in close contact with the airway are particularly at risk of contamination by the SARS-CoV-2 virus, especially when exposed to sputum, coughing, or a tracheostomy. In the current pandemic phase, all patients should be considered as potentially infected. Thus, the level of precaution recommended for the caregivers depends more on the type of procedure than on the patient’s proved or suspected COVID-19 status. Procedures that are particularly at high risk of contamination are clinical and flexible endoscopic pharyngo-laryngological evaluation, and probably also video fluoroscopic swallowing exams. Voice rehabilitation should not be considered urgent at this time. Therefore, recommendations presented here mainly concern the management of swallowing disorders, which can sometimes be dangerous for the patient, and recent dysphonia. In cases where they are considered possible and useful, teleconsultations should be preferred to face-to-face assessments or rehabilitation sessions. The latter must be maintained only in few selected situations, after team discussions or in accordance with the guidelines provided by health authorities. Evidence based guideline. Freely available at: https://www.sciencedirect.com/science/article/pii/S1879729620301010?via%3Dihub

Hanif, S. et al. Managing people with diabetes fasting for Ramadan during the COVID-19 pandemic: a South Asian Health Foundation update. Diabetic Medicine, 25th April 2020. [Epub ahead of print]. Ramadan fasting can impact those with diabetes, increasing the risk of hypoglycaemia, hyperglycaemia and dehydration. This year, Ramadan will occur during the global COVID-19 pandemic. Reports show that diabetes appears to be a risk factor for more severe disease with COVID-19. In addition, the UK experience has shown diabetes and COVID-19 is associated with dehydration, starvation ketosis, diabetic ketoacidosis and hyperglycaemic hyperosmolar state. This makes fasting in Ramadan particularly challenging for those Muslims with diabetes. Here, we discuss the implications of fasting in Ramadan during the COVID-19 pandemic and make recommendations for those with diabetes who wish to fast. Review. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/dme.14312


Containment, Transmission and Isolation

Liu, Y. et al. Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals. Nature, 27th April 2020. [Epub ahead of print]. This study investigated the aerodynamic nature of SARS-CoV-2 by measuring viral RNA in aerosols in different areas of two Wuhan hospitals during the COVID-19 outbreak in February and March 2020. The concentration of SARS-CoV-2 RNA in aerosols detected in isolation wards and ventilated patient rooms was very low, but it was elevated in the patients’ toilet areas. Levels of airborne SARS-CoV-2 RNA in the majority of public areas was undetectable except in two areas prone to crowding, possibly due to infected carriers in the crowd. We found that some medical staff areas initially had high concentrations of viral RNA with aerosol size distributions showing peaks in submicrometre and/or supermicrometre regions, but these levels were reduced to undetectable levels after implementation of rigorous sanitization procedures. Although we have not established the infectivity of the virus detected in these hospital areas, we propose that SARS-CoV-2 may have the potential to be transmitted via aerosols. Our results indicate that room ventilation, open space, sanitization of protective apparel, and proper use and disinfection of toilet areas can effectively limit the concentration of SARS-CoV-2 RNA in aerosols. Future work should explore the infectivity of aerosolized virus. Retrospective Cohort Study. Freely available at: https://www.nature.com/articles/s41586-020-2271-3_reference.pdf

Liu, Y. et al. What are the underlying transmission patterns of COVID-19 outbreak: an age-specific social contract characterization. EClinical Medicine, 18th April 2020. [Epub ahead of print]. With an in-depth characterization of age-specific social contact-based transmission, the retrospective and prospective situations of the disease outbreak, including the past and future transmission risks, the effectiveness of different interventions, and the disease transmission risks of restoring normal social activities, are computationally analyzed and reasonably explained. The conclusions drawn from the study not only provide a comprehensive explanation of the underlying COVID-19 transmission patterns in China, but more importantly, offer the social contact-based risk analysis methods that can readily be applied to guide intervention planning and operational responses in other countries, so that the impact of COVID-19 pandemic can be strategically mitigated. Retrospective Study. Freely available at: https://www.thelancet.com/pdfs/journals/eclinm/PIIIS2589-5370(20)30098-5.pdf

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Diagnosis and Testing


AI assistance improved radiologist performance in distinguishing COVID-19 from pneumonia of other etiology on chest CT. Future study will investigate integration of these algorithms into routine clinical workflow to assist radiologists in accurately diagnosing COVID-19. **Retrospective Study.** Freely available at: https://pubs.rsna.org/doi/10.1148/radiol.2020201491?url_ver=Z39.88-2003&rfr_dat=cr_pub%20%200pubmed


Here, we summarize all the available updates on the multidisciplinary approaches for the advancement of diagnosis and proposed therapeutic strategies for COVID-19. Moreover, the review discusses different aspects of the COVID-19, including its epidemiology; incubation period; the general clinical features of patients; the clinical features of intensive care unit (ICU) patients; SARS-CoV-2 infection in the presence of co-morbid diseases and the clinical features of pediatric patients infected with the SARS-CoV-2. Advances in various diagnostic approaches, such as the use of real-time polymerase chain reaction (RT-PCR), chest radiography, and computed tomography (CT) imaging; and other modern diagnostic methods, for this infection have been highlighted. However, due to the unavailability of adequate evidence, presently there are no officially approved drugs or vaccines available against SARS-CoV-2. Additionally, we have discussed various therapeutic strategies for COVID-19 under different categories, like the possible treatment plans with drug (antiviral drugs and anti-cytokines) therapy for disease prevention. Lastly, potentials candidates for the vaccines against SARS-CoV-2 infection have been described. Collectively, the review provides an overview of the SARS-CoV-2 infection outbreak along with the recent advancements and strategies for diagnosis and therapy of COVID-19. **Review.** Freely available at: https://www.europeanreview.org/wp/wp-content/uploads/4016-4026.pdf


