Library Service and Knowledge Hub

Issue 7 COVID-19 Evidence Update

Week Ending 8th 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

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

Department for Digital, Culture, Media and Sport. Government launches plan to tackle loneliness during the coronavirus lockdown. DDCMS, 22nd April 2020. [Online].


Department of Health. Major home testing programme for coronavirus will track levels of infection in the community. DHSS, 29th April 2020. [Online].

A major new programme of home testing for coronavirus will track the progress of the infection across England. The programme, commissioned by the Department of Health and Social Care, is being led by a world-class team of scientists, clinicians and researchers at Imperial College London, alongside colleagues at Imperial College Healthcare NHS Trust and Ipsos MORI. It will help improve understanding of how many people are currently infected with the virus, and potentially how many have been infected and recovered since the outbreak began. Accurate testing for the virus on a wide scale will provide authorities with a clearer picture of the current spread of the disease and the number of people who have previously caught it. It will help identify individuals who may have some immunity to the virus, and to plan services for those who do not. Press release. Freely available at: https://www.gov.uk/government/news/major-home-testing-programme-for-coronavirus-will-track-levels-of-infection-in-the-community


New guidance will allow clinics to reopen if they can prove measures to protect staff and patients are in place. Press Release. Freely available at: https://www.gov.uk/government/news/health-secretary-welcomes-reopening-of-fertility-services

NHS England. NHS urges public to get essential vaccines despite coronavirus outbreak. NHS England. 2nd May 2020. [Online]. NHS England is urging people to attend all regular vaccination appointments to prevent outbreaks of serious diseases and reduce pressure on the health service. The NHS is continuing to help people to manage illness linked to coronavirus, but is still urging parents to bring children forward for lifesaving jabs to stop killer diseases like measles and mumps. With many people expressing concern and even fear about seeking help during the virus emergency, the NHS is running a nationwide campaign to encourage people to come forward for help when they need it. Essential, routine vaccinations like the MMR jab can save a child’s life and are available through family doctors, including in some parts of the country through new children's immunisation drive-through clinics. As long as those attending appointments, including parents of babies or children, do not have symptoms or are not self-isolating because someone in the household is displaying symptoms, all scheduled vaccinations should go ahead as normal. News. Freely available at: https://www.england.nhs.uk/2020/05/nhs-urges-public-to-get-essential-vaccines-despite-coronavirus-outbreak/


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In the daily Cabinet Office coronavirus briefings, The UK Government now publishes NHS England datasets on health security is the ability of a nation to secure sufficient, affordable and consistent healthcare supplies for its health crisis. Supplies could be those drugs, devices and non-pharmaceutical products required to meet healthcare needs irrespective of the supply chain and the current rate of infection. The OBNR can be estimated using a technique called the Chain Ladder. This is used by actuaries to estimate incurred but not reported claims by using patterns of past claims. The principle behind the Chain Ladder method is to use the way in which the counts have accumulated in the past to predict how they will be reported in the future and to fill in the missing (future) values. Statistics and Mortality. Freely available at: https://www.cebm.net/covid-19/the-chain-ladder-method-to-estimate-deaths-not-yet-reported/

Patients with severe COVID-19 can develop cytokine release syndrome ("cytokine storm") and are reported to have high circulating IL-6 concentrations. Tocilizumab is a recombinant humanized anti-human IgG1 monoclonal antibody directed against the interleukin-6 receptor (IL-6R). It has therefore been proposed to be of value in the management of severe COVID-19. Rapid Review. Treatment. Freely available at: https://www.cebm.net/covid-19/tocilizumab/


The authors take a close examination of the architecture of hospital (valetudinarianum) in the Roman Legionary fortress at Inchtuthi near Perth in Scotland in how we could develop our hospital facilities in the future. Rapid Review. History. Freely available at: https://www.cebm.net/covid-19/covid-19-hospitals-back-to-the-future/


We found no clinical evidence that vitamin D supplements are beneficial in preventing or treating COVID-19. We would need evidence from well-masked randomized trials to determine if there are effects, before recommending vitamin D3 supplements for treating or preventing COVID-19 infection. There is some evidence that vitamin D may have a role in preventing other respiratory infections, particularly for people with low or very low vitamin D status. Whilst this evidence comes from systematic reviews of randomised trials, it has many limitations, including heterogeneous definitions of respiratory infections, study populations, interventions and definitions of vitamin D deficiency. People at risk of vitamin D deficiency should in any case take supplements in line with current guidance. Currently the whole UK population is advised to take supplements. Similarly, clinicians should continue to treat people with vitamin D deficiency – but not because of any possible association with respiratory infection. Policymakers should attend to the recommendations of the SACN, including developing food-based strategies for the general population to achieve adequate vitamin D intake. Rapid Review. Treatment. Prevention. Freely available at: https://www.cebm.net/covid-19/vitamin-d-a-rapid-review-of-the-evidence-for-treatment-or-prevention-in-covid-19/


General practice has been asked to reorganise care to reduce the rate of spread, optimise use of critical care beds and ensure high quality care for those choosing not to be admitted. Ongoing work with primary care colleagues from across the South West to develop pathways for the management of Covid-19 suggested a number of uncertainties around this reorganisation, particularly around how triage is managed and considerations around specific groups, such as the more frail. Rapid Review. Primary Care Practice. Freely available at: https://www.cebm.net/covid-19/what-questions-are-priority-areas-for-primary-care-during-the-covid-19-pandemic-a-rapid-question-generation-and-prioritisation-exercise/


Evidence indicates markedly higher mortality risk from COVID-19 among Black, Asian and Minority Ethnic (BAME) groups, but deaths are not consistent across BAME groups. Similarly, adverse outcomes are seen for BAME patients in intensive care units and amongst medical staff and Health and Care Workers. The exact reasons for this increased risk and vulnerability from COVID-19 in BAME populations are not known. There may be a number of contributing factors in the general population such as overrepresentation of BAME populations in lower socio-economic groups, multi-family and multi-generational households, co-morbidity exposure risks, and disproportionate employment in lower band key worker roles. For Health and Care workers, there are increased health and care setting exposure risks. Rapid Data and Evidence Review. Freely available at: https://www.cebm.net/covid-19/bame-covid-19-deaths-what-do-we-know-rapid-data-evidence-review/


There is no evidence that any smartphone technology is accurate for the measurement of blood oxygen saturation. Furthermore, the scientific basis of such technologies is questionable. Oxygen saturation levels obtained from such technologies should not be trusted. Rapid Review. Symptom Assessment. Freely available at: https://www.cebm.net/covid-19/question-should-smartphone-apps-be-used-as-oximeters-answer-no/


‘Lifelight First’ is a smartphone app that attempts to measure pulse, respiratory rate and blood pressure without making physical contact with the patient. In relation to the measurement of blood pressure, the app has not yet been validated to the standards needed and hard evidence of its accuracy and safety is currently lacking. We believe that a Medtech Innovation Briefing (MIB213) by the National Institute for Health and Clinical Excellence (NICE) is premature and suggest that it should be withdrawn pending further studies. Rapid Review. Symptom Assessment. Freely available at: https://www.cebm.net/covid-19/question-is-the-lifelight-app-adequately-validated-for-blood-pressure-measurement-answer-no/

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Cochrane Reviews


The Cochrane Reviews are concerned with medical grade PPE, used by healthcare workers. Different types of PPE are used but may include coveralls, gowns, hoods, masks, goggles and face shields, to prevent the wearer’s skin and mucous membranes from becoming contaminated, and respirators to prevent them inhaling infected particles. The purpose of this PPE is to protect the wearers from infection. Blog. Freely available at: https://www.evidentlycochrane.net/personal-protective-equipment/?mc_cid=9eaea5e47a&mc_eid=4a5bb0dfeb

NICE

NICE. COVID-19 rapid guideline: acute kidney injury in hospital. NG175. NICE, 6th May 2020. [Online]. The purpose of this guideline is to help healthcare professionals prevent, detect and manage acute kidney injury in adults in hospital with known or suspected COVID-19. This is important to improve outcomes and reduce the need for renal replacement therapy. Rapid Review. Freely available at: https://www.nice.org.uk/guidance/NG175

NICE. COVID-19 rapid guideline: antibiotics for pneumonia in adults in hospital. NG173. NICE, 1st May 2020. [Online]. The purpose of this guideline is to ensure the best antibiotic management of suspected or confirmed bacterial pneumonia in adults in hospital during the COVID-19 pandemic. This includes people presenting to hospital with moderate to severe community-acquired pneumonia and people who develop pneumonia while in hospital. It will enable services to make the best use of NHS resources. Rapid Review. Treatment. Freely available at: https://www.nice.org.uk/guidance/ng173

NICE. COVID 19 rapid guideline: children and young people who are immunocompromised. NG174. NICE, 1st May 2020. [Online]. The purpose of this guideline is to maximise the safety of children and young people who are immunocompromised during the COVID-19 pandemic. It also aims to protect staff from infection and enable services to make the best use of NHS resources. Rapid Review. Freely available at: https://www.nice.org.uk/guidance/ng174

Uncover (University of Edinburgh)

Dozier, M. et al. What is the evidence on ethnic variation on COVID-19 incidence and outcomes? Uncover, 29th April 2020. Uncover 013-01. [Online]. The effects of COVID-19 on the health of racial and ethnic minority groups is still emerging; however, current data from around the world indicate that racial and ethnic minority groups may be disproportionately affected. This rapid review assesses the latest available data on incidence, severity and mortality from the UK and around the world and seeks to answer the following questions: Sub-question 1: What is the evidence for differences in COVID-19 incidence and outcomes (hospitalisation, ICU admission, death)? Is the emerging evidence from the UK in line with that from other countries? Sub-question 2: Health differences between racial and ethnic groups are multifactorial, with deep structural inequalities driving disadvantage in economic and social conditions. Are differences in living and working conditions among ethnic groups associated with differences in COVID-19 incidence and outcomes? Sub-question 3: Are differential rates of relevant comorbid conditions associated with differences in COVID-19 outcomes? Rapid Review. Ethnicity. Freely available at: https://www.ed.ac.uk/files/atoms/files/uncover_013-01_summary_-_ethnicity_and_covid-19_0.pdf

