Library Service and Knowledge Hub

Issue 9 COVID-19 Evidence Update

Week Ending 22nd 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/

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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.

Contents

Official Publications

<table>
<thead>
<tr>
<th>Official Publication</th>
<th>Page</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Government Reports</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>CEBM (University of Oxford)</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Cochrane Reviews</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>NICE Guidelines</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>Uncover (University of Edinburgh)</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>UpToDate</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>World Health Organisation</td>
<td>7</td>
<td>24</td>
</tr>
</tbody>
</table>

Original Research

<table>
<thead>
<tr>
<th>Original Research</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>About Covid-19</td>
<td>7</td>
</tr>
<tr>
<td>Business as Usual Post Covid</td>
<td>8</td>
</tr>
<tr>
<td>Cancer and Haematology Services</td>
<td>8</td>
</tr>
<tr>
<td>Cardiology and Cardiothoracic Services</td>
<td>9</td>
</tr>
<tr>
<td>Co-Morbidities</td>
<td>11</td>
</tr>
<tr>
<td>Containment, Transmission and Isolation</td>
<td>11</td>
</tr>
<tr>
<td>Dermatology</td>
<td>12</td>
</tr>
<tr>
<td>Diagnosis and Testing</td>
<td>12</td>
</tr>
<tr>
<td>Education and Training</td>
<td>13</td>
</tr>
<tr>
<td>Elderly Care</td>
<td>13</td>
</tr>
<tr>
<td>Endocrine and Diabetes</td>
<td>13</td>
</tr>
<tr>
<td>Gastroenterology Services</td>
<td>14</td>
</tr>
<tr>
<td>Head and Neck Services</td>
<td>14</td>
</tr>
<tr>
<td>Infection Control and PPE</td>
<td>16</td>
</tr>
<tr>
<td>Intensive and Critical Care Services</td>
<td>17</td>
</tr>
<tr>
<td>Liver and Hepatic Disease</td>
<td>19</td>
</tr>
<tr>
<td>Mental Health and Wellbeing</td>
<td>19</td>
</tr>
<tr>
<td>Neurology and Stroke Services</td>
<td>21</td>
</tr>
<tr>
<td>Obstetrics and Gynaecology</td>
<td>21</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>22</td>
</tr>
<tr>
<td>Paediatric and Neonatal Services</td>
<td>22</td>
</tr>
<tr>
<td>Palliative and End of Life Care</td>
<td>23</td>
</tr>
<tr>
<td>Patient Information</td>
<td>24</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>23</td>
</tr>
<tr>
<td>Physical Activity, Lifestyle and Nutrition</td>
<td>24</td>
</tr>
<tr>
<td>Post Discharge and Rehabilitation</td>
<td>24</td>
</tr>
<tr>
<td>Primary Care Practice</td>
<td>25</td>
</tr>
<tr>
<td>Prognosis</td>
<td>24</td>
</tr>
<tr>
<td>Renal and Urology Services</td>
<td>24</td>
</tr>
<tr>
<td>Research and Trials</td>
<td>25</td>
</tr>
<tr>
<td>Residential and Specialist Care Facilities</td>
<td>25</td>
</tr>
<tr>
<td>Statistics and Mortality</td>
<td>25</td>
</tr>
<tr>
<td>Surgery</td>
<td>25</td>
</tr>
<tr>
<td>Telemedicine and Technology</td>
<td>26</td>
</tr>
<tr>
<td>Trauma and Orthopaedic Services</td>
<td>26</td>
</tr>
<tr>
<td>Treatments for COVID-19</td>
<td>26</td>
</tr>
<tr>
<td>Vaccines, Antibodies and Immunity</td>
<td>28</td>
</tr>
<tr>
<td>Resources and Databases</td>
<td>28</td>
</tr>
</tbody>
</table>
UK Government Reports