With the current SARS-CoV2 outbreak, countless tests need to be performed on potential symptomatic individuals, contacts and travellers. The gold standard is a quantitative polymerase chain reaction (qPCR)-based system taking several hours to confirm positivity. For effective public health containment measures, this time span is too long. We therefore evaluated a rapid test in a high-prevalence community setting. Given the low sensitivity, we recommend not to rely on an antibody-based rapid test for public health measures such as community screenings. **Randomised testing.** Freely available at: https://www.sciencedirect.com/science/article/pii/S0033350620301141?via%3Dihub


A pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been spreading throughout the world. Though molecular diagnostic tests are the gold standard for
COVID-19, serological testing is emerging as a potential surveillance tool, in addition to its complementary role in COVID-19 diagnostics. Indubitably quantitative serological testing provides greater advantages than qualitative tests but today there is still little known about serological diagnostics and what the most appropriate role quantitative tests might play. Research article Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.25932

The unexpected pandemic set off by the novel coronavirus 2019 (COVID-19) has caused severe panic among people worldwide. COVID-19 has created havoc, and scientists and physicians are urged to test the efficiency and safety of drugs used to treat this disease. In such a pandemic situation, various steps have been taken by government to control and prevent the Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2). This pandemic situation has forced scientists to rework strategies to combat infectious diseases through drugs, treatment, and control measures. COVID-19 treatment requires both limiting viral multiplication and neutralizing tissue damage induced by inappropriate immune reaction. Currently, various diagnostic kits to test for COVID-19 are available, and repurposing therapeutics for COVID-19 has shown to be clinically effective. As the global demand for diagnostics and therapeutics continues to rise, it is essential to rapidly develop various algorithms to successfully identify and contain the virus. This review discusses the updates on specimens/samples, recent efficient diagnostics, and therapeutic approaches to control the disease and repurposed drugs mainly focusing on chloroquine/hydroxychloroquine and convalescent plasma (CP). More research is required for further understanding of the influence of diagnostics and therapeutic approaches to developing vaccines and drugs for COVID-19. Review. Freely available at: http://submit.bmbreports.org/Search/View.html?tmp_tr_num=5018

Current events with the recent COVID-19 outbreak are necessitating steep learning curves for the NHS workforce. Ultrasound, although not used in the diagnosis of COVID-19 may be utilised by practitioners at the point of care (POC) or on the intensive care units (ITUs) where rapid assessment of the lung condition may be required. The aim of this article was to review current literature surrounding the use of lung ultrasound in relation to COVID-19 and provide Sonographers with a quick and digestible reference guide for lung pathologies. The adoption of lung ultrasound to monitor lung condition during the COVID-19 outbreak may reduce the need for serial exposure to ionising radiation on the wards and in turn reduce the number of radiographers required to attend infected wards and bays, protecting both patients and the workforce. Review. Freely available at: https://www.radiographyonline.com/article/S1078-8174(20)30057-2/pdf

Wu, F. et al. Discontinuation of antiviral drugs may be the reason for recovered COVID-19 patients testing positive again. British Journal of Hospital Medicine, 51 (4) 2020. [Online]. Currently, some patients in China who have been treated for COVID-19 and discharged from hospital have tested positive again in subsequent nucleic acid tests. The authors believe that discontinuation of antiviral drugs may be one of the reasons for recovered patients with COVID-19 testing positive again. Case Report. Freely available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/hmed.2020.0156

Nucleic acid testing is the standard method for the diagnosis of viral infections. However, this method reportedly has a low positivity rate. To increase the sensitivity of COVID-19 diagnoses, we developed an IgM-IgG combined assay and tested it in patients with suspected SARS-CoV-2 infection. In total, 56 patients were enrolled in this study and SARS-CoV-2 was detected by using both IgM-IgG antibody and nucleic acid tests. Clinical and laboratory data were collected and analyzed. Our findings suggest that patients who develop severe illness might experience longer virus exposure times and develop a more severe inflammatory response. The IgM-IgG test is an accurate and sensitive diagnostic method. A combination of nucleic acid and IgM-IgG testing is a more sensitive and accurate approach for diagnosis and early treatment of COVID-19. Research article. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1002/jmv.25930

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The COVID-19 pandemic is a significant global event in the history of infectious diseases. The SARS-CoV-2 appears to have originated from bats but is now easily transmissible among humans, primarily through droplet or direct contact. Clinical features of COVID-19 include high fever, cough, and fatigue which may progress to ARDS. Respiratory failure can occur rapidly after this. The primary laboratory findings include lymphopenia and eosinopenia. Elevated D-dimer, procalcitonin, and CRP levels may correlate with disease severity. Imaging findings include ground-glass opacities and patchy consolidation on CT scan. Mortality is higher in patients with hypertension, cardiac disease, diabetes mellitus, cancer, and COPD. Elderly patients are more susceptible to severe disease and death, while children seem to have lower rates of infection and lower mortality. Diagnostic criteria and the identification of persons under investigation have evolved as more data has emerged. However, the approach to diagnosis is still very variable from region to region, country to country, and even among different hospitals in the same city. The importance of a clinical pathway to implement the most effective and relevant diagnostic strategy is of critical importance to establish the control of this virus that is responsible for more and more deaths each day. *Review.* Freely available at: https://link.springer.com/article/10.1007%2Fs12016-020-08792-8#citeas

Education and Training

None identified this week.