Li, Y. et al. How have population-level non-pharmaceutical interventions [NPIs] to reduce SARS CoV-2 transmission been related in time to the reproduction number (R) and have countries used measures of R in making decisions about the application of these interventions? Uncover. 1st May 2020. Uncover 006-01. [Online]. A number of NPIs to reduce SARS CoV-2 transmission were introduced in countries affected by COVID-19, such as school closure, public events ban, social distancing and lockdown. The basic reproduction number or R0, is used to

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measures the average number of people who would catch a disease from a single infected person. R0 can change over time with interventions being introduced to reduce transmission by changing patterns of social mixing in the population. The time-varying “R0”, which is often referred to as “R” or “Rt”, is defined by the expected number of secondary cases arising from a primary case infected at time \( t \). R is an important parameter for assessing whether current interventions appear to be effective, or whether additional interventions are required. If R remains below one, then the epidemics will die out eventually; if R is above one, sustained epidemics are expected. Therefore, it is important to review the change of R over time in relation to these NPI decisions. **Rapid Review, Transmission.** Freely available at: [https://www.ed.ac.uk/files/atoms/files/uncover_006-01_summary_r0_and_lockdown_0.pdf](https://www.ed.ac.uk/files/atoms/files/uncover_006-01_summary_r0_and_lockdown_0.pdf)

**UpToDate**

None this week.

**World Health Organisation**

None this week.

**Original Research**

**About Covid-19**


 perceived risk of acquiring disease has led many governments to institute a variety of control measures. We conducted a literature review of publicly available information to summarize knowledge about the pathogen and the current epidemic. In this literature review, the causative agent, pathogenesis and immune responses, epidemiology, diagnosis, treatment and management of the disease, control and preventions strategies are all reviewed. **Review.** Freely available at: [https://www.sciencedirect.com/science/article/pii/S1876034120304329?via%3Dihub](https://www.sciencedirect.com/science/article/pii/S1876034120304329?via%3Dihub)


The causative agent of the outbreak was identified by the WHO as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), producing the disease named coronavirus disease-2019 (COVID-19). The virus is closely related (96.3%) to bat coronavirus RaTG13, based on phylogenetic analysis. Human-to-human transmission has been confirmed even from asymptomatic carriers. The virus has spread to at least 200 countries, and more than 1,700,000 confirmed cases and 111,600 deaths have been recorded, with massive global increases in the number of cases daily. Therefore, the WHO has declared COVID-19 a pandemic. The disease is characterized by fever, dry cough, and chest pain with pneumonia in severe cases. In the beginning, the world public health authorities tried to eradicate the disease in China through quarantine but are now transitioning to prevention strategies worldwide to delay its spread. To date, there are no available vaccines or specific therapeutic drugs to treat the virus. There are many knowledge gaps about the newly emerged SARS-CoV-2, leading to misinformation. Therefore, in this review, we provide recent information about the COVID-19 pandemic. This review also provides insights for the control of pathogenic infections in humans such as SARS-CoV-2 infection and future spillovers. **Review.** Freely available at: [https://www.mdpi.com/2077-0383/9/4/1225/htm](https://www.mdpi.com/2077-0383/9/4/1225/htm)


SARS-CoV-2 (COVID-19) is a new virus causing respiratory illness outbreak. Nowadays, COVID-19 has spread to several countries around the world and is presently a major global concern. It appears that no certain effective pharmaceutical agent is currently available for it. It seems that obesity is one of the biggest risk factors related to COVID-19 hospitalization and critical illness. The strengthening of the body systems by non-drug ways is very

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important especially in obese people. On the basis of some indirect evidence, it seems that moderate physical activity can be recommended as a non-pharmacological, inexpensive, and viable way to cope with corona. On the other hand, recommending higher intensity exercise needs further consideration to make final decision in this regard. \textit{Review.} Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7184978/

\textbf{Business as Usual Post Covid}

Adelaja, I. e al. \textit{COVID-19: a comprehensive hospital agile preparedness (CHAPs) tool for pandemic preparedness, based on the COVID-19 experience.} Future Healthcare Journal, 7 (2) 2020, pp. 1-4. The tool presented in this paper allows for a comprehensive multidisciplinary approach to preparedness planning for COVID-19. However, it is not possible to produce a tool to acknowledge the uniqueness of certain hospitals and hospital settings. It is therefore vital to ensure clear accountability within the organisation for pandemic preparedness, stress-test these preparations and identify triggers and rate-limiting factors that may lead to rapid resource depletion and hospital decompensation. Organisations should also consider their recovery strategies following the resolution of the COVID-19 pandemic as this is likely to pose a significant challenge. \textit{Management Tool.} Freely available at: https://www.rcpjournals.org/content/futurehosp/early/2020/04/28/fhj.2020-0030?papetoc=

Institute for Government. \textit{Lifting lockdown: how to approach a coronavirus exit strategy.} IfG, April 2020. [Online]. The prime minister and his cabinet face difficult decisions – as hard as any cabinet has had to face. In charting an exit from the coronavirus lockdown, they will need to balance competing demands and make unpalatable trade-offs based on imperfect information. In this paper we set out our view of how they should best do this. \textit{Report.} Freely available at: https://www.instituteforgovernment.org.uk/sites/default/files/publications/lifting-lockdown-how-approach-coronavirus-exit-strategy_1.pdf


\textbf{Cancer and Haematology Services}

Aujayeb, A. \textit{Consolidating malignant pleural and peritoneal services during the COVID-19 response.} Future Healthcare Journal, 7 (2) 2020. [Online]. Delivery of routine and established medical care has been significantly disrupted by the COVID-19 pandemic. Acutely unwell patients are being prioritised, and large numbers of doctors and inpatient beds are required to deliver this care. We have recognised the impact that this disruption will have on patients with presumed and/or confirmed pleural and/or peritoneal malignancies. We present our service transformation and hope that the learning from this reconfiguration can be adopted by other organisations. \textit{Rapid Review. Service Transformation.} Freely available at: https://www.rcpjournals.org/content/futurehosp/early/2020/05/04/fhj.2020-0016?papetoc=


Health Tech Newspaper. \textit{University hospitals Birmingham starts AI melanoma pilot.} HTN, 6th May 2020. [Online]. University Hospitals Birmingham NHS Foundation Trust has launched a pilot to test a new AI triage skin cancer community service. The pilot aims to reduce delays in skin cancer detection and treatment during the coronavirus pandemic, by providing a screening programme using the AI tool. Working with AI company Skin Analytics, referred patients will be provided with skin cancer triage outside of the hospital setting, using AI technology to capture high

There was consensus that during the COVID-19 pandemic it is appropriate to defer enrollment in lung cancer screening and modify the evaluation of lung nodules due to the added risks from potential exposure and the need for resource reallocation. There are multiple local, regional, and patient related factors that should be considered when applying these statements to individual patient care. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7177089/

Cancer patients are presumed to be at increased risk from COVID-19 infection fatality due to underlying malignancy, treatment-related immunosuppression, or increased comorbidities. A total of 218 COVID-19 positive patients from March 18th-April 8th, 2020 with a malignant diagnosis were identified. A total of 61 (28%) cancer patients died from COVID-19 with a case fatality rate (CFR) of 37% (20/54) for hematologic malignancies and 25% (41/164) for solid malignancies. 6/11 (55%) lung cancer patients died from COVID-19 disease. Increased mortality was significantly associated with older age, multiple comorbidities, need for ICU support, and elevated levels of D-Dimers, LDH and lactate on multivariable analysis. Age-adjusted CFRs in cancer patients compared to non-cancer patients at our institution and NYC reported a significant increase in case fatality for cancer patients. These data suggest the need for proactive strategies to reduce likelihood of infection and improve early identification in this vulnerable patient population. Population Case Study. Freely available at: https://cancerdiscovery.aacrjournals.org/content/early/2020/04/29/2159-8290.CD-20-0516.long

The novel coronavirus, also known as SARS-CoV-2 or COVID-19 has become a worldwide threat and the major healthcare concern of the year 2020. Cancer research was directly affected by the emerging of this disease. According to some Chinese studies, cancer patients are more vulnerable to COVID-19 complications. This observation led many oncologists to change their daily practice in cancer care, without solid evidence and recommendations. Moreover, the COVID-19 manifestations as well as its diagnosis are particular in this special population. In this review paper we expose the challenges of cancer management in the era of SARS-CoV-2, the epidemiological, clinical, pathological and radiological characteristics of the disease in cancer patients and its outcomes on this population. Finally, we focus on strategies that are followed in cancer management with review of national and international guidelines. Systematic Review. Freely available at: https://www.sciencedirect.com/science/article/pii/S1040842820301104?via%3Dihub

Cardiology and Cardiothoracic Services

We provide a comprehensive review of the clinical course of COVID-19, its comorbidities, and mechanistic considerations for future therapies. While COVID-19 primarily affects the lungs, causing interstitial pneumonitis and severe acute respiratory distress syndrome (ARDS), it also affects multiple organs, particularly the cardiovascular system. Risk of severe infection and mortality increase with advancing age and male sex. Mortality is increased by comorbidities: cardiovascular disease, hypertension, diabetes, chronic pulmonary disease, and cancer. The most common complications include arrhythmia (atrial fibrillation, ventricular tachyarrhythmia, and ventricular fibrillation), cardiac injury [elevated highly sensitive troponin I (hs-cTnI) and creatine kinase (CK) levels], fulminant myocarditis, heart failure, pulmonary embolism, and disseminated intravascular coagulation (DIC). Review. Freely available at: https://academic.oup.com/cardiovascres/advance-article/doi/10.1093/cvr/cvaa106/5826160