NHS England and NHS Improvements. **Clinical guide for supporting compassionate visiting arrangements for those receiving care at the end of life.** NHS England. 11th May 2020. [Online]. The considerations set out here aim to minimise the risk of infection whilst also allowing close family members or friends to accompany and say goodbye to their loved ones at the end of their life and for visits from faith leaders (including chaplains) if desired. These measures relate to visits to people who are close to the end of their lives (24 to 48hrs), recognising this can be difficult to assess with accuracy. In these circumstances, there is minimal additional risk to the dying person from contracting coronavirus. The considerations assert the rights of the dying to see their loved ones and/or to receive religious support. They also aim to reduce the adverse impact on close family or friends of not visiting their loved one before death. **Specialty Guideline.** Freely available at: [https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0393-clinical-guide-for-supporting-compassionate-visiting-arrangements-11-may-2020.pdf](https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0393-clinical-guide-for-supporting-compassionate-visiting-arrangements-11-may-2020.pdf)
NHS England and NHS Improvements. Clinical guide for the management of palliative care in hospital during the coronavirus pandemic: keeping the care in healthcare. NHS England. 22nd April 2020. [Online]. All hospitals have access to specialist palliative care teams, whether as in-house hospital palliative care teams or in-reach teams from local palliative care services. These teams will be able to provide advice and support, but it will not be possible for them to provide direct care to everybody who needs it, especially as the pandemic progresses. Specialty Guideline. Freely available at: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0081-AMENDED-Specialty-guide-Palliative-care-and-coronavirus-v2-2020-04-22.pdf

NHS England and NHS Improvements. Clinical guide for use of anaesthetic machines to provide continuous invasive ventilatory support for adult patients during the coronavirus pandemic. NHS England. 28th April 2020. [Online]. The use of anaesthetic machines as ventilation stations for continuous support of COVID-19 patients as part of surge and super-surge capacity is considered an off-label use. The MHRA recognises that use of anaesthetic machines in this way may be required under current pandemic conditions. This guidance has recently been requested in order to support clinicians (critical care physicians, anaesthetists, nurses and other support staff) in the safe use of anaesthetic machines for this purpose. As with all medical devices, please refer to the manufacturer’s guidance for information about the safe use of specific machines. Specialty Guideline. Freely available at: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/C0377-specialty-guide-use-of-anaesthetic-machines-to-provide-continuous-invasive-ventilatory-support-for-adult.pdf


NHS Resolution. Coronavirus outbreak indemnity FAQ’s. NHS Resolution. 18th May 2020. The updated FAQs published by NHS Resolution on the coronavirus outbreak indemnity includes information which is relevant to community pharmacists, including those returning to the profession to help with the response to the coronavirus pandemic. Legal Guidance. Freely available at: https://resolution.nhs.uk/wp-content/uploads/2020/05/Coronavirus-outbreak-indemnity-FAQs.pdf


Covid-19 Evidence Update, Issue 9 22nd May 2020
Ferner, R. E. and Aronson, J. K. *Drug vidgettes: azithromycin.* CEBM, 13th May 2020. [Online]. Azithromycin is a macrolide antibacterial drug, derived from erythromycin, licensed in the USA and in the UK, and used to treat bacterial infections. It has been used in combination with hydroxychloroquine in the treatment of COVID-19. However, there is an adverse drug–drug interaction between the two, which contraindicates their combined use. **Rapid Review.** Freely available at: https://www.cebm.net/covid-19/drug-vidgettes-azithromycin/

Fleming, S. and Heneghan, C. *COVID-19: Roche antibody test.* CEBM, 14th May 2020. [Online]. According to Roche their new COVID-19 antibody test has “a specificity greater than 99.8% and a sensitivity of 100%”. This short summary discusses how this is calculated. **Summary.** Freely available at: https://www.cebm.net/covid-19/covid-19-roche-antibody-test-14th-may/

Graziadio, S. et al. *A composite reference standard for COVID-19 diagnostic accuracy studies: a roadmap.* CEBM, 18th May 2020. [Online]. The aim is to develop a composite reference standard for COVID-19 diagnosis that will support a standardised approach across research groups to decrease the high false negative rate of rRT-PCR that could penalise the evaluation of diagnostic accuracy of new tests if rRT-PCR is used as a stand-alone reference standard. Currently there is a paucity of robust evidence for the use of blood biomarkers in COVID-19 diagnosis, therefore it is proposed that an extensive list of biomarkers is recorded during the diagnostic accuracy evaluations of the new COVID-19 tests in the summer months in order to help bridge this knowledge gap. To analyse this data, a temporary Composite Reference Standard (CRS) which includes radiological findings will be used to support the identification of biomarkers discriminatory for COVID-19. These will be included in the next iteration of CRS which could be used in the winter studies to discriminate COVID-19 from other respiratory diseases, highly prevalent in the winter months and characterized by similar radiological features to COVID-19. **Rapid Review. Diagnosis.** Freely available at: https://www.cebm.net/covid-19/a-composite-reference-standard-for-covid-19-diagnostic-accuracy-studies-a-roadmap/