**Infection Control and PPE**


Despite personal protective equipment, fluorescent markers were found on the uncovered skin, hair, and shoes of participants after simulations of emergency department management of patients experiencing respiratory distress. The findings suggest that the current recommendations for personal protective equipment may not fully prevent exposures in emergency department settings. Clothing that covers all skin may further diminish exposure risk. Inhalation of aerosols and exposure risks associated with doffing were not evaluated in this study. The small number of participants, the simulated health care setting, and the surrogate measures of exposure are the primary limitations. Because this was a simulation study using manikins, it is uncertain how the results might apply to actual patient care. *Research Letter.* Freely available at: https://jamanetwork.com/journals/jama/fullarticle/2765377


Orthopaedic and trauma surgery using power tools, pulsatile lavage and electrocautery are surgical aerosol-generating procedures and all body fluids contain virus particles. Raising awareness of these issues will help avoid occupational transmission of COVID-19 to the surgical team by aerosolization of blood or other body fluids and hence adequate PPE should be available and used during orthopaedic surgery. In addition, efforts have to be made to improve the current evidence in this regard. *Review.* Freely available at: https://link.springer.com/article/10.1007/s00167-020-06022-4


All gastrointestinal endoscopic procedures have a high risk of aerosol contamination of the coronavirus disease 2019 (COVID-19) to endoscopists, nurses, and healthcare assistants. Given the current pandemic situation of COVID-19, the Japan Gastroenterological Endoscopy Society (JGES) issued the recommendation for gastrointestinal (GI) endoscopy based on the status of COVID-19 as of April 9th, 2020, in Japan; 1) indications for GI endoscopy in the pandemic of COVID-19, 2) practical protective equipment for medical personals depending on the risk for COVID-19, 3) preprocedural management, such as pharyngeal local anesthesia using lidocaine spray which has a potential to generate the aerosols, 4) ideal settings of the endoscopy room including the numbers of the staff and the patients, 5) postprocedural management, such as undressing and follow-up of the patients, as well as the involved staff, were
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documented to fit the practical scenarios in GI endoscopy, with the available data in Japan and the world. We believe that certain measures will prevent further spread of COVID-19. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/den.13703


Tang, L. Y. and Wnag, J. Anesthesia and COVID-19: what we should know and what we should do. Seminars in Cardiothoracic and Vascular Anesthesia, 27th April 2020. [Epub ahead of print]. Coronavirus disease 2019 (COVID-19), caused by Severe Acute Respiratory Syndrome-Coronavirus-2 (SARS-CoV-2), was first reported in Wuhan, Hubei, China, and has spread to more than 200 other countries around the world. COVID-19 is a highly contagious disease with continuous human-to-human transmission. The origin of the virus is unknown. Airway manipulations and intubations, which are common during anesthesia procedures may increasingly expose anesthesia providers and intensive care unit team members to SARS-CoV-2. Through a comprehensive review of existing studies on COVID-19, this article presents the epidemiological and clinical characteristics of COVID-19, reviews current medical management, and suggests ways to improve the safety of anesthetic procedures. Owing to the highly contagious nature of the virus and the lack of therapeutic drugs or vaccines, precautions should be taken to prevent medical staff from COVID-19. Review. Freely available at:

Uppal, V. et al. Neuraxial anaesthesia and peripheral nerve blocks during the COVID-19 pandemic.: A literature review and practice recommendations. Anaesthesia, 28th April 2020. [Epub ahead of print]. Coronavirus disease 2019 (COVID-19) has had a significant impact on global healthcare services. In an attempt to limit the spread of infection and to preserve healthcare resources, one commonly used strategy has been to postpone elective surgery, whilst maintaining the provision of anaesthetic care for urgent and emergency surgery. General anaesthesia with airway intervention leads to aerosol generation, which increases the risk of COVID-19 contamination in operating rooms and significantly exposes the healthcare teams to COVID-19 infection during both tracheal intubation and extubation. Therefore, the provision of regional anaesthesia may be key during this pandemic, as it may reduce the need for general anaesthesia and the associated risk from aerosol-generating procedures. However, guidelines on the safe performance of regional anaesthesia in light of the COVID-19 pandemic are limited. The goal of this review is to provide up-to-date, evidence-based recommendations, or expert opinion when evidence is limited, for performing regional anaesthesia procedures in patients with suspected or confirmed COVID-19 infection. These recommendations focus on seven specific domains including: (1) planning of resources and staffing; (2) modifying the clinical environment; (3) preparing equipment, supplies and drugs; (4) selecting appropriate personal protective equipment; (5) providing adequate oxygen therapy; (6) assessing for and safely performing regional anaesthesia procedures; and (7) monitoring during the conduct of anaesthesia and post-anaesthetic care. Implicit in these recommendations is preserving patient safety whilst protecting healthcare providers from possible exposure. Literature Review. Evidence Based Guidelines. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/anae.15105

Weissman, D.N., de Perio, M.A. and Radonovich, L.J. COVID-19 and risks posed to personnel during endotracheal intubation. JAMA, 27th April 2020. [Online]. Fundamental research is needed to better inform PPE recommendations. For example, it would be useful to know how long SARS-CoV-2 can remain infective on surfaces such as the skin, hair, and clothing, and the potential for contact transmission from those sites to guide recommendations for barrier protection. A better understanding of the duration of infectivity and level of risk posed by airborne SARS-CoV-2 would help to guide recommendations for respiratory protection. Much can be done to protect health care personnel performing endotracheal intubations from procedure-related transmission of COVID-19. Individuals who perform this life-saving procedure must be able to do it as safely as possible. Editorial. Freely available at: https://jamanetwork.com/journals/jama/fullarticle/2765376

Since its emergence in December 2019, the virus known as severe acute respiratory syndrome coronavirus 2 has quickly caused a pandemic. This virus causes a disease now known as coronavirus disease 2019, or COVID-19. As an increasing proportion of the at-risk population becomes infected, and patients with severe illness are hospitalized, it is essential for hospitalists to remain current on how to best care for people with suspected or confirmed disease. Establishing a system for logistical planning, and accurate information sharing is strongly recommended. Infection control remains the ultimate goal. As such, healthcare workers should be educated on universal and isolation precautions, and the appropriate use of personal protective equipment. Social distancing should be encouraged to prevent the spread of infection, and creative and innovative ways to reduce contact may need to be considered. Moreover, it is imperative to prepare for contingencies as medical staff will inevitably get sick or become unavailable. Hospitalists have the difficult task of caring for patients, while also adapting to the many logistical and social elements of a pandemic. *Evidence Based Guideline*. Freely available at: https://www.amjmed.com/article/S0002-9343(20)30349-1/pdf