In this large, population-based study, the use of ACE inhibitors and ARBs was more frequent among patients with
Covid-19 than among controls because of their higher prevalence of cardiovascular disease. However, there was no evidence that ACE inhibitors or ARBs affected the risk of COVID-19. **Cohort Study.** [Freely available at: https://www.nejm.org/doi/10.1056/NEJMoa2006923]


Coronavirus disease 2019 (Covid-19) may disproportionately affect people with cardiovascular disease. Concern has been aroused regarding a potential harmful effect of angiotensin-converting-enzyme (ACE) inhibitors and angiotensin-receptor blockers (ARBs) in this clinical context. Our study confirmed previous observations suggesting that underlying cardiovascular disease is associated with an increased risk of in-hospital death among patients hospitalized with Covid-19. Our results did not confirm previous concerns regarding a potential harmful association of ACE inhibitors or ARBs with in-hospital death in this clinical context. **Observational Study.** [Freely available at: https://www.nejm.org/doi/10.1056/NEJMoa2007621]


The severe acute respiratory syndrome-CoV-2 is an emerging viral pathogen responsible for the global coronavirus disease 2019 pandemic resulting in significant human morbidity and mortality. Based on preliminary clinical reports, hypoxic respiratory failure complicated by acute respiratory distress syndrome is the leading cause of death. Further, septic shock, late-onset cardiac dysfunction, and multiorgan system failure are also described as contributors to overall mortality. Although extracorporeal membrane oxygenation and other modalities of mechanical cardiopulmonary support are increasingly being utilized in the treatment of respiratory and circulatory failure refractory to conventional management, their role and efficacy as support modalities in the present pandemic are unclear. We review the rapidly changing epidemiology, pathophysiology, emerging therapy, and clinical outcomes of coronavirus disease 2019; and based on these data and previous experience with artificial cardiopulmonary support strategies, particularly in the setting of infectious diseases, provide consensus recommendations from American Society for Artificial Internal Organs. Of note, this is a living document, which will be updated periodically, as additional information and understanding emerges. **Evidence Based Guideline.** Abstract Only. Contact the Library for full text.

Wei, J-F. et al. *Acute myocardial injury is common in patients with covid-19 and impairs their prognosis.* Heart, 30th April 2020. [Epub ahead of print].

We prospectively assessed the medical records, laboratory results, chest CT images and use of medication in a cohort of patients presenting to two designated covid-19 treatment centres in Sichuan, China. Outcomes of interest included death, admission to an intensive care unit (ICU), need for mechanical ventilation, treatment with vasoactive agents and classification of disease severity. Acute myocardial injury was defined by a value of high-sensitivity troponin T (hs-TnT) greater than the normal upper limit. **Cohort Study.** Abstract Only. Contact the Library for full text.

**Co-Morbidities**


Many countries, including SA, have imposed major restrictions on travel, and everyday life, and the implications of these necessary changes are being felt in liver transplant (LT) centers in SA. Concerns remain that there is an increased risk for individuals over 65 years of age, with underlying medical conditions, or for those who are immunocompromised. Therefore, the Saudi Association for the Study of Liver Diseases and Transplantation (SASLT) established an urgent task force to launch a statement that can be utilized by LT centers as a guidance in the management of patients with advanced liver disease from the time of LT listing to the post-operative care of transplanted patients. **Evidence Based Guideline.** Abstract only. Please contact the library for full text.


Active IBD, old age and comorbidities were associated with a negative COVID-19 outcome, whereas IBD treatments were not. Preventing acute IBD flares may avoid fatal COVID-19 in patients with IBD. Further research is needed **Observational Cohort Study.** Abstract only. Please contact the library for full text.

We provide a description of the cutaneous manifestations associated with COVID-19 infection. These may help clinicians approach patients with the disease and recognize paucisymptomatic cases. Survey. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/bjd.19163

Damiani, G. et al. Biologics increase the risk of SARS-CoV-2 infection and hospitalization, but not ICU admission and death: real-life data from a large cohort during red-zone declaration. Dermatologic Therapy, 1st May 2020. [Epub ahead of print].

During COVID-19 outbreak there are discordant opinion towards the impact on biologics in psoriatic patients. Thus we performed a single center case-control study in Lombardia, the Italian region with the higher number of COVID-19 confirmed cases. We enrolled 1193 PsO patients treated with biologics and small molecules and we used the entire Lombardia population as controls. Notably, 17 PsO patients COVID-19 confirmed were quarantined at home and 5 hospitalized, no PsO patients were admitted to intensive care unit (ICU) or died. With respect to the general population of Lombardy, patients on biologics were at higher risk to be symptomatic for COVID-19 (OR 3.43 [95%CI 2.25-5.73], P < 0.0001), to be self-quarantined at home (OR 9.05 [95%CI 5.61-14.61], P < 0.0001) and hospitalized (OR 3.59 [95%CI 1.49-8.63], P = 0.0044) however not increased risk of ICU admission or death were found. PsO Patients on biologics should be carefully monitored with telemedicine during COVID-19 outbreak and early treated at home to limit hospital overwhelm. Cohort Study. Abstract only. Please contact the library for full text.


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. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7184382/


The outbreak of coronavirus disease 2019 (COVID-19) pandemic has become the biggest challenge for the whole human community since many years. It seems that the appropriate identification of all people infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the best strategy to limit COVID-19 transmission. However, in a significant proportion of patients, there are no clinical manifestations of the disease, symptoms may be very mild or atypical. There is a growing body of evidence that digestive manifestations of COVID-19 are frequently reported and may precede typical respiratory symptoms. Moreover, the presence of SARS-CoV-2 particles was shown in the gastrointestinal epithelial cells, and viral RNA was detected in the feces of COVID-19 patients. These data suggest that gastrointestinal symptoms in COVID-19 are not an accidental finding, but they may result from direct digestive involvement. Patients with new-onset diarrhea, abdominal pain, nausea, vomiting without any other evident etiological factors should be tested for SARS-CoV-2 infection. Gastroenterologists and members of other medical specialties should also remember that the current epidemiological situation has changed diagnostic and therapeutic algorithms in several gastrointestinal and liver disorders. The paper summarizes the currently available data on multiple gastroenterological aspects of COVID-19 and provides practical recommendations and position statements submitted by the most prominent associations in the field of gastroenterology in response to the emergence of the pandemic. Review. Freely available at: https://www.mp.pl/paim/en/node/15332/pdf


The high number of arterial and, in particular, venous thromboembolic events diagnosed within 24 h of admission and the high rate of positive VTE imaging tests among the few COVID-19 patients tested suggest that there is an urgent need to improve specific VTE diagnostic strategies and investigate the efficacy and safety of thromboprophylaxis in
ambulatory COVID-19 patients. **Retrospective Cohort Study.** Freely available at: https://www.thrombosisresearch.com/article/S0049-3848(20)30140-7/pdf

Matucci-Cerinic, M. et al. **Systemic sclerosis and the COVID-19 pandemic. World Scleroderma Foundatin preliminary advice for patient management.** Annals of Rheumatic Diseases, 29th April 2020. [Epub ahead of print]. Due to the frequent presence of interstitial lung disease and widespread use of immunosuppressive treatment, systemic sclerosis (SSc) patients may be considered at risk for a more severe disease course and higher mortality when they develop Severe Acute Respiratory Syndrome - Coronavirus - 2 (SARS-CoV-2) virus infection. Therefore, with World Scleroderma Foundation endorsement, experts from different specialties including rheumatology, virology and clinical immunology gathered virtually to answer to the main practical clinical questions regarding SARS-CoV-2 infection coming from both patients and physicians. This preliminary advice is aligned with other national and international recommendations, adapted for SSc patients. **Evidence Based Guideline.** Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7167585/pdf/main.pdf

Mummery, C. J. and Kipps, C. M. **UK neurology response to the COVID-19 crisis.** Clinical Medicine, 30th April 2020. [Epub ahead of print]. COVID-19 has led to seismic changes in neurological practice in a matter of weeks. The Association of British Neurologists has supported neurology specialists and patients during this rapid reorganisation and its attendant challenges. We have written guidance on structured service transformation, considering the need to sustain long term care while responding to acute developments; we have recognised that staff experience differs and that this, as well as individual risk factors should be considered when redeployment occurs. Appreciating that there may be understandable anxiety when facing a working routine outside normal practice, we have signposted ethical and psychological support for individuals. We have also focused on our patients: we have facilitated a national alert system to register all neurological COVID cases, coordinating research efforts on this new disease; finally we have defined how to identify the most vulnerable patients under our care. When this initial wave of the pandemic subsides, we will have planned for return to the new ‘norm’, ready to embrace innovation where appropriate, aiming to minimise fall-out in our chronic disease population, and potentially having enhanced and modernised our services. **Evidence Based Guideline.** Abstract only. Please contact the library for full text.

Sole, G. et al. **Guidance for the care of neuromuscular patients during the COVID-19 pandemic outbreak from the French Rare Health Care for Neuromuscular Diseases Network,** Revue Neurologique, 20th April 2020. [Epub ahead of print]. In the context of NM diseases, particular attention must be paid to two experimental COVID-19 treatments, hydroxychloroquine and azithromycin: risk of exacerbation of myasthenia gravis and QT prolongation in patients with pre-existing cardiac involvement. The unfavorable emergency context related to COVID-19 may specially affect the potential for intensive care admission (ICU) for people with NMD. In order to preserve the fairest medical decision, a multidisciplinary working group has listed the neuromuscular diseases with a good prognosis, usually eligible for resuscitation admission in ICU and, for other NM conditions, the positive criteria suggesting a good prognosis. Adaptation of the use of noninvasive ventilation (NIV) make it possible to limit nebulization and continue using NIV in ventilator-dependent patients. **Evidence Based Guideline.** Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7167585/pdf/main.pdf

Stefaniak, A. A. **Itch in the era of COVID-19 pandemic: an unfolding scenario.** Dermatologic Therapy, 1st May 2020. Coronavirus disease 2019 (COVID-19) is an infectious disease, caused by severe acute respiratory syndrome (SARS)-CoV-2, that broke out in December 2019. In just four months it has spread to almost every country in the world and up to April 182 020, the virus has infected more than 2 million people. Itch is the most common symptom in dermatology and a frequent one of systemic diseases. The association of itch and viral diseases has been widely documented; however, the actual prevalence of itch in the patients suffering from new the SARS-CoV-2 infection is still unknown. In this paper, we present a review of the available literature on the topic of itch in the affected population. Moreover, we have also analysed different aspects of itch associated with COVID-19 pandemic, not directly related to the viral infection. Those included use of chemicals, hand sanitizers, common use of personal protective equipment and psychosocial stress. **Review.** Abstract only. Please contact the library for full text.