Heneghan, C. and Jefferson, T. *COVID-19: have we forgotten our children in all this?* CEBM, 14th May 2020. [Online]. The authors review the recently published UNESCO report on COVID-19 education disruption and response. **Summary.** Freely available at: https://www.cebm.net/covid-19/covid-19-have-we-forgotten-our-children-in-all-this/


Nunan, D. *Loss of smell and taste as symptoms of COVID-19: what does the evidence say?* CEBM, 20th May 2020. [Online]. On Monday 18 May the UK Government added loss of smell (anosmia) and taste (ageusia) to the list of symptoms of coronavirus infection that should warn people to self-isolate for 7 days. Until now, only fever and cough were triggers for people to isolate, in case they had and could spread the infection. The current evidence base is predominantly of poor quality, due mainly to the retrospective and cross-sectional nature of the included study designs. Ongoing studies using symptom tracking in healthy users to prospectively track symptom development are needed to reduce uncertainty. Such studies should also indicate when the presence of anosmia occurs in relation to other symptoms.
which will be critical in helping to reduce the number of false-positive cases. **Overview.** Freely available at: https://www.cebm.net/covid-19/loss-of-smell-and-taste-as-symptoms-of-covid-19-what-does-the-evidence-say/


Severe pneumonia induced by human coronaviruses including SARS-CoV-2 is associated with raised pro-inflammatory cytokine responses, which result in acute pulmonary injury, severe acute respiratory syndrome and possible chronic pulmonary fibrosis. Mast cells are the main source of pro-inflammatory cytokines and bronchoconstrictor mediators. At the time of writing, we found no evidence of the use of mast cell stabilisers, leukotriene antagonists or antihistamines in COVID-19. There was evidence supporting minor short-term symptomatic relief when antihistamines were used for the treatment of the common cold. Further clinical evidence is needed to establish whether mast cell stabilisers may be beneficially repurposed in the treatment of COVID-19. **Rapid Review.** Freely available at: https://www.cebm.net/covid-19/mast-cell-stabilisers-leukotriene-antagonists-and-antihistamines-a-rapid-review-of-effectiveness-in-covid-19/

**Cochrane Reviews**

Valk, S. J. et al. **Convalescent plasma or hyperimmune immunoglobulin for people with COVID-19: a rapid review.** CDSR, 14th May 2020. [Online].

We identified eight studies (seven case-series and one prospectively planned single-arm intervention study) with a total of 32 participants (range 1 to 10). Most studies assessed the risks of the intervention; reporting two adverse events (potentially grade 3 or 4), one of which was a serious adverse event. We are very uncertain whether convalescent plasma is effective for people admitted to hospital with COVID-19 as studies reported results inconsistently, making it difficult to compare results and to draw conclusions. We identified very low-certainty evidence on the effectiveness and safety of convalescent plasma therapy for people with COVID-19; all studies were at high risk of bias and reporting quality was low. No RCTs or controlled non-randomised studies evaluating benefits and harms of convalescent plasma have been completed. There are 47 ongoing studies evaluating convalescent plasma, of which 22 are RCTs, and one trial evaluating hyperimmune immunoglobulin. We will update this review as a living systematic review, based on monthly searches in the above mentioned databases and registries. These updates are likely to show different results to those reported here. **Rapid Review.** Freely available at: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD013600/full

**NICE**


NICE. **COVID-19 rapid guideline: chronic kidney disease. NG 176.** NICE. 15th May 2020. [Online]. The purpose of this guideline is to maximise the safety of adults with chronic kidney disease 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 Guideline.** Freely available at: https://www.nice.org.uk/guidance/ng176

NICE. **COVID-19 rapid guideline: interstitial lung disease. NG177.** NICE, 15th May 2020. [Online]. The purpose of this guideline is to maximise the safety of adults with interstitial lung disease, including idiopathic pulmonary fibrosis and pulmonary sarcoidosis, 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 Guideline.** Freely available at: https://www.nice.org.uk/guidance/ng177

NICE. **COVID 19 rapid evidence summary: anakinra for COVID-19 associated secondary haemophagocytic lymphohistiocytosis. ES 26.** NICE, 21st May 2020. Anakinra has been used (off label) for cytokine storm syndromes triggered by other viruses (such as herpes viruses), including sHLH, and is reported to be relatively well tolerated, with a favourable safety profile. Caution is advised when using immunomodulating therapies in critically ill people with known or suspected infections because they increase the
risk of infectious complications. However, it has been proposed that anakinra may be an option if such a treatment is considered necessary because it has a relatively short half-life and can be discontinued quickly if an adverse effect or concern for worsening infection arises (Wampler Muskardin et al. 2020). Anakinra can be given intravenously (off label) or subcutaneously and has a large therapeutic window. When anakinra is effective for cytokine storm syndromes, it reportedly works within 2 or 3 days (Cron et al. 2020). Rapid Evidence Summary. Freely available at: https://www.nice.org.uk/advice/es25/chapter/Key-messages

NICE. COVID 19 rapid evidence summary: angiotensin-converting enzyme inhibitors (ACEIs) or angiotensin receptor blockers (ARBs) in people with or at risk of COVID-19. ES24. NICE, 21st May 2020. [Online].