**Intensive Care**


As COVID-19 disease escalates globally, optimising patient outcome during this catastrophic health care crisis is the number one priority. The principles of patient blood management are fundamental strategies to improve patient outcomes and should be given high priority in this crisis situation. The aim of this expert review is to provide clinicians and health care authorities with information regarding how to apply established principles of patient blood management during the COVID-19 pandemic. In particular, this review considers the impact of the COVID-19 pandemic on the blood supply and specifies important aspects of donor management. We further discuss how preventative and control measures implemented during the COVID-19 crisis could affect the prevalence of anaemia, and highlight issues regarding the diagnosis and treatment of anaemia in patients requiring elective or emergency surgery. In addition, we review aspects related to patient blood management of critically ill patients with known or suspected COVID-19, and discuss important alterations of the coagulation system in patients hospitalised due to COVID-19. Finally, we address special considerations pertaining to supply-demand and cost-benefit issues of patient blood management during the COVID-19 pandemic. *Review*. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/anae.15095


During the SARS-CoV-2 pandemic, tracheostomy may be required for COVID-19 patients requiring long term ventilation in addition to other conditions such as airway compromise from head and neck cancer. As an aerosol generating procedure, tracheostomy increases healthcare worker exposure to COVID-19 infection. Performing surgical tracheostomy and tracheostomy care requires a strategy that mitigates these risks and maintains the quality of patient care. *Evidence based guideline*. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1002/hed.26191


Tracheostomy guidelines during the COVID-19 pandemic vary by physician groups and specialty, hospital systems, and supply-chain/resource availability. This summary is provided as a point-in-time current state of the guidelines for tracheotomy management in April, 2020 and is expected to change in coming weeks and months as the COVID-19 pandemic, virus testing and antibody testing evolves. *Evidence based guideline*. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1002/hed.26192

**Law and Ethics**

None identified this week.

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Mental Health and Well-being

This field guide to self-care is for men and women working in our hospitals. It is hoped that this useful resource for staff and anyone else who may be feeling stressed or anxious during difficult times. Divided into three sections, body, emotion and mind, the resources offers helpful tips and tools to help recovery to those experiencing traumatic events. Web Support. Freely available at: https://www.helpforheroes.org.uk/get-support/mental-health-and-wellbeing/a-field-guide-to-self-care/

The 2019 novel coronavirus (COVID-19) has gained global attention after it originated from China at the end of 2019, and later turned into pandemic as it affected about 118,000 in 114 countries by March 11, 2020. By March 13, 2020, it was declared a national emergency in the United States as the number of COVID-19 cases, and the death toll rose exponentially. To contain the spread of the disease, the world scientist community came together. However, the unpreparedness of the nations, even with the advanced medical sciences and resources, has failed to address the mental health aspect amongst the public, as all efforts are focused on understanding the epidemiology, clinical features, transmission patterns, and management of COVID-19 pneumonia. Our efforts in this review are to evaluate and study similar outbreaks from the past to understand its adverse impact on mental health, implement adequate steps to tackle and provide a background to physicians and healthcare workers at the time of such outbreaks to apply psychological first aid. Review. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7182052/

Obstetrics and Gynaecology

Providing guidelines to health care workers during a period of rapidly evolving viral pandemic infections is not an easy task, but it is extremely necessary in order to coordinate appropriate action so that all patients will get the best possible care given the circumstances they are in. With these International Society of Infectious Disease in Obstetrics and Gynecology (ISIDOG) guidelines we aim to provide detailed information on how to diagnose and manage pregnant women living in a pandemic of COVID-19. Pregnant women need to be considered as a high-risk population for COVID-19 infection, and if suspected or proven to be infected with the virus, they require special care in order to improve their survival rate and the well-being of their babies. Both protection of healthcare workers in such specific care situations and maximal protection of mother and child are envisioned. Evidence Based Guideline. Freely available at: https://www.mdpi.com/2075-4418/10/4/243

The objective of this study was to summarize the existing literature on COVID-19 infection during pregnancy and childbirth, particularly concerning clinical presentation and outcomes. It concludes that COVID-19 infection during pregnancy probably has a clinical presentation and severity resembling that in non-pregnant adults. It is probably not associated with poor maternal or perinatal outcomes. Review. Freely available at: https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1002/ijgo.13182

In December 2019, cases of pneumonia of unknown cause first started to appear in Wuhan in China; subsequently, a new coronavirus was soon identified as the cause of the illness, now known as Coronavirus Disease 2019 (COVID-19). Since then, infections have been confirmed worldwide in numerous countries, with the number of cases steadily rising. The aim of the present review is to provide an overview of the new severe acute respiratory syndrome (SARS) coronavirus 2 (SARS-CoV-2) and, in particular, to deduce from it potential risks and complications for pregnant patients. For this purpose, the available literature on cases of infection in pregnancy during the SARS epidemic of 2002/2003, the MERS (Middle East respiratory syndrome) epidemic ongoing since 2012, as well as recent
Publications on cases infected with SARS-CoV-2 in pregnancy are reviewed and reported. Based on the literature available at the moment, it can be assumed that the clinical course of COVID-19 disease may be complicated by pregnancy which could be associated with a higher mortality rate. It may also be assumed at the moment that transmission from mother to child in utero is unlikely. Breastfeeding is possible once infection has been excluded or the disease declared cured. **Review.** Freely available at: [https://www.thieme-connect.de/products/ejournals/pdf/10.1055/a-1134-5951.pdf](https://www.thieme-connect.de/products/ejournals/pdf/10.1055/a-1134-5951.pdf)


The objective of this study was to evaluate the clinical characteristics and outcomes in pregnancy and the vertical transmission potential of SARS-CoV-2 infection. It concludes that SARS-CoV-2 infection during pregnancy is not associated with an increased risk of spontaneous abortion and spontaneous preterm birth. There is no evidence of vertical transmission of SARS-CoV-2 infection when the infection manifests during the third-trimester of pregnancy. **Prognosis. Retrospective Study.** Freely available at: [https://www.ajog.org/article/S0002-9378(20)30462-2/pdf](https://www.ajog.org/article/S0002-9378(20)30462-2/pdf)

Zhao, X. et al. **Analysis of the susceptibility to COVID-19 in pregnancy and recommendations on potential drug screening.** European Journal of Clinical Microbiology and Infectious Diseases, 23rd April 2020. [Epub ahead of print].