Taxonera, C. et al. **2019 novel coronavirus disease (COVID-19) in patients with inflammatory bowel diseases.** Alimentary Pharmacology and Therapeutics. 2nd May 2020. [Epub ahead of print]. IBD patients do not have an increased risk of COVID-19 and associated mortality compared with the general
population. In many IBD patients diarrhoea was a presenting symptom, and sometimes, was the only symptom at onset of COVID-19. Case Series. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/apt.15804

ICU cases showed higher rates of organ failure and mortality than non-ICU cases. The poor outcomes of patients with diabetes and COVID-19 indicated that more supervision is required in these patients. Retrospective Study: Freely available at: https://journals.aace.com/doi/pdf/10.4158/EP-2020-0108

The purpose of this study was to summarize measures for prevention and control of the 2019 novel Corona Virus Disease (COVID-19) in the department of kidney transplantation. During the epidemic period, we implemented strict prevention and control measures and adjusted working methods and procedures to ensure the safe and orderly work of the department. Guidance. Abstract only. Please contact the library for full text.

Containment, Transmission and Isolation

See also Uncover above


Cheng, H.Y. Contact tracing assessment of COVID-19 transmission dynamics in Taiwan and risk at different exposure periods before and after symptom onset. JAMA Internal Medicine, 1st May 2020. [Epub ahead of print].
In this study, high transmissibility of COVID-19 before and immediately after symptom onset suggests that finding and isolating symptomatic patients alone may not suffice to contain the epidemic, and more generalized measures may be required, such as social distancing. Original Investigation. Freely available at: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2765641

Older adults and those with pre-existing medical conditions are at risk for dying of SARS CoV-2. In this period of quarantine, one of the reasons for going out is physical activity (PA). This issue is important as the impact of a sedentary lifestyle might be lower for children and young adults, but far more crucial for older adults. Indeed, they need to stay at home because they have a higher risk of a Covid-19 infection but they also need to avoid sedentarily. PA is important for older adults, especially to maintain their level of independence, their mental health, and well-being. Maintaining mobility in old age is, therefore, necessary, as it may predict loss of independence in older adults. The study had two main objectives. Our first objective was to evaluate the impact of this quarantine period on PA program organizations and on the physical and mental health of older adults. Our second objective was to discuss which alternatives could be suggested to this population to avoid a sedentary lifestyle. Interviews. Freely available at: https://s3.ca-central-1.amazonaws.com/assets.jmir.org/assets/preprints/preprint-19007-accepted.pdf

Critical Care

The majority of patients presents with mild symptoms of coronavirus disease 2019 (COVID-19). However, about 5% become critically ill and require intensive care treatment. Acute hypoxemic failure with severe dyspnea and an increased respiratory rate (>30/min) usually leads to ICU admission. At that point, bilateral pulmonary infiltrates are
typically seen. Patients often develop a severe acute respiratory distress syndrome (ARDS). To date there is no specific treatment available—the main goal of supportive therapy is to ascertain adequate oxygenation. Early intubation and repeated prone positioning are key elements in treating hypoxemic COVID-19 patients. Strict adherence to basic infection control measures (including hand hygiene) and use of personal protection equipment (PPE) are essential in the care of patients. Procedures that lead to formation of aerosols should be avoided where possible and carried out with utmost precaution. Guidelines. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7155395/

Kotitis, K. et al. COVID-19: ICU delirium management during SARS-CoV-2 pandemic. Critical Care. 24 (1) 2020, pp.176 [Online]. This article will discuss how ICU professionals (e.g., physicians, nurses, physiotherapists, pharmacologists) can use our knowledge and resources to limit the burden of delirium on patients by reducing modifiable risk factors despite the imposed heavy workload and difficult clinical challenges posed by the pandemic. For example, others have already stressed reasonable analgesia and sedation use with special attention to monitoring and mitigating delirium. Review. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7186945/

Diagnosis and Testing

Bachelet, V. Do we know the diagnostic properties of the tests used in COVID-19? A rapid review of recently published literature. Medwave, 30 (3) 2020, pp. e7890. [Online]. COVID-19 has brought death and disease to large parts of the world. Governments must deploy strategies to screen the population and subsequently isolate the suspect cases. Diagnostic testing is critical for epidemiological surveillance, but the accuracy (sensitivity and specificity) and clinical utility (impact on health outcomes) of the current diagnostic methods used for SARS-CoV-2 detection are not known. The author ran a quick search in PubMed/MEDLINE to find studies on laboratory diagnostic tests and rapid viral diagnosis. After running the search strategies, they found 47 eligible articles that are discussed in this review, commenting on test characteristics and limitations. They did not find any papers that report on the clinical utility of the tests currently used for COVID-19 detection, meaning that we are fighting a battle without proper knowledge of the proportion of false negatives that current testing is resulting in. This shortcoming should not be overlooked as it might hamper national efforts to contain the pandemic through testing community-based suspect cases. Review. Freely available at: https://www.medwave.cl/link.cgi/English/Reviews/GeneralReviews/7891.act

Borghesi, A. Radiographic severity index in COVID-19 pneumonia: relationship to age and sex in 783 Italian patients. La Radiologia Medica, 1st May 2020. [Epub ahead of print]. To improve the risk stratification of patients infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), an experimental chest X-ray (CXR) scoring system for quantifying lung abnormalities was introduced in our Diagnostic Imaging Department. The purpose of this study was to retrospectively evaluate correlations between the CXR score and the age or sex of Italian patients infected with SARS-CoV-2. Males aged 50 years or older and females aged 80 years or older showed the highest risk of developing severe lung disease. Our results may help to identify the highest-risk patients and those who require specific treatment strategies. Retrospective Study. Freely available at: https://link.springer.com/article/10.1007/s11547-020-01202-1

Cipriano, M., Ruberti, E. and Giacalone, A. et al. Gastrointestinal infection could be new focus for coronavirus diagnosis. Cureus. 12 (3), pp. e7422. [Online]. The classic description of COVID-19 is a respiratory illness that manifests with fever, dry cough, and dyspnea on exertion. However, gastrointestinal (GI) complication of COVID-19 is emerging as well. This was observed with similar viral respiratory illnesses, such as severe acute respiratory syndrome (SARS), which emerged in 2003, and the Middle East respiratory syndrome (MERS), which emerged in 2012. In a recently published, single-center case series of 138 consecutive hospitalized patients with confirmed COVID-19, investigators reported that approximately 10% of patients initially presented with GI symptoms, prior to the subsequent development of respiratory symptoms. Common and often very subtle symptoms included diarrhea, nausea, and abdominal pain, with a less common symptom being nonspecific GI illness. New studies are expanding our understanding of the possible fecal transmission of COVID-19. Assessment by polymerase chain reaction (PCR) has provided evidence of the virus in the stool and the oropharynx outside the nasopharynx and respiratory tract. Virus in the stool may be evident on presentation and last throughout the course of illness resolution for up to 12 days after the respiratory virus evidence is gone. In fact, in one of the most recent studies looking at 73 patients, approximately 24% remained positive in their stool for evidence of the virus, though not necessarily infection, after showing negative in respiratory samples. The Centers for Disease Control and

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Prevention (CDC) recommends that after two negative respiratory tests separated by ≥ 24 hours, patients can be dismissed from having transmissibility infection risk for COVID-19. The potential for fecal-oral transmission of COVID-19 needs to be strongly considered. Considering these cases and the lessons from SARS, many authors recommend that real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from feces should be performed routinely in SARS-CoV-2 patients. **Review:** Freely available at: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7186097/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7186097/)

He, J-L. et al. **Diagnostic performance between CT and initial real-time RT-PCR for clinically suspected 2019 coronavirus disease (COVID-19) patients outside Wuhan, China.** Respiratory Medicine, 21st April 2020. [Epub ahead of print].

Chest CT is thought to be sensitive but less specific in diagnosing the 2019 coronavirus disease (COVID-19). The diagnostic value of CT is unclear. The authors aimed to compare the performance of CT and initial RT-PCR for clinically suspected COVID-19 patients outside the epicentre-Wuhan, China. Initial RT-PCR and chest CT had comparable diagnostic performance in identification of suspected COVID-19 patients outside the epidemic center. To compensate potential risk of false-negative PCR, chest CT should be applied for clinically suspected patients with negative initial RT-PCR. **Retrospective Study.** Freely available at: [https://www.resmedjournal.com/article/S0954-6111(20)30120-7/pdf](https://www.resmedjournal.com/article/S0954-6111(20)30120-7/pdf)


Coronavirus-disease-2019 (COVID-19) caused by the severe acute-respiratory-syndrome-coronavirus-2 (SARS-CoV-2) shows a rapid spread over-the-world. Given scarce resources, non-laboratory diagnostics is crucial. In this cross-sectional study, two-thirds of European patients with polymerase chain reaction confirmed COVID-19 reported olfactory and gustatory dysfunction, indicating the significance of this history in the early diagnostics. **Cross Sectional Study.** Freely available at: [https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa525/5827752](https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa525/5827752)


The novel coronavirus disease 2019 (COVID-19) is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and was declared a pandemic in March 2020. A plethora of respiratory sampling methods for SARS-CoV-2 viral detection has been used and in the current evolving situation, there is no international consensus on the recommended method of respiratory sampling for diagnosis. Otolaryngologists deal intimately with the upper respiratory tract and a clear understanding of the respiratory sampling methods is of paramount importance. This article aims to provide an overview of the various methods and their evidence till date. **Review.** Abstract only. Please contact the library for full text.