Despite biological plausibility for the role of ACEIs and ARBs in both increasing and decreasing the risk of COVID-19 and its complications, this evidence review has not found any observational or experimental data to support these hypotheses. However, the risks of stopping treatment with an ACEI or an ARB, such as worsening heart failure or hypertension, are well understood. Rapid Evidence Summary. Freely available at: https://www.nice.org.uk/advice/es24/chapter/Factors-for-decision-making


No evidence was found to suggest that people taking NSAIDs for a long-term condition should be advised to stop treatment in the context of COVID-19. Stopping or switching NSAID treatment could have a negative impact on some people. Clinicians should follow advice in the BNF and the NICE Clinical Knowledge Summary on issues around prescribing NSAIDs. When considering an NSAID, individual risk factors for adverse effects should be taken into account, including any contraindications, drug interactions, medical history, and any monitoring requirements. The lowest effective dose of an NSAID should be used for the shortest period of time required to control symptoms and the need for long-term treatment should be reviewed periodically. At this time, policy decisions on whether NSAIDs should be used long-term in people with confirmed or suspected COVID-19 will need to take into account the risk of adverse effects of NSAIDs, the risk of complications of COVID-19, and the presence of comorbidities that increase the risk of more severe COVID-19. Rapid Evidence Summary. Freely available at: https://www.nice.org.uk/advice/es25/chapter/Key-messages


The technology is not new, but it is new to use cytokine adsorption devices specifically to treat COVID-19. The devices are intended to return the cytokine concentration in the blood to normal levels. This is expected to prevent organ failure and death as a result of cytokine release syndrome in people with COVID-19. Unlike drug therapies, adsorption cartridges are concentration dependent, so the cytokines in the blood at the highest concentrations will be removed from the blood at a faster rate. Technical Briefing. Freely available at:

Uncover (University of Edinburgh)

None this issue.

UpToDate


Individuals with COVID-19 may have a number of coagulation abnormalities (in the direction of an underlying hypercoagulable state), raising questions about appropriate evaluations and interventions to prevent or treat thrombosis. This topic reviews evaluation and management of coagulation abnormalities in individuals with COVID-19. Synthesis of Current Practice. Freely available at:


Solid organ transplant recipients may be at increased risk for COVID-19 because they are immunosuppressed and have frequent contact with the health care system. There is also a theoretical risk of transmission of SARS-CoV-2 (the virus that causes COVID-19) with organ transplantation, although no cases of organ transplant-transmitted infection
have been described to date. This topic reviews aspects of COVID-19 that are specific to solid organ transplantation, including screening prior to transplantation, distinct clinical features, managing immunosuppression, and important drug interactions. **Synthesis of Current Practice.** Freely available at:

**World Health Organisation**


This brief summarizes the current evidence on the impact of ACE inhibitors or angiotensin receptor blockers on severe acute respiratory illness due to SARS CoV-2. **Scientific Brief.** Freely available at: [https://www.who.int/news-room/commentaries/detail/covid-19-and-the-use-of-angiotension-converting-enzyme-inhibitors-and-receptor-blockers](https://www.who.int/news-room/commentaries/detail/covid-19-and-the-use-of-angiotension-converting-enzyme-inhibitors-and-receptor-blockers)


Recent reports from Europe and North America describe clusters of children and adolescents requiring admission to intensive care units with a multisystem inflammatory condition with some features similar to those of Kawasaki disease and toxic shock syndrome. Case reports and small series have described a presentation of acute illness accompanied by a hyperinflammatory syndrome, leading to multiorgan failure and shock. Initial hypotheses are that this syndrome may be related to COVID-19. **Scientific Briefing.** Freely available at: [https://www.who.int/news-room/commentaries/detail/multisystem-inflammatory-syndrome-in-children-and-adolescents-with-covid-19](https://www.who.int/news-room/commentaries/detail/multisystem-inflammatory-syndrome-in-children-and-adolescents-with-covid-19)