Pregnant women are susceptible to COVID-19, and special attention should be paid to the selection of drugs that are both effective for maternal diseases and friendly to the fetus. However, there are still many deficiencies in the study of drug safety during pregnancy, and broad-spectrum, effective and fetal-safe drugs for pregnant women need to be developed so as to cope with more infectious diseases in the future. **Review.** Freely available at: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7178925/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7178925/)

**Paediatric and Neonatal Medicine**

Janssens, G. O. et al. **A rapid review of evidence and recommendations from the SIOPE radiation oncology working group to help mitigate for reduced paediatric radiotherapy capacity during the COVID-19 pandemic or other crises.** Radiotherapy Oncology, 26th April 2020. [Epub ahead of print].

This review provides evidence-based treatment recommendations during unexpected shortage of paediatric radiotherapy facilities. It has wider applications for the optimal utilization of facilities, to improve clinical outcome in low- and middle-income countries, where limited resources continue to be a challenge. **Evidence Based Guideline.** Freely available at: [https://www.thegreenjournal.com/article/S0167-8140(20)30216-4/pdf](https://www.thegreenjournal.com/article/S0167-8140(20)30216-4/pdf)


In the early February, 2020, we called up an experts' committee with more than 30 Chinese experts from 11 national medical academic organizations to formulate the first edition of consensus statement on diagnosis, treatment and prevention of coronavirus disease 2019 (COVID-19) in children, which has been published in this journal. With accumulated experiences in the diagnosis and treatment of COVID-19 in children, we have updated the consensus statement and released the second edition recently. The current version in English is a condensed version of the second edition of consensus statement on diagnosis, treatment and prevention of COVID-19 in children. In the current version, diagnosis and treatment criteria have been optimized, and early identification of severe and critical cases is highlighted. The early warning indicators for severe pediatric cases have been summarized which is utmost important for clinical practice. This version of experts consensus will be valuable for better prevention, diagnosis and treatment of COVID-19 in children worldwide. **Evidence Based Guideline.** Freely available at: [https://link.springer.com/article/10.1007%2Fs12519-020-00362-4](https://link.springer.com/article/10.1007%2Fs12519-020-00362-4)

Schwierzeck, V. et al. **First reported nosocomial outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in a pediatric dialysis unit.** Clinical Infections Diseases, 27th April 2020. [Epub ahead of print].

Person-to-person transmission was at the heart of a hospital outbreak of SARS-CoV-2 between healthcare workers (HCWs) and patients in the pediatric dialysis unit at the UHM. Semi quantitative real-time RT-PCR results suggest that individuals with high viral load pose a risk to spread SARS-CoV-2 in the hospital setting. Our epidemiological observation highlights the need to develop strategies to trace and monitor SARS-CoV-2 infected HCWs in order to prevent COVID-19 outbreaks in the hospital setting. Freely available at: [https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa491/5625509](https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa491/5625509)
Coronavirus disease 2019 (COVID-19) has rapidly spread not only in China but throughout the world. Children with kidney failure (chronic kidney disease (CKD) stage 5) are at significant risk for COVID-19. In turn, a set of recommendations for the prevention and control of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and COVID-19 in pediatric hemodialysis (HD) centers and in home peritoneal dialysis (PD) settings have been proposed. The recommendations are based on the epidemiological features of the SARS-CoV-2 virus and COVID-19 disease, susceptibility factors, and preventive and control strategies. These recommendations will be updated as new information regarding SARS-CoV-2 and COVID-19 becomes available. Evidence Base Guideline. Freely available at: https://link.springer.com/article/10.1007%2Fs00467-020-04555-x

Palliative and End of Life Care

In 2005, the American College of Surgeons called on surgeons to provide palliative care to all patients with serious illness, not just those at the end of life. Nonetheless, misperceptions about palliative care as synonymous with end-of-life care persist. There is an urgent need for surgeons to abandon biases and fully embrace palliative care to optimize care for patients, their families, and colleagues. In the past, surgeons have asked, “Which patients should receive palliative care?” Today we must ask, “Who should not?” Viewpoint. Freely available at: https://jamanetwork.com/journals/jamasurgery/fullarticle/2765182

Patient Information

None identified this week.

Pathology and Autopsy

None identified this week.

Prevention

The COVID-19 pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has put health care workers at risk when exposed to aerosolized viral particles during upper airway mucosal surgery. The objective of this review was to discuss topical preparations that could be utilized preoperatively to help to decrease viral load and potentially reduce the risks of viral transmission. Povidone-iodine (PVP-I) solutions ranging from 0.23% to 7% have been found to demonstrate highly effective virucidal activity against a broad range of viruses including several coronaviruses responsible for recent epidemics including SARS-CoV-1 and MERS-CoV. While specific evidence regarding SARS-CoV-2 is lacking, PVP-I-based preparations have been successfully demonstrated to reduce viral loads of coronaviruses. They are relatively safe to use in the upper airway and may reduce risk of SARS-CoV-2 aerosolization during upper airway mucosal surgery. Review. Abstract only at: https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26200

This review focuses on best practices and recommendations for hygiene and disinfection to limit exposure and transmission of infection in outpatient glaucoma clinics during the current COVID-19 pandemic. Evidence based guideline. Abstract only at: https://journals.lww.com/glaucomajournal/Abstract/9000/Review_of_Hygiene_and_Disinfection_Recommendations.97907.aspx