Since December 2019, there had been an outbreak of COVID-19 in Wuhan, China. At present, diagnosis COVID-19 were based on real-time RT-PCR, which have to be performed in biosafe laboratory and is unsatisfactory for suspect case screening. Therefore, there is an urgent need for rapid diagnostic test for COVID-19. The colloidal gold immunochromatography assay for SARS-CoV-2 specific IgM/IgG anti-body had 71.1% sensitivity and 96.2% specificity in this population, showing the potential for a useful rapid diagnosis test for COVID-19. Further investigations should be done to evaluate this assay in variety of clinical settings and populations. **Review.** Freely available at: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7191168/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7191168/)


Chemosensitive disorders are very frequent in the early stages of COVID-19 and in paucisymptomatic cases. These patients are typically placed in home quarantine. This study has the aim of validating a new olfactory and gustatory objective evaluation test in these patients. The olfactory and gustatory evaluation by self-administered test can be considered a valid tool, fundamental for obtaining objective qualitative and quantitative data on the extent of chemosensitive disorders in home-quarantined COVID-19 patients. **Review.** Abstract only. Please contact the library for full text.

In the race to contain SARS-CoV-2, efficient detection and triage of infected patients must rely on rapid and reliable testing. In this work we performed the first evaluation of the QIAstat-Dx Respiratory SARS-CoV-2 Panel (QIAstat-SARS) for SARS-CoV-2 detection. This assay is the first rapid multiplex PCR (mPCR) assay including SARS-CoV-2 detection, and is fully compatible with a non-PCR trained laboratory or point-of-care (POC) testing. This evaluation was performed using 69 primary clinical samples (66 NPS, 1 BAL and 1 tracheal aspirate and 1 bronchial aspirate) comparing the SARS-CoV-2 detection with the currently WHO recommended RT-PCR (WHO-PCR) workflow. Additionally, a comparative limit of detection (LoD) assessment was performed between QIAstat-SARS and the WHO-PCR using a quantified clinical sample. Compatibility of sample pre-treatment for viral neutralisation or viscous samples with the QIAstat-SARS system were also tested. The QIAstat-Dx Respiratory SARS-CoV-2 Panel demonstrated a comparable sensitivity to the WHO recommended assay with a limit of detection at 1000 copies/mL. The overall percent agreement between QIAstat-Dx SARS and WHO-PCR on 69 clinical samples was 97% with a sensitivity at 100% (40/40) and specificity at 93% (27/29). No cross reaction was encountered for any other respiratory viruses or bacteria included in the panel. The QIAstat-SARS rapid multiplex-PCR panel provides a highly sensitive, robust and accurate assay for rapid detection of SARS-CoV-2. This assay allows rapid decisions even in non-PCR trained laboratory or point-of-care testing, allowing innovative organisation. Analytical Sensitivity Analysis. Freely available at: https://jcm.asm.org/content/jcm/early/2020/04/24/JCM.00630-20.full.pdf

Zeng, F. F. et al. Can we predict the severity of COVID-19 with a routine blood test? Polish Archives of Internal Medicine, 1st May 2020. [Epub ahead of print].

The purpose of this study was to provide an overview of the association of markers in routine blood test with the severity of COVID-19. Severe patients had more neutrophils, higher NLR level, and fewer lymphocytes than non-severe patients with COVID-19. Measurement of these markers might assist clinicians to monitor and predict the severity and prognosis of COVID-19. Review. Freely available at: https://www.mp.pl/palm/issue/article/15331

Education and Training

Health Education England. E-Learning for health Coronavirus (COVID-19). eLfH. 2020. [Online]. There is now an extensive e-learning resource available on eLfH to support the training of redeployed staff. There is also a section on staff wellbeing and resilience. E-Learning Package. Freely available at: https://portal.eflh.org.uk/Catalogue/I...HierarchyId=0_45016&programmelm=45016

Imperial College London. Mechanical ventilation training. ICL. 17th April 2020.

A new online training tool has been launched to quickly teach doctors and nurses how to operate ventilators under the direction of an intensive care consultant. The new online tool, developed by Imperial College London, Imperial College Healthcare NHS Trust and Fundamental VR, allows redeployed clinicians to gain the key knowledge they need for ventilating patients. The training consists of a short how-to video that teaches the essentials of operating ventilators. Clinicians can use the tool on their smartphone at home or in real-time as they care for patients, enabling them to begin running ventilators immediately under the supervision of an intensive care consultant. It can be accessed for free by any clinician across the world, regardless of health system or specialty. E-Learning Package. Freely available at: https://www.fundamentalsurgery.com/ventilator/v1/


In many contexts, medical students collaborate with health care workers to deliver patient management and care in emergencies like the COVID-19 pandemic. In others, medical students are experiencing an unintended pause in their education due to global university closure over COVID-19 concerns. In either situation, students find themselves coping with mental and emotional issues, including stress, anxiety, and fear, that may require significant psychological and physical effort. Therefore, it is important that medical schools not only care about students’ mental health but also implement strategies to support their understanding of crisis management, self-mental care, and other principal measures in order to strengthen their coping skills and mental preparedness. Education Adaptations. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/medu.14206

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With the ongoing coronavirus, journals and the media have extensively covered the impacts on doctors, nurses, physician assistants, and other healthcare workers. However, one group that has rarely been mentioned despite being significantly impacted is medical students and medical education overall. This piece, prepared by both a medical student and a cardiothoracic surgeon with a long career in academic medicine, discusses the recent history of medical education and how it has led to issues now with distance-based learning due to COVID-19. It concludes with a call to action for the medical education system to adapt so it can meet the needs of healthcare learners during COVID-19 and even beyond.  *Editorial*. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1111/jocs.14590

**Head and Neck Services**


A questionnaire was distributed to head and neck surgeons assessing opinions related to treatment and concerns for the safety of patients, self, family, and staff. This study highlights differences in the willingness of head and neck surgeons to delay surgery or alter plans during times when hospital resources are scarce and risk is high.  *Questionnaire*. Abstract only. Please contact the library for full text.


An otolaryngologic triage committee was created to appropriately allocate resources to patients. Hospital ethicists provided support. Our tumor conference screened patients for non-surgical options. Patients were tested twice for Sars-CoV-2 before performing urgent contaminated operations. N95 masks and protective equipment were conserved when possible. Patients with low-grade cancers were advised to delay surgery, and other difficult decisions were made.  *Practice Guidance*. Abstract only. Please contact the library for full text.


Patients with head and neck mucosal malignancy require continued treatment despite the current pandemic state. Care must be taken at all stages of treatment to minimize the risk to patients and health care workers while maintaining focus on minimizing use of limited resources. Patient care plans should be guided by best available evidence to optimize outcomes while maintaining a safe environment in the setting of this pandemic.  *Evidence Based Guideline*. Freely available at: https://journals.sagepub.com/doi/full/10.1177/0194599200923623?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub++0pubmed


In India, oral cancer is the most common head and neck cancer (HNC) in men in India, mainly due to the consumption of smoked and smokeless tobacco. During the current pandemic, delaying surgery for even 1-2 months may lead to more extensive surgery or inoperability, when only supportive care can be provided. Being semi-emergent in nature, treatment for these patients is currently on hold or delayed in most centres across the country. This study was conducted to assess the impact of COVID-19 pandemic and inability of the health system to treat HNC in a timely fashion and how surgeons are coping to this emergent situation. This article highlights the situation in Indian, a country burdened with one of the highest incidence of HNC.  *Review*. Abstract only. Please contact the library for full text.


The severe acute respiratory syndrome (SARS)-CoV-2 pandemic continues to produce a large number of patients with chronic respiratory failure and ventilator dependence. As such, surgeons will be called upon to perform tracheotomy for a subset of these chronically intubated patients. As seen during the SARS and the SARS-CoV-2 outbreaks, aerosol-generating procedures (AGP) have been associated with higher rates of infection of medical personnel and potential acceleration of viral dissemination throughout the medical center. Therefore, a thoughtful approach to tracheotomy (and other AGPs) is imperative and maintaining traditional management norms may be unsuitable or even potentially harmful. We sought to review the existing evidence informing best practices and then

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develop straightforward guidelines for tracheotomy during the SARS-CoV-2 pandemic. This communication is the product of those efforts and is based on national and international experience with the current SARS-CoV-2 pandemic and the SARS epidemic of 2002/2003. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1002/hed.26214

Infection Control and PPE

See also Cochrane Reviews above.


The abrupt outbreak of COVID-19 and its rapid spread over many health care systems in the world led to personal protective equipment (PPE) shortening, which cannot be faced only by the reduction in their consumption nor by the expensive and time-requiring implementation of their production. It is thus necessary to promote PPE rational use, highlighting possible differences in terms of efficacy among them and promoting an effective technique to reuse them. Rational use and successful reuse of respirators can help facing PPE shortening during a pandemic. Further evidences testing UVGI and other decontamination techniques are an unmet need. The definitive answer to pandemic issues can be found in artificial intelligence and deep learning: these groundbreaking modalities could help in identifying high-risk patients and in suggesting appropriate types and use of PPE. Review. Freely available at: https://pubmed.ncbi.nlm.nih.gov/32353457/

Eikenberry, S. E. et al. To mask or not to mask: modeling the potential for face mask use by the general public to curtail the COVID-19 pandemic. Infectious Disease Modelling, 21st April 2020.