**Original Research**

**About Covid-19**


Paramedics are at the frontline of healthcare delivery and this includes during the current coronavirus pandemic. This pandemic poses specific problems for paramedics, which include not only treating and transporting infected patients, but also issues around decontamination and disinfection of ambulances and medical equipment. Of particular concern is the pneumonia associated with the 2019 novel coronavirus. Data on COVID-19 pneumonia are developing. Ongoing research demonstrates that almost all serious consequences of COVID-19 feature pneumonia, especially in older people and those with comorbidities. Paramedics can have a profound effect on the care of patients with pneumonia. Effective management of COVID-19 pneumonia by the paramedic should centre around prompt recognition, early administration of oxygen and intravenous fluids and transfer to hospital. In some situations, paramedics may need to be involved in the delivery and maintenance of airway adjuncts in patients with COVID-19 pneumonia. **Clinical Practice.** Freely available at: [https://www.magonlinelibrary.com/doi/pdf/10.12968/jpar.2020.12.5.179](https://www.magonlinelibrary.com/doi/pdf/10.12968/jpar.2020.12.5.179)

Hill, B. **Coronavirus: origins, signs, prevention and management of patients.** British Journal of Nursing, 29 (7) 2020, pp. 399-402 [Online].

Covid-19 Evidence Update, Issue 9 22nd May 2020
The author provides an overview of the current pandemic. **Summary.** Freely available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/bjon.2020.29.7.399

**Business as Usual Post Covid-19**


It is politicians who have to decide when to release the lockdown, and in what way. In doing so, they have to balance many considerations (as with any decision). Often the different considerations appear incommensurable so that only the roughest of judgements can be made. For example, in the case of COVID-19, one has to compare the economic benefits of releasing the lockdown with the social and psychological benefits, and then compare the total of these with the increase in deaths that would result from an early exit. We here propose a way of doing this more systematically. **Report.** Freely available at: http://ftp.iza.org/dp13186.pdf


The coronavirus crisis has required a co-ordinated response between the UK and devolved governments. The devolved governments of Scotland, Wales and Northern Ireland are responsible for key public services affected by the pandemic, including the NHS, education and public transport, and for implementing the lockdown within their territories. For these matters, a common approach cannot be imposed by UK ministers, and instead can only be achieved through agreement. In the early stages of the pandemic, there has been close co-ordination between the four administrations. There have been some differences in policy and guidance, but on the big issues, including the lockdown, the governments have been on the same page. As the UK enters its sixth week of lockdown, the four governments are beginning to think about the ‘exit strategy’ from the unprecedented restrictions on personal freedom and other temporary policies imposed to fight coronavirus. Since key powers used in the pandemic response are devolved, this could potentially lead to divergence between the four nations, with, for example, restrictions changed sooner in some places than in others. A co-ordinated exit strategy would be preferable. But co-ordination is not the same as homogeneity, and a UK strategy is not the same as a UK government strategy. **Report.** Freely available at: https://www.instituteforgovernment.org.uk/sites/default/files/publications/four-nation-exit-strategy-coronavirus.pdf

**Cancer and Haematology Services**

de Marinis, F. *Results of multilevel containment measures to better protect lung cancer patients from COVID-19: The IEO Model.* Frontiers in Oncology, 22nd April 2020. [Online]. In this study, we report the results of proactive measures including social media, telemedicine, and telephone triage for screening patients with lung cancer during the COVID-19 outbreak in the European Institute of Oncology (Milan, Italy). Proactive management and containment measures, applied in a structured and daily way, has significantly aided the identification of advance patients with suspected symptoms related to COVID-19, limiting their admission to our cancer center; we have thus been more able to protect other patients from possible contamination and at the same time guarantee to the suspected patients the immediate treatment and evaluation in referral hospitals for COVID-19. **Quality Improvement.** Freely available at: https://www.frontiersin.org/articles/10.3389/fonc.2020.00665/full


As the COVID-19 pandemic has swept across the world, a striking difference has been seen between the sexes. But why are men so much more susceptible to severe outcomes from COVID-19 than women? Suspicions naturally turn to the sex hormones, and there have been suggestions that estrogen may be protective against COVID-19 in females and/or that androgens worsen COVID-19 outcomes in males. New data supporting the androgen theory come from a study in Italy. **Population Study.** Freely available at: https://www.annalsofoncology.org/article/S0923-7534(20)39797-0/pdf