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Prognosis


The aim of this study was to investigate the clinical characteristics of Corona Virus Disease 2019 in Taizhou, China. Older patients or patients with comorbidities such as obesity or diabetes mellitus were more likely to have severe condition. Treatments of COVID-19 is still experimental and more clinical trials are needed. Retrospective Observational Study. Freely available at: https://link.springer.com/article/10.1007%2Fs15010-020-01432-5


Although the pathophysiology underlying severe COVID-19 remains poorly understood, accumulating data suggest that a lung-centric coagulopathy may play an important role. Elevated D-dimer levels which correlated inversely with overall survival were recently reported in Chinese cohort studies. Critically however, ethnicity has major effects on thrombotic risk, with a 3-4 fold lower risk in Chinese compared to Caucasians and a significantly higher risk in African-Americans. In this study, we investigated COVID-19 coagulopathy in Caucasian patients. Our findings confirm that severe COVID-19 infection is associated with a significant coagulopathy that correlates with disease severity. Importantly however, Caucasian COVID-19 patients on LMWH thrombo-prophylaxis rarely develop overt DIC. In rare COVID-19 cases where DIC does develop, it tends to be restricted to late stage disease. Collectively, these data suggest that the diffuse bilateral pulmonary inflammation observed in COVID-19 is associated with a novel pulmonary-specific vasculopathy which we have termed pulmonary intravascular coagulopathy (PIC) as distinct to DIC. Given that thrombotic risk is significantly impacted by race, coupled with the accumulating evidence that coagulopathy is important in COVID-19 pathogenesis, our findings raise the intriguing possibility that pulmonary vasculopathy may contribute to the unexplained differences that are beginning to emerge highlighting racial susceptibility to COVID-19 mortality. Short report. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/bjh.16749


Factors associated with negative conversion of SARS-CoV-2 RNA in hospitalized patients have not yet been systematically determined. We conducted a retrospective cohort study of COVID-19 patients in Qingdao, China. Both univariate and multivariate analysis were performed to identify independent factors for time to viral RNA negative conversion. Data on patients with re-detectable viral RNA after showing negative on RT-PCR test (intermittent negative status) were also analyzed. A total of 59 patients confirmed with COVID-19 were included in this study, with a median duration of 1 (interquartile range, IQR: 0–2) day from symptom onset to hospital admission. Median communicable period (from first day of positive nucleic acid test to first day of consecutive negative results) was 14 (IQR: 10–18) days, and 7 (IQR: 6–10) days for 10 patients with intermittent negative results. Age older than 45 years (hazard ratio, HR: 0.378; 95\% confidence interval, CI: 0.205–0.698) and chest tightness (HR: 0.290; 95\%CI: 0.091–0.919) were factors independently affecting negative conversion of SARS-CoV-2 RNA. Headache (odds ratio: 7.553; 95\%CI: 1.011–28.253) was significantly associated with intermittent negative status, with a predicted probability of 60\%. Older age and chest tightness were independently associated with delayed clearance of SARS-CoV-2 RNA in hospitalized patients. These predictors would provide a new perspective on early identification of patients with prolonged viral shedding and facilitate optimal isolation protocols and treatment strategies. Retrospective Cohort Study. Freely available at: https://www.sciencedirect.com/science/article/pii/S0048969720323299?via%3Dihub


In this prospective study, a cohort of 137 patients with confirmed SARS-CoV-2 infection were enrolled. Clinical information and laboratory data were retrieved from electronic medical records. Viral positivity duration was calculated by an interval from the day SARS-CoV-2 positive confirmed to the day SARS-CoV-2 returned to negative in these 137 COVID-19 patients. Early risk factors for the duration of SARS-CoV-2 viral positivity were evaluated. Our findings firstly provided early laboratory parameters such as count of CD8+ T cells, as risk factors for the duration of SARS-CoV-2 viral positivity, which have significance in control and prevention of the disease. Cohort Study. Freely available at: https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa490/5825508

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Meng, Y. et al. **Sex-specific clinical characteristics and prognosis of coronavirus disease-19 infection in Wuhan, China: a retrospective study of 168 severe patients.** PLoS Pathogens, 16 (4) 2020, pp. e1008520. [Epub ahead of print].

Overall, our results highlight sex-specific differences in clinical characteristics and prognosis to COVID-19, which are consistent with the sex-bias observed in other COVID-19 related studies. We also provided more evidence and explored the underlying mechanism with epidemiological analysis. Six candidate laboratory indicators with significant sex differences were considered as potential mediators affecting the prognosis of COVID-19. The age-specific risk distributions of COVID-19 showed a positive correlation between the prognosis and age/ comorbidities, which was significantly affected by sex. We also emphasize that sex is a biological variable that should be considered in the prevention and therapy of COVID-19. It is our hope that these methods may serve as a guide to the clinician in providing timely and specific therapy. Obviously, future studies are warranted to elucidate the different pathways and cellular responses between women and men. The key challenge is how best to use this disparity for providing adequate protection in both males and females. **Retrospective Study.** Freely available at: https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1008520

Yao, Q. et al. **Retrospective study of risk factors for severe SARS-CoV-2 infections in hospitalized adult patients.** Polish Archives of Internal Medicine, 24th April 2020. [Epub ahead of print].

To identify the clinical characteristics and risk factors associated with the severe incidence of SARS-CoV-2 infection. Lymphocytopenia and the higher SOFA score on admission could help clinicians to identify patients with high risk for developing severe COVID-19. More related studies are needed in the future. **Retrospective study.** Freely available at: https://www.mp.pl/paim/en/node/15312/pdf

### Primary Care Practice

None identified this week.

### Racial and Ethnic Disparities

Essien, UR and Venkataramani, A. **Data and policy solutions to address racial and ethnic disparities in the COVID-19 pandemic.** JAMA Health Forum, 28th April 2020. [Online].