In conclusion, the findings suggest that face mask use should be as nearly universal (i.e., nation-wide) as possible and implemented without delay, even if most masks are homemade and of relatively low quality. This measure could contribute greatly to controlling the COVID-19 pandemic, with the benefit greatest in conjunction with other non-pharmaceutical interventions that reduce community transmission. Despite uncertainty, the potential for benefit, the lack of obvious harm, and the precautionary principle lead us to strongly recommend as close to universal (homemade, unless medical masks can be used without diverting healthcare supply) mask use by the general public as possible. Modelling. Freely available at: https://www.sciencedirect.com/science/article/pii/S2468042720300117?via%3Dihub


The use of medical masks and respirators as personal protective equipment is pivotal to reducing the level of biological hazard to which healthcare workers are exposed during the outbreak of highly diffusible pathogens, such as the recent novel coronavirus SARS-CoV-2. Unfortunately, during this pandemic, supplies are rapidly running out worldwide, with potential consequences for the rate of occupational infections. Also, knowledge about specific characteristics of respirators is of utmost importance to select the proper type according to the clinical setting. A wide variety of literature is available on the topic, but mostly based on Influenza viruses infection models. Clinical evidence on the use of respirators is poor and interest in the topic has not been constant over time. A better understanding of SARS-CoV-2 transmission is needed, together with high-quality clinical data on the use of respirators or alternative devices. Moreover, healthcare workers, regardless of their level of experience, should receive specific training. This review aims to summarize the available evidence on the use of medical masks and respirators in the context of viral infections, especially the current coronavirus disease 2019 (COVID-19). Review. Freely available at: https://www.sciencedirect.com/science/article/pii/S253104372030088X?via%3Dihub


The management of patients with novel 2019 coronavirus (Covid-19) represents a new challenge for medical and surgical teams. Each operating room in the world should be prepared with thinking and the development of a protocol and patient route seems mandatory. Adequate degree of protection must be used. We propose recommendations to help different professionals in the establishment of protocols for the management of patients with Covid-19. We also
offer a Checklist which could be used in operating room. Evidence Based Guideline. Freely available at: https://www.sciencedirect.com/science/article/pii/S1878875020308627?via%3Dihub


The COVID-19 pandemic caused by the novel coronavirus SARS-CoV-2 has claimed many lives worldwide. Wearing medical masks or N95 masks (namely N95 respirators) can slow the virus spread and reduce the infection risk. Reuse of these masks can minimize waste, protect the environment, and help to solve the current imminent shortage of masks. Disinfection of used masks is needed for reuse of them with safety, but improper decontamination can damage the blocking structure of masks. In this study, we demonstrated, using avian coronavirus of infectious bronchitis virus to mimic SARS-CoV-2, that medical masks and N95 masks remained their blocking efficacy after being steamed on boiling water even for 2 hours. We also demonstrated that three brands of medical masks blocked over 99% viruses in aerosols. The avian coronavirus was completely inactivated after being steamed for 5 minutes. Together, this study suggested that medical masks are adequate for use on most social occasions, and both medical masks and N95 masks can be reused for a few days with steam decontamination between use. Review. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1002/jmv.25921


Tracheostomy in patients with coronavirus disease should be a rare event yet one that requires significant decision making and procedural deliberation. Indications for surgery must be balanced by risk of disease transmission to health care workers. Considerations are given to personal protective equipment, viral testing, and alternatives. Review. Freely available at: https://journals.sagepub.com/doi/10.1177/2473974X20922528


The set of recommendations in this document highlight the importance of avoiding tracheotomy procedures in patients who are COVID-19 positive if at all possible. Recommendations for appropriate PPE and environment are made for COVID-19 positive, negative and unknown patients requiring consideration of tracheotomy. The safety of healthcare professionals who care for ill patients and who keep critical infrastructure operating is paramount. Evidence Based Guideline. Freely available at: https://journalotohns.biomedcentral.com/articles/10.1186/s40463-020-00414-9


The theoretical rationale discussed here suggests that along with evidence-based recommendations such as physical distancing and maintaining hand hygiene, universal masking may help in reducing droplet-based transmission of COVID and contribute to flattening and shortening the curve. Review. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1111/resp.13834


Testing for SARS-CoV-2 is important for decision making prior to surgery in otolaryngology. An understanding of current and developing testing methods is important for interpreting test results. Due to the current sensitivity of RT-PCR based testing for SARS-CoV-2, a negative test cannot rule out COVID-19. Full PPE should be worn during high risk procedures such as aerosol generating procedures even if testing is negative. Patients who test positive during screening should have their surgeries postponed if possible until asymptomatic and have tested negative for SARS-CoV-2. Review. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1002/hed.26213

**Intensive Care**


In this article, all outbreak response measures including triaging, preparation of isolation rooms, decontamination and disinfection protocols as well as fundamental principles of critical care and anaesthetic management in Covid-19

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cases is being discussed. All the recommendations have been derived from the past experiences of SARS (Severe Acute Respiratory Syndrome) and MERS (Middle East Respiratory Syndrome) outbreak as well as upcoming guidelines from the international health fraternity and Indian Health Services. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7189905/


Generic guidelines exist for the intubation of different patient groups, as do resources to facilitate airway rescue and transition to the "can't intubate, can't oxygenate" scenario. They should be followed where they do not contradict our specific recommendations for the COVID-19 patient group. Consideration should be given to using a checklist that has been specifically modified for the COVID-19 patient group. Early intubation should be considered to prevent the additional risk to staff of emergency intubation and to avoid prolonged use of high flow nasal oxygen or non-invasive ventilation. Significant institutional preparation is required to optimise staff and patient safety in preparing for the airway management of the COVID-19 patient group. The principles for airway management should be the same for all patients with COVID-19 (asymptomatic, mild or critically unwell). Safe, simple, familiar, reliable and robust practices should be adopted for all episodes of airway management for patients with COVID-19. Evidence Based Guideline. Abstract only. Please contact the library for full text.

Law and Ethics

None this issue.

Mental Health and Well-being


The COVID-19 pandemic presents significant challenges for healthcare services. We have established a need to develop a digital support package around psychological wellbeing in healthcare through stakeholder consultations. We have met this need through the rapid development of an evidence-based digital package on psychological wellbeing for healthcare workers, which is relevant to all healthcare workers in the UK as well as healthcare academics and students. Evaluation demonstrated that the package has high fidelity with regards delivery to, and engagement of, healthcare workers. Assessment of implementation qualities showed high usability and practicality, with low perceived burden for completion and acceptable cost implications. This digital package is considered to be appropriate for any UK healthcare professional as well as healthcare academics and students, with much of the content having international relevance. Overall, the content was perceived to be useful, meaningful and appropriate to the needs of healthcare workers. We recommend that this package is distributed to all healthcare workers to supplement strategic health and wellbeing provisions for employees during and after the COVID-19 pandemic. Learning Package. Freely available at: https://www.mdpi.com/1660-4601/17/9/2997/htm

Obstetrics and Gynaecology


This study aims to compare clinical course and outcomes between pregnant and reproductive-aged non-pregnant women with COVID-19 and assess the vertical transmission potential of COVID-19 in pregnancy. Pregnant women have comparable clinical course and outcomes compared with reproductive-aged non-pregnant women when infected with SARS-CoV-2. No evidence supported vertical transmission of COVID-19 in the late stage of pregnancy including vaginal delivery. Retrospective Study. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7185021/pdf/main.pdf

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The clinical characteristics of pregnant women with COVID-19 are similar to those of non-pregnant adults. Fetal and neonatal outcomes appear good in most cases, but available data only include pregnant women infected in their third trimesters. Further studies are needed to ascertain long-term outcomes and potential intrauterine vertical transmission. *Systematic Review. Prognosis*. Freely available at: https://www.tandfonline.com/doi/full/10.1080/14767058.2020.1759541

**Paediatric and Neonatal Medicine**

The COVID-19 pandemic will have a profound short- and long-term impact on health care worldwide. Although the full repercussions of this disease have yet to be realized, the outlined recommendations will guide otolaryngologists in the treatment of pediatric patients in the face of an unprecedented global health crisis. *Evidence Based Guideline*. Freely available at: https://journals.sagepub.com/doi/pdf/10.1177/0194599820921393

Most children are asymptomatic or exhibit mild symptoms from COVID-19 infection. However, a small number have recently been identified who develop a significant systemic inflammatory response. This document for clinicians, which has been developed after expert review of the cases, includes a case definition and approach to clinical management. *Practice Guideline*. Freely available at: https://www.rcpch.ac.uk/resources/guidance-paediatric-multisystem-inflammatory-syndrome-temporally-associated-covid-19

**Palliative and End of Life Care**

This clinical guidance for essential end of life medicines, which sets out the first and second choices for these medicines, will enable the NHS to conserve supplies, switch to alternative drugs when required and minimise waste. This is also being used to guide the purchasing of medicines for the UK. It aims to support healthcare professionals working in palliative and end of life care, including GPs and pharmacists, across hospital, community, social care and hospice settings to work together in managing additional demand for end of life medicines due to COVID-19. *Guideline*. Freely available at: https://apmonline.org/wp-content/uploads/2020/04/priority-meds-for-end-of-life-care-290420-final-2.pdf

**Patient Information**

None this issue.

**Pathology and Autopsy**

None this issue.

**Prevention**

None this issue.
Primary Care Practice

See also CEBM above.