The current COVID-19 pandemic presents a substantial obstacle to cancer patient care. Data from China as well as risk models suppose that cancer patients, particularly those on active, immunosuppressive therapies are at higher risks of severe infection from the illness. In addition, staff illness and restructuring of services to deal with the crisis will
inevitably place treatment capacities under significant strain. These guidelines aim to expand on those provided by NHS England regarding cancer care during the coronavirus pandemic by examining the known literature and provide guidance in managing patients with urothelial and rarer urinary tract cancers. In particular, they address the estimated risk and benefits of standard treatments and consider the alternatives in the current situation. As a result, it is recommended that this guidance will help form a framework for shared decision making with patients. Moreover, they do not advise a one-size-fits-all approach but recommend continual assessment of the situation with discussion within and between centres. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7180390/

Cancer has become a prevalent disease, affecting millions of new patients globally each year. The COVID-19 pandemic is having far-reaching impacts around the world, causing substantial disruptions to health and health care systems that are likely to last for a prolonged period. Early data have suggested that having cancer is a significant risk factor for mortality from severe COVID-19. A diverse group of medical oncologists met to formulate detailed practical advice on systemic anticancer treatments during this crisis. In the context of broad principles, issues including risks of treatment, principles of prioritizing resources, treatment of elderly patients, and psychosocial impact are discussed. Detailed treatment advice and options are given at a tumor stream level. We must maintain care for patients with cancer as best we can and recognize that COVID-19 poses a significant competing risk for death that changes conventional treatment paradigms. Evidence Based Guideline. Abstract only, please contact the library for full text.

Surgery remains the best line of defence in many solid organ tumours especially in early stage and is potentially curative. China, the source of this pandemic, has taken more than 3 months to enter the post transitional phase of this pandemic. Deferring cancer surgeries for this long period may have a direct impact on the long-term outcomes of cancer patients. Many surgical oncology associations across the globe have come up with triage guidelines for surgical care of cancer patients; however, these are based on expert opinion rather than actual data. Herein, we intend to review these guidelines with respect to the risk of disease progression in cancer patients. In the absence of actual data on cancer surgery care during this pandemic, clinical decisions should be based on careful consideration of disease-related and patient-related factors. While some of the cancer surgeries can be safely delayed for some time, how long we can delay surgeries safely cannot be answered/explained by any means. Thorough evaluation and discussion by an expert and experienced multidisciplinary team appears to be the most effective way forward.
Review. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7212248/

Cardiology and Cardiothoracic Services

Patients with cardiovascular risk factors or established cardiovascular disease have an increased risk of developing coronavirus disease 19 and have a worse outcome when infected, but translating this notion into effective action is challenging. At present it is unclear whether cardiovascular therapies may reduce the likelihood of infection, or improve the survival of infected patients. Given the crucial importance of this issue for clinical cardiologists and all specialists dealing with coronavirus disease 19, we tried to recapitulate the current evidence and provide some practical recommendations. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7218353/

In face of the pandemic of the novel coronavirus disease 2019 (COVID-19), the management of patients with cardiovascular risk factors and/or disease is challenging. The cardiovascular complications evidenced in patients with COVID-19 derive from several mechanisms, ranging from direct viral injury to complications secondary to the inflammatory and thrombotic responses to the infection. The proper care of patients with COVID-19 requires special attention to the cardiovascular system aimed at better outcomes. Evidence Based Guideline. Freely available at:

Covid-19 Evidence Update, Issue 9 22nd May 2020
Covid-19 Evidence Update, Issue 9 22nd May 2020


Recent EACVI recommendations described the importance of limiting cardiovascular imaging during the COVID-19 pandemic in order to reduce virus transmission, protect healthcare professionals from contamination, and reduce consumption of personal protective equipment. However, an elevated troponin remains a frequent request for cardiac imaging in COVID-19 patients, partly because it signifies cardiac injury due to a variety of causes and partly because it is known to convey a worse prognosis. The present paper aims to provide guidance to clinicians regarding the appropriateness of cardiac imaging in the context of troponin elevation and myocardial injury, how best to decipher the mechanism of myocardial injury, and how to guide patient management. Evidence Based Guideline. Freely available at: https://academic.oup.com/ehjcimaging/advance-article/doi/10.1093/ehjci/jeaa136/5835726


We observed there was no obvious difference in clinical characteristics between RAS blockers and non-RAS blockers groups. These data suggest ACEIs/ARBs may have few effects on increasing the clinical severe conditions of COVID-19. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7199677/pdf/atm-08-07-430.pdf