The burden of COVID-19 morbidity and mortality has disproportionately fallen on minority populations. Early in the pandemic, lower rates of COVID-19 testing were reported among minority communities. Now, emerging data illustrate that black and Hispanic Americans are dying at far higher rates from the novel coronavirus than any other groups in the nation. These disparities are just the most recent manifestation of centuries’ worth of racial and ethnic gaps in health outcomes. **News.** Freely available at: https://jamanetwork.com/channels/health-forum/fullarticle/2765498

### Research and Trials

None identified this week.

### Residential and Specialist Care

None identified this week.
Signs and Symptoms


The novel coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infects the human respiratory epithelial cells. The clinical features of patients infected with SARS-CoV-2 included lower respiratory tract infection with fever, dry cough, and dyspnea. In contrast, upper respiratory tract symptoms are less common, suggesting that the cells targeted by the virus could be located in the lower respiratory tract. Herein we present a case where the main symptom expressed by the patient infected by SARS-CoV-2 was the sudden and complete loss of the olfactory function without nasal obstruction. *Case Report*. Freely available at: https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2764417


Older adults with COVID-19, the illness caused by the coronavirus, have several "atypical" symptoms, complicating efforts to ensure they get timely and appropriate treatment, according to physicians. COVID-19 is typically signaled by three symptoms: a fever, an insistent cough and shortness of breath. But older adults — the age group most at risk of severe complications or death from this condition — may have none of these characteristics. Instead, seniors may seem "off" — not acting like themselves — early on after being infected by the coronavirus. They may sleep more than usual or stop eating. They may seem unusually apathetic or confused, losing orientation to their surroundings. They may become dizzy and fall. Sometimes, seniors stop speaking or simply collapse. *News*. Freely available at: https://www.medscape.com/viewarticle/929407?nlid=135285_5404&src=wnl_dne_200428_mscpedit&uac=149854DK&implID=2362424&fa1=1

Statistics and Mortality

See also CEBM


The data of COVID-19 disease in China and then in South Korea were collected daily from several different official websites. The collected data included 33 death cases in Wuhan city of Hubei province during early outbreak as well as confirmed cases and death toll in some specific regions, which were chosen as representatives from the perspective of the coronavirus outbreak in China. Data were copied and pasted onto Excel spreadsheets to perform data analysis. A new methodology, Patient Information Based Algorithm (PIBA) [1], has been adapted to process the data and used to estimate the death rate of COVID-19 in real-time. Assumption is that the number of days from inpatients to death fall into a pattern of normal distribution and the scores in normal distribution can be obtained by observing 33 death cases and analysing the data [2]. We selected 5 scores in normal distribution of these durations as lagging days, which will be used in the following estimation of death rate. We calculated each death rate on accumulative confirmed cases with each lagging day from the current data and then weighted every death rate with its corresponding possibility to obtain the total death rate on each day. While the trendline of these death rate curves meet the curve of current ratio between accumulative death cases and confirmed cases at some points in the near future, we considered that these intersections are within the range of real death rates. Six tables were presented to illustrate the PIBA method using data from China and South Korea. One figure on estimated rate of infection and patients in serious condition and retrospective estimation of initially occurring time of CORID-19 based on PIBA. *Data Article*. Freely available at: https://www.sciencedirect.com/science/article/pii/S2352340920305138?via%3Dihub

Treatments for COVID


Since the infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was reported in China during December 2019, the coronavirus disease 2019 (COVID-19) has spread on a global scale, causing the
World Health Organization (WHO) to issue a warning. While novel vaccines and drugs that target SARS-CoV-2 are under development, this review provides information on therapeutics which are under clinical trials or are proposed to antagonize SARS-CoV-2. Based on the information gained from the responses to other RNA coronaviruses, including the strains that cause severe acute respiratory syndrome (SARS)-coronaviruses and Middle East respiratory syndrome (MERS), drug repurposing might be a viable strategy. Since several antiviral therapies can inhibit viral replication cycles or relieve symptoms, mechanisms unique to RNA viruses will be important for the clinical development of antivirals against SARS-CoV-2. Given that several currently marketed drugs may be efficient therapeutic agents for severe COVID-19 cases, they may be beneficial for future viral pandemics and other infections caused by RNA viruses when standard treatments are unavailable. Review. Freely available at: https://www.mdpi.com/1422-0067/21/8/2839/htm

Bhimraj, A. et al. Infectious Diseases Society of America guidelines on the treatment and management of patients with COVID-19. Clinical Infectious Diseases, 27th April 2020. [Epub ahead of print]. The panel expressed the overarching goal that patients be recruited into ongoing trials, which would provide much needed evidence on the efficacy and safety of various therapies for COVID-19, given that we could not make a determination whether the benefits outweigh harms for most treatments. Guidelines. Freely available at: https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa478/5825667

Boggs, W. Positive SARS-CoV-2 test can follow negative testing. Medscape, 16th April 2020. [Online]. Patients who recover from COVID-19 can still test positive for SARS-CoV-2 after two negative tests, researchers in China Report. They state that "According to our study, it is probable that two negative RT-PCR tests 24 hours apart may not be sufficient for viral clearance evaluation," the authors conclude. "Repeated viral RT-PCR testing separated by prolonged duration like 48 hours is essential to assure that virus has actually cleared and the discharged patients no longer transmitted the virus." News. Freely available at: https://www.medscape.com/viewarticle/928749?nlid=135063_5404&src=wnl_dne_200417_mscedit&uac=149854DK&implID=2349767&af=1

Borba, M.G.S. et al. Effect of high vs low doses of chloroquine diphosphate as adjunctive therapy for patients hospitalized with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection: a randomized clinical trial. JAMA Network Open, 24th April 2020. The preliminary findings of this study suggest that the higher CQ dosage should not be recommended for critically ill patients with COVID-19 because of its potential safety hazards, especially when taken concurrently with azithromycin and oseltamivir. These findings cannot be extrapolated to patients with nonsevere COVID-19. Randomised Clinical Trial. Freely available at: https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2765270