As part of Health Education England (HEE) e-learning programme for COVID-19 a remote total triage in general practice resource has been developed by the Digital First Primary Care Team at NHSE/I and HEE to support all GP practices in England with the rapid implementation of a ‘total triage’ model. *E-learning package. Freely available at:* https://portal.e-lfh.org.uk/Component/Details/609561

Prognosis

Our results shown that the decrease of CD3+, CD4+ and CD8+ T lymphocyte correlated with the course of patients with COVID-19 pneumonia, especially in severe cases. The level of T lymphocyte could be used as an indicator for prediction of severity and prognosis of patients with COVID-19 pneumonia. The application of glucocorticoid should be cautious in severe cases. *Retrospective Study. Freely available at:* https://www.sciencedirect.com/science/article/pii/S1386653220301037?via%3Dihub

The inflammatory response plays a critical role in coronavirus disease 2019 (COVID-19), and inflammatory cytokine storm increases the severity of COVID-19. The objective of the study was to investigate the ability of interleukin-6 (IL-6), C-reactive protein (CRP), and procalcitonin (PCT) to predict mild and severe cases of COVID-19. It concludes that the serum levels of IL-6 and CRP can effectively assess disease severity and predict outcome in patients with COVID-19. *Retrospective Study. Freely available at:* https://www.sciencedirect.com/science/article/abs/pii/S1386653220301128?via%3Dihub

Wang, D. et al. *Clinical course and outcome of 107 patients infected with the novel coronavirus, SARS-CoV-2, discharged from two hospitals in Wuhan, China.* Critical Care, 24 (1), 2020, pp. 188. [Online].
Retrospective case series of COVID-19 patients from Zhongnan Hospital of Wuhan University in Wuhan and Xishui Hospital, Hubei Province, China, up to February 10, 2020. Epidemiological, demographic, and clinical data were collected. The clinical course of survivors and non-survivors were compared. Risk factors for death were analyzed. A period of 7-13 days after illness onset is the critical stage in the COVID-19 course. Age and male gender were independent risk factors for death of COVID-19. *Retrospective Study. Freely available at:* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7192564/

This study aimed to develop mortality-prediction models for patients with Coronavirus disease 2019 (COVID-19). We developed two predictive models for the in-hospital mortality of patients with COVID-19 in Wuhan and validated in patients from another center. *Cohort Study. Freely available at:* https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa538/5828281

112 patients were recruited with symptoms of fever, cough, fatigue, myalgia, and diarrhoea. All patients underwent antibody tests. Fifty-eight (51.79%) were positive for both IgM and IgG, 7 (6.25%) were negative for both antibodies, 1 (0.89%) was positive for only IgM, and 46 (41.07%) were positive for only IgG. IgM antibody appeared within a week post disease onset, and lasted for one month and gradually decreased, while IgG antibody was produced 10 days after infection, and lasted for a longer time. However, no significant difference in level of IgM and IgG antibody between positive and negative patients of nucleic acid test after treatment was found. The results indicate that...

**Racial and Ethnic Disparities**

See also [Uncover](#) and [CEBM](#) above.

Platt, L. and Warwick, R. *Are some ethnic groups more vulnerable to COVID-19 than others*. IFS, 1st May 2020. [Online].
The COVID-19 pandemic has affected some sections of the population more than others, and there are growing concerns that the UK’s minority ethnic groups are being disproportionately affected. Following evidence that minority groups are over-represented in hospitalisations and deaths from the virus, Public Health England has launched an inquiry into the issue. *Report*. Freely available at: https://www.ifs.org.uk/inequality/chapter/are-some-ethnic-groups-more-vulnerable-to-covid-19-than-others/

The death rate among British black Africans and British Pakistanis from coronavirus in English hospitals is more than 2.5 times that of the white population, according to stark analysis by the Institute of Fiscal Studies. The highly respected thinktank also found that deaths of people from a black Caribbean background were 1.7 times higher than for white Britons. NHS England figures published last week showed that hospital deaths per 100,000 among British people of a black Caribbean background were three times the equivalent number among the majority white British population. However, unlike previous analysis, the IFS research, published on Friday, strips out the role of age, gender and geography and shows that they do not explain the disparities. *News*. Freely available at: https://www.theguardian.com/world/2020/may/01/british-bame-covid-19-death-rate-more-than-twice-that-of-whites

**Research and Trials**

None this issue.

**Residential and Specialist Care**


This policy brief sets forth the American Geriatrics Society’s (AGS’s) recommendations to guide federal, state, and local governments when making decisions about care for older adults in assisted living facilities (ALFs) during the COVID-19 pandemic. It focuses on the need for personal protective equipment (PPE), access to testing, public health support for infection control, and workforce training. The AGS continues to review guidance set forth in peer-reviewed articles, as well as ongoing and updated guidance from the U.S. Department of Health and Human Services (HHS), the Centers for Medicare & Medicaid Services (CMS), the Centers for Disease Control and Prevention (CDC), and other key agencies. This brief is based on the situation and any federal guidance or actions as of April 15, 2020. Joining a separate AGS policy brief on COVID-19 in nursing homes (DOI: 10.1111/jgs.16477), this brief is focused on ALFs, given that varied structure and staffing can impact their response to COVID-19. *Evidence Based Guidelines*. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/jgs.16510

**Signs and Symptoms**

None this issue.
Statistics and Mortality
See also CEBM above.

Telemedicine and Technology

Grimes, C. L. et al. A guide for urogynecologic patient care utilizing telemedicine during the COVID-19 pandemic: review of existing evidence. International Urogynecology Journal, 27t April 2020. [Epub ahead of print]. The COVID-19 pandemic and the desire to “flatten the curve” of transmission have significantly affected the way providers care for patients. Female Pelvic Medicine and Reconstructive Surgeons (FPMRS) must provide high quality of care through remote access such as telemedicine. No clear guidelines exist on the use of telemedicine in FPMRS. Using expedited literature review methodology, we provide guidance regarding management of common outpatient urogynecology scenarios during the pandemic. Behavioral, medical, and conservative management will be valuable as first-line virtual treatments. Certain situations will require different treatments in the virtual setting while others will require an in-person visit despite the risks of COVID-19 transmission. We have presented guidance for treating FPMRS conditions via telemedicine based on rapid literature review and expert consensus and presented it in a format that can be actively referenced. Evidence Based Guideline. Freely available at: https://link.springer.com/article/10.1007%2Fs00192-020-04314-4

Hayes, B. Working from home in medicine during coronavirus: what equipment do you need to get started and what can you do to help from home? Futures Healthcare Journal, 7 (2) 2020. [Online]. The COVID-19 pandemic looks set to significantly change how we practice medicine. It is vital that the vulnerable and immunocompromised members of our workforce are protected, which may mean that they do not go into clinical areas. While the medical field has been slower than many professional areas to catch on to working from home, many trusts are already moving towards telephone or video outpatient appointments during COVID-19. We describe the equipment needed to set up working from home for healthcare practitioners (HCPs) and discuss a variety of other opportunities for home-based HCPs, including teaching, learning, carrying out audit and quality improvement work and offering psychological support for colleagues working on the front line. Rapid Review. Home Working. Freely available at: https://www.rcpjournals.org/content/futurehosp/early/2020/05/04/fhj.2020-0025?papetoc=

Health Tech Newspaper. Contact tracing app to be trialled on Isle of Wight. HTN, 3rd May 2020. [Online]. The NHS contact tracing app is going into testing this week on the Isle of Wight before being rolled-out later in the month. Isle of Wight will be the first place the new contact tracing app will be used to alert users should they have come into contact with someone who later develops COVID-19 symptoms. News. Freely available at: https://www.thehtn.co.uk/2020/05/03/contact-tracing-app-to-be-trialled-on-isle-of-wight/

Health Tech Newspaper. COVID-19 contact tracing apps from around the world. HTN, 6th May 2020. [Online]. As countries begin to emerge from lockdown, the relaxing of restrictions has seen governments around the world introduce smartphone contact tracing apps in order to limit and control the spread of COVID-19. In this article, we take a look at countries which have adopted contact tracing apps, and look at how these apps compare. Two common criticisms of contact tracing apps have so far been how personal data is collected, stored and used, as well as usability issues. News. Freely available at: https://www.thehtn.co.uk/2020/05/06/covid-19-contact-tracing-apps-from-around-the-world/

Health Tech Newspaper. One Gloucestershire triage app supports COVID-19 response. HTN, 6th May 2020. [Online]. An app built by NHS surgeon, Owain Hughes is helping GPs and paramedics to screen COVID-19 patients. The platform, Cinapsis, is being used across the One Gloucestershire Integrated Care System to assess patients as part of their GP appointment, providing consultant advice when needed. The platform connects GPs and community lead nurses with consultants from the local NHS Trust who can provide advice about a patient’s management in real time. This enables assessments to be made to reduce unnecessary person-to-person contacts and patient trips to hospital. The referral system can also be used to send messages, images and video to connect primary care clinicians with the right specialist. News. Freely available at: https://www.thehtn.co.uk/2020/05/06/one-gloucestershire-trieage-app-supports-covid-19-response/


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The Royal Wolverhampton NHS Trust and University Hospitals Birmingham NHS Trust have signed with Babylon to use its COVID-19 app to support patients. The company is providing its AI digital care assistant to help support and monitor coronavirus patients 24/7 in the community. People can use the service to check their symptoms, track their illness, cope with self-isolation, learn more about COVID-19, have live chat with trained team members and consult with GPs and clinicians by video. News. Freely available at: https://www.thehtn.co.uk/2020/04/15/royal-wolverhampton-and-university-hospitals-birmingham-sign-with-babylon/

Prasad, A. M. et al. Optimizing your telemedicine visit during the COVID-19 pandemic: practice guidelines for patients with head and neck cancer. Head ad Neck, 28th April 2020. [Epub ahead of print]. The COVID-19 epidemic has resulted in many hospitals and practices to cancel in-person outpatient clinic visits, where head and neck patients receive their critical longitudinal care. Out of necessity, most practices have been encouraged to use telemedicine as a method to maintain a continuum of care with their patients. As a result, the prevalence of telemedicine has grown rapidly during this pandemic, without allowing the physicians and patients to be adequately educated on how best to utilize the services. There is a steep learning curve as we have learned, and our goal is to provide guidelines for both patients and physicians, as well as a valuable patient handout in preparation for their visit. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1002/hed.26197

Treatments for COVID
See also CEBM above.