The objective of this study was to investigate the characteristics and clinical significance of myocardial injury in patients with severe coronavirus disease 2019 (COVID-19). It concludes that the risk of in-hospital death among patients with severe COVID-19 can be predicted by markers of myocardial injury, and was significantly associated with senior age, inflammatory response, and cardiovascular comorbidities. Systematic Review. Freely available at: https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehaa408/5835730


Human coronavirus-associated myocarditis is known, and a number of COVID-19-related myocarditis cases have been reported. The pathophysiology of COVID-19-related myocarditis is thought to be a combination of direct viral injury and cardiac damage due to the host's immune response. COVID-19 myocarditis diagnosis should be guided by insights from previous coronavirus and other myocarditis experience. The clinical findings include changes in ECG, cardiac biomarkers, and impaired cardiac function. When cardiac MRI is infeasible, cardiac CT angiography with delayed myocardial imaging may serve to exclude significant coronary artery disease and identify myocardial inflammatory patterns. Because many COVID-19 patients have cardiovascular comorbidities, myocardial infarction should be considered. Where the diagnosis remains uncertain, an endomyocardial biopsy may help identify active cardiac infection through viral genome amplification and possibly refine the treatment risks of systemic immunosuppression. Arrhythmias are not uncommon in the COVID-19 patients; however, its pathophysiology is still speculative. Nevertheless, clinicians should be vigilant to provide prompt monitoring and treatments. The long-term impact of COVID-19 myocarditis, including in the majority of mild cases remains unknown. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7199677/


Venous thromboembolism (VTE), a frequent cardiovascular and/or respiratory complication among hospitalized patients, is one of the known sequela of the illness. Hospitalized COVID-19 patients are often elderly, immobile, and show signs of coagulopathy. Therefore, it is reasonable to assume a high incidence of VTE among these patients.
Presently, the incidence of VTE is estimated at around 25% of patients hospitalized in the intensive care unit for COVID-19 even under anticoagulant treatment at prophylactic doses. In this review, we discuss present knowledge of the topic, the unique challenges of diagnosis and treatment of VTE, as well as some of the potential mechanisms of increased risk for VTE during the illness. Understanding the true impact of VTE on patients with COVID-19 will potentially improve our ability to reach a timely diagnosis and initiate proper treatment, mitigating the risk for this susceptible population during a complicated disease. Review. Freely available at: https://www.karger.com/Article/FullText/508233

The authors of this prospective cohort study evaluated the impact of co-administered antiviral agents (lopinavir, ritonavir, darunavir) on DOAC levels in 32 patients with COVID-19. Compared with prehospitalization levels, serum concentrations of DOACs were approximately six times higher during the index hospitalization. The authors note limitations of their study, including the inability to account for potential confounding factors, such as co-occurring organ dysfunction or other drug–drug interactions affecting DOAC levels. No clinical bleeding endpoints were included in the analysis. Cohort Study. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1111/jth.14871

This interim consensus guidance provides a framework for clinicians managing patients with cancer during the COVID-19 pandemic. In view of the rapidly changing situation, clinicians must also monitor national, state, local and institutional policies, which will take precedence. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.5694/mja2.50607

In this case series of 3 patients with COVID-19, histology revealed SARS-CoV-2 viral elements in endothelial cells, with evidence of endotheliitis across vascular beds of multiple organs. COVID-19 endotheliitis could contribute to microcirculatory impairment and sequelae such as thrombosis and ischemia. Case Report. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7172722/pdf/main.pdf

Co-Morbidities

Basal hormone milieu, defective response of both innate and adaptive immune system and sedentariness are major determinants in the severity of influenza viral infection in obese patients. Being overweight not only increases the risk of infection and of complications for the single obese person, but a large prevalence of obese individuals within the population might increase the chance of appearance of more virulent viral strain, prolongs the virus shedding throughout the total population and eventually might increase overall mortality rate of an influenza pandemic. The study concludes, due to prolonged viral shedding, quarantine in obese subjects should likely be longer than normal weight individuals. Prognosis. Freely available at: https://link.springer.com/article/10.1007/s00592-020-01522-8

Containment, Transmission and Isolation

Howe, M.S. Mouthwash; can it reduce levels of COVID-19 in the mouth? The Dental Elf. 4th May 2020, [Online].
From this review four mouthwashes were identified: 0.2% chlorhexidine mouthwash (CHX), 1% povidone iodine (PI), 1.5% hydrogen peroxide (H2O2), or 0.05% hypochlorous acid (HOCl). CHX had poor virucidal properties and the other three (PI, H2O2, HOCl) all have good virucidal properties but poor microbial substantivity, with the benefits being lost within a few minutes as saliva flow may potentially replace the virus. Of the three the most clinically acceptable in terms of virucidal activity, commercial availability, and taste is the 1.5% hydrogen peroxide. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/oral-medicine-and-pathology/mouthwash-reduce-levels-covid-19-mouth/?utm_source=rss&utm_medium=rss&utm_campaign=mouthwash-reduce-levels-covid-19-mouth
Dermatology