Johnson, K. M. et al. Managing COVID-19 in renal transplant recipients: a review of recent literature and case supporting corticosteroid-sparing immunosuppression. Pharmacotherapy, 27th April 2020. [Online]. Novel coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome virus (SARS-CoV-2) has become a global healthcare crisis. The Centers for Disease Control and Prevention (CDC) lists immunocompromised patients, including those requiring immunosuppression following renal transplantation, as high-risk for severe disease from SARS-CoV-2. Treatment for other viral infections in renal transplant recipients often includes a reduction in immunosuppression, however, there are no current guidelines recommending the optimal approach to managing immunosuppression in the patients who are infected with SARS-CoV-2. It is currently recommended to avoid corticosteroids in the treatment of SARS-CoV-2 outside of critically ill patients. Recently published cases describing the inpatient care of COVID-19 in renal transplant recipients differ widely in disease severity, time from transplantation, baseline immunosuppressive therapy, and the modifications made to immunosuppression during COVID-19 treatment. The purpose of this review is to summarize and compare inpatient immunosuppressant management strategies of recently published reports in the renal transplant population infected with SARS-CoV-2 and
to discuss the limitations of corticosteroids in managing immunosuppression in this patient population. Review. Freely available at: https://accpjournals.onlinelibrary.wiley.com/doi/abs/10.1002/phar.2410

Kim, S. B. et al. Interim guidelines on antiviral therapy for COVID-19. Infection and Chemotherapy, 23rd April 2020. As COVID-19 has such varied clinical manifestations and case fatality rates, no standard antiviral therapy regimen has been established other than supportive therapy. In the present guideline, we aim to introduce potentially helpful antiviral and other drug therapies based on in vivo and in vitro research and clinical experiences from many countries. Evidence Based Guideline. Freely available at: https://www.icjournals.org/DOIx.php?id=10.3947/ic.2020.52.e18

Mehta, N. et al. Pharmacotherapy in COVID-19: a narrative review for emergency providers. American Journal of Emergency Medicine 15th April 2020. [Epub ahead of print]. This narrative review was conducted to summarize the effectiveness of current therapy options for COVID-19 and address the controversial use of non-steroidal anti-inflammatory drugs (NSAIDs), angiotensin converting enzyme (ACE) inhibitors, and angiotensin receptor blockers (ARBs). PubMed and SCOPUS were queried using a combination of the keywords "COVID 19," "SARS-CoV-2," and "treatment." All types of studies were evaluated including systematic reviews, case-studies, and clinical guidelines. There are several ongoing clinical trials that are testing the efficacy of single and combination treatments with the drugs mentioned in this review and new agents are under development. Until the results of these trials become available, we must use the best available evidence for the prevention and treatment of COVID-19. Additionally, we can learn from the experiences of healthcare providers around the world to combat this pandemic. Review. Freely available at: https://www.ajemjournal.com/article/S0735-6757(20)30263-1/pdf francis

Nikhat, S. and Fazil, M. Overview of Covid-19; Its prevention and management in light of Unani medicine. Science of the Total Environment, 278 (August) [Epub ahead of print]. It is a likely possibility that epidemics will continue to occur, and with the emergence of new organisms, may be more aggressive than ever. Hence, the need arises to develop new effective methods of infection control that are accessible to the maximum population. Most of the Unani herbal drugs described in this manuscript are cheap, easy to administer and available in most parts of the world. Our review suggests that proactive researches on Unani medicines can generate credible evidence regarding their role in health promotion and disease prevention. Review. Freely available at: https://www.sciencedirect.com/science/article/pii/S0048969720323767?via%3Dihub

Scavone, C. et al. Current pharmacological treatments for COVID-19: what next? British Journal of Pharmacology, 24th April 2020. [Epub ahead of print]. In this paper we aim to describe the main pharmacological properties, including data on mechanism of action, safety concerns and drug-drug interactions, of drugs currently administered in patients with COVID-19, focusing on antivirals and drugs with immune-modulatory and/or anti-inflammatory properties. Where available, data from clinical trials involving patients with COVID-19 were reported. Several studies have been registered worldwide and a number of drugs were repurposed to face the new health emergency of COVID-19. For many of these drugs, including lopinavir/ritonavir, remdesivir, favipiravir and tocilizumab, preliminary clinical trials seem to support their benefit in improving patients' clinical conditions. However, adequate clinical trials are necessary to reach any firm conclusion on the efficacy and safety profiles of these compounds. Even though drug repurposing is necessary, it requires caution. Too many drugs that are currently tested in patients with COVID-19 have peculiar safety profiles. In conclusion, while waiting for the development of effective preventive measures, such as vaccines, many clinical trials on drugs belonging to different therapeutic classes are currently underway. It is conceivable that very soon their results will help us in defining the best way to treat COVID-19 and reducing its symptoms and complications. Review. Freely available at: https://bpspubs.onlinelibrary.wiley.com/doi/epdf/10.1111/bph.15072

Vaccines and Immunity

None identified this week.
Resources and Databases


The following sources have been searched for evidence published in the previous week.

- American Journal of Medicine
- BMJ
- BMJ Best Practice
- CEBM Oxford
- Cochrane Library
- Google Scholar
- HDAS Databases (Medline, Cinahl etc)
- JAMA
- KnowledgeShare
- LIS-Medical
- Medscape
- New England Journal of Medicine
- NICE Evidence
- NHS Networks
- PubMed
- SCIE
- The Lancet
- Trip Database
- Twitter
- Up-To-Date

Please contact the editors for further information, or if you would like to receive a personal copy of the bulletin via your e-mail.

We hope you find this newsletter useful. Suggestions or comments? E-mail The Editor

If you require a search for information or knowledge with respect to a particular group of patients (e.g. pregnant or elderly, with asthma or psychological illness) please do let us know and we will endeavour to search for you.

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