Cai, Q. et al. Experimental treatment with Favipiravir for COVID-19- an open label control study. Engineering, 18th March 2020. [Epub ahead of print]. The study examines the effects of Favipiravir (FPV) versus Lopinavir (LPV)/ritonavir (RTV) for the treatment of COVID-19. Patients with laboratory-confirmed COVID-19 who received oral FPV (Day 1: 1600 mg twice daily; Days 2-14: 600 mg twice daily) plus interferon (IFN)-α by aerosol inhalation (5 million U twice daily) were included in the FPV arm of this study, whereas patients who were treated with LPV/RTV (Days 1-14: 400 mg/100 mg twice daily) plus IFN-α by aerosol inhalation (5 million U twice daily) were included in the control arm. Changes in chest computed tomography (CT), viral clearance, and drug safety were compared between the two groups. For the 35 patients enrolled in the FPV arm and the 45 patients in the control arm, all baseline characteristics were comparable between the two arms. A shorter viral clearance time was found for the FPV arm versus the control arm (median (interquartile range, IQR), 4 (2.5-9) d versus 11 (8-13) d, P < 0.001). The FPV arm also showed significant improvement in chest imaging compared with the control arm, with an improvement rate of 91.43% versus 62.2% (P = 0.004). After adjustment for potential confounders, the FPV arm also showed a significantly higher improvement rate in chest imaging. Multivariable Cox regression showed that FPV was independently associated with faster viral clearance. In addition, fewer adverse reactions were found in the FPV arm than in the control arm. In this open-label nonrandomized control study, FPV showed significantly better treatment effects on COVID-19 in terms of disease progression and viral clearance; if causal, these results should be important information for establishing standard treatment guidelines to combat the SARS-CoV-2 infection. Control Trial. Freely available at: https://pubmed.ncbi.nlm.nih.gov/32346491/

Chowdhury, M. S., Rathod, J. and Gemsheimer, J. A rapid systematic review of clinical trials utilizing chloroquine and hydroxychloroquine as a treatment for COVID-19. Academic Emergency Medicine, 2nd May 2020. [Epub ahead of print]. There are currently 7 completed clinical trials and 29 registered clinical trials focusing on HCQ or CQ as a therapeutic avenue for COVID-19. Of these, 5/7 trials have shown favorable outcomes for patients using CQ or HCQ and 2/7 have shown no change compared to control. However, all 7 trials carried varying degrees of bias and poor study design. There is currently not enough data available to support the routine use of HCQ and CQ as therapies for COVID-19. Pending further results from more extensive studies with more stringent study parameters, clinicians should defer from routine use of HCQ and CQ. There are several clinical trials currently underway with results expected soon. Rapid Systematic Review. Freely available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/acem.14005

Ingraham, N.E. et al. Understanding the renin-angiotensin-aldosterone-SARS-CoV-Axis: a comprehensive review. European Respiratory journal 27th April 2020. This review discusses the role of the RAAS-SCoV-axis in acute lung injury and the effects, risks, and benefits of pharmacologic modification of this axis. There may be an opportunity to leverage the different aspects of RAAS inhibitors to mitigate indirect viral-induced lung injury. Concerns have been raised that such modulation might

In this cohort study, patients who received hydroxychloroquine for the treatment of pneumonia associated with COVID-19 were at high risk of QTc prolongation, and concurrent treatment with azithromycin was associated with greater changes in QTc. Clinicians should carefully weigh risks and benefits if considering hydroxychloroquine and azithromycin, with close monitoring of QTc and concomitant medication usage. *Cohort Study*. Freely available at: https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(20)30234-2/pdf


We assessed the relation between previous treatment with ACE inhibitors, angiotensin-receptor blockers, beta-blockers, calcium-channel blockers, or thiazide diuretics and the likelihood of a positive or negative result on Covid-19 testing as well as the likelihood of severe illness (defined as intensive care, mechanical ventilation, or death) among patients who tested positive. Using Bayesian methods, we compared outcomes in patients who had been treated with these medications and in untreated patients, overall and in those with hypertension, after propensity-score matching for receipt of each medication class. A difference of at least 10 percentage points was prespecified as a substantial difference. We found no substantial increase in the likelihood of a positive test for Covid-19 or in the risk of severe Covid-19 among patients who tested positive in association with five common classes of antihypertensive medications. *Original Research*. Freely available at: https://www.nejm.org/doi/10.1056/NEJMoa2008975


We assessed the relation between previous treatment with ACE inhibitors, angiotensin-receptor blockers, beta-blockers, calcium-channel blockers, or thiazide diuretics and the likelihood of a positive or negative result on Covid-19 testing as well as the likelihood of severe illness (defined as intensive care, mechanical ventilation, or death) among patients who tested positive. Using Bayesian methods, we compared outcomes in patients who had been treated with these medications and in untreated patients, overall and in those with hypertension, after propensity-score matching for receipt of each medication class. A difference of at least 10 percentage points was prespecified as a substantial difference. We found no substantial increase in the likelihood of a positive test for Covid-19 or in the risk of severe Covid-19 among patients who tested positive in association with five common classes of antihypertensive medications. *Original Research*. Freely available at: https://www.nejm.org/doi/10.1056/NEJMoa2008975
A number of substances have been found to prevent the reproduction of SARS-CoV-2 in vitro. These include virustatic agents that have already been approved for the treatment of other types of viral infection, as well as drugs that are currently used for entirely different purposes. High in vitro activity has been found for the nucleotide analogue remdesivir, for the antimalarial drug chloroquine, and for nitazoxanide, a drug used to treat protozoan infections. Because the virus enters human cells by way of the membrane-associated angiotensin converting enzyme 2 (ACE2), keeping the virus from docking to this receptor is a conceivable treatment approach. Transmembrane protease serine 2 (TMPRSS2) plays a role in the fusion of the virus with cells; inhibitors of this enzyme are known as well. The potential therapeutic efficacy and tolerability of these and other active substances remain to be investigated in clinical trials. At present, more than 80 trials on COVID-10 have already been registered with ClinicalTrials.gov. Some initial findings should already be available in late April 2020. Clinical trials are now indispensable in order to determine the true clinical benefits and risks of the substances that have been found to be active against SARS-CoV-2 in vitro. There is not yet any recommendation for the therapeutic use of any particular agent beyond standard supportive treatment.

Review. Freely available at: https://www.aerzteblatt.de/int/archive/article/213208

Temte, J. Remdesivir for COVID-19. Practice Update, 29th April 2020. [Online]. Remdesivir is a nucleotide analogue that inhibits RNA polymerases. It has been shown to be active across several families of viruses, including coronaviruses, and interferes with SARS-CoV-2 in vitro. This antiviral has been used on a compassionate basis for severe COVID-19. In a cohort of 53 patients, with no control group, clinical improvement was noted in 68%. Randomised Control Trial. Freely available at: https://www.practiceupdate.com/news/29052/1/24?elsca1=emc_enews_daily-digest&elsca2=email&elsca3=practiceupdate_rm&elsca4=respiratorymedicine&elsca5=newsletter&rid=MzI2NDczOTk2MjQwS0&lid=10332481


Vaccines and Immunity

De Alwis, R. et al. Impact of immune enhancement of Covid-19 polyclonal hyperimmune globulin therapy and vaccine development. EBioMedicine, 16th April 2020. [Epub ahead of print]. The pandemic spread of a novel coronavirus - SARS coronavirus-2 (SARS-CoV-2) as a cause of acute respiratory illness, named Covid-19, is placing the healthcare systems of many countries under unprecedented stress. Global economies are also spiraling towards a recession in fear of this new life-threatening disease. Vaccines that prevent SARS-CoV-2 infection and therapeutics that reduces the risk of severe Covid-19 are thus urgently needed. A rapid method to derive antiviral treatment for Covid-19 is the use of convalescent plasma derived hyperimmune globulin. However, both hyperimmune globulin and vaccine development face a common hurdle - the risk of antibody-mediated disease enhancement. The goal of this review is to examine the body of evidence supporting the hypothesis of immune enhancement that could be pertinent to Covid-19. We also discuss how this risk could be mitigated so that both hyperimmune globulin and vaccines could be rapidly translated to overcome the current global health crisis. Review. Freely available at: https://www.thelancet.com/pdfs/journals/ebiom/PIIS2352-3964(20)30143-2.pdf

Du, S. Q. and Yuan, W. Mathematical modeling of interaction between innate and adaptive immune responses in COVID-19 and implications for viral pathogenesis. Journal of Medical Virology, 1st May 2020. [Epub ahead of print]. We have applied mathematical modeling to investigate the infections of the ongoing COVID-19 pandemic caused by SARS-CoV-2 virus. We first validated our model using the well-studied influenza viruses and then compared the pathogenesis processes between the two viruses. The interaction between host innate and adaptive immune responses was found to be a potential cause for the higher severity and mortality in COVID-19 patients. Specifically the timing mismatch between the two immune responses has a major impact on the disease progression. The
The adaptive immune response of the COVID-19 patients are more likely to come before the peak of viral load, while the opposite is true for influenza patients. This difference in timing causes delayed depletion of vulnerable epithelial cells in the lungs in COVID-19 patients while enhancing the viral clearance in influenza patients. Stronger adaptive immunity in COVID-19 patients can potentially lead to longer recovery time and more severe secondary complications. Based on our analysis, delaying the onset of adaptive immune responses during early phase of infections may be a potential treatment option for high risk COVID-19 patients. Suppressing the adaptive immune response temporarily and avoiding its interference with the innate immune response may allow the innate immunity to more efficiently clear the virus. Research Article, Abstract Only. Contact the Library for full text.

Resources and Databases

RWT Library and Knowledge Services (COVID-19 resources)

The Library and Knowledge Service are trialling an online system that contains hundreds of links to information, online tools and newly published research. This page contains the latest published information on COVID-19 and provides links to various online resources from The Lancet, UpToDate and Wolters Kluwer. It is continually being adapted to fulfil the requirements of the Trust and its staff. Click here to find out more or go to: https://royalwolverhampton.libguides.com/welcome/covid19

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
- Coronavirus Research Database
- DynaMed
- Google Scholar
- HDAS Databases (Medline, Cinahl etc)
- JAMA
- KnowledgeShare
- LIS-Medical
- McMasterPlus
- Medscape
- New England Journal of Medicine
- NICE Evidence
- NHS Networks
- Public Health Database

Please contact the editors for further information, of 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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