Skin lesions, and chilblains in particular, are a common cutaneous finding during the COVID-19 pandemic, according to results of a retrospective nationwide study from France. *Retrospective Study. Freely available at:* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7198162/


A 48-year-old man diagnosed with COVID-19 presented with a slightly pruritic petechial rash 3 days after onset of fever. The rash involved his buttocks, popliteal fossae, proximal anterior thighs, and lower abdomen while sparing the crural folds. Histopathology revealed a superficial perivascular lymphocytic infiltrate with abundant red cell extravasation, focal papillary edema, focal parakeratosis, and isolated dyskeratotic cells. Some histologic overlap with pityriasis rosea was noted. *Case Report. Freely available at:* https://jamanetwork.com/journals/jamadermatology/fullarticle/2765614

Diagnosis and Testing


The sensitivity of the IC assay was low during the early phase in asymptomatic and symptomatic patients. Therefore, IC assay alone is not recommended for initial diagnostic testing for COVID-19. When RT-qPCR cannot be used, the combination of chest CT and IC assay may be useful for diagnosing COVID-19.


It is unclear whether seasonal changes, school closures or other public health interventions will result in a slowdown of the current coronavirus disease 2019 (COVID-19) pandemic. We aimed to determine whether epidemic growth is globally associated with climate or public health interventions intended to reduce transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Epidemic growth of COVID-19 was not associated with latitude and temperature, but may be associated weakly with relative or absolute humidity. Conversely, public health interventions were strongly associated with reduced epidemic growth. *Cohort Study. Freely available at:* https://www.cmaj.ca/content/cmaj/early/2020/05/08/cmaj.200920.full.pdf


Errors in diagnosis are relatively common in primary care which often result in serious harm to patients. The majority of these errors are preventable. This article describes a diagnostic error checklist, SAFER PRACTICES, which can be used to help clinicians prepare themselves for consulting in patients with suspected or confirmed COVID-19 disease so that they come to the consultation with the correct medical knowledge, clinical assessment plan and diagnostic reasoning required to reduce the risk of diagnostic error. It can also be used during the consultation to deliver a systematic approach to the prevention and detection of diagnostic errors. *Check List. Freely available at:* https://www.magonlinelibrary.com/doi/pdf/10.12968/pnur.2020.31.5.194


The purpose of this study was to evaluate the diagnostic efficacy of Densely Connected Convolutional Networks (DenseNet) for detection of COVID-19 features on high resolution computed tomography (HRCT). It concludes that deep learning (DL) with DenseNet can accurately classify COVID-19 on HRCT with an AUC of 0.98, which can reduce the miss diagnosis rate (combined with radiologists’ evaluation) and radiologists’ workload. *Clinical Prediction Guide. Freely available at:* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7210135/pdf/atm-08-07-450.pdf

Covid-19 Evidence Update, Issue 9 22nd May 2020
Education and Training


Elderly Care


Early on, geriatricians in Israel viewed with increasing alarm the spread of COVID-19. It was clear that this viral disease exhibited a clear predilection for and danger to older persons. Informal contacts began with senior officials from the country’s Ministry of Health, the Israel Medical Association and the country’s largest Health Fund; this in order to plan an approach to the possible coming storm. A group was formed, comprising three senior geriatricians, a former dean, palliative care specialist and a lawyer/ethicist. The members made every effort to ensure that its recommendations would be practical while at the same time taking into account the tenets of medical ethics. The committee’s main task was to think through a workable approach were ICU/ventilator resources be far outstripped by those requiring such care. Recommendations included the approach to older persons both in the community and long term care institutions, a triage instrument and palliative care. Patient autonomy was emphasized with a strong recommendation for people of all ages to update their advance directives or if they did not have any, to quickly draw them up. Considering the value of distributive justice, with respect to triage, a “soft utilitarian” approach was advocated with the main criteria being function and co-morbidity. While chronological age was rejected as a sole criterion, in the case of an overwhelming crisis, “biological age” would enter into the triage considerations; but only in the case of distinguishing between people with equal non-age related deficits. The guideline emphasized that no matter what, in the spirit of beneficence, anyone who fell ill must receive active palliative care throughout the course of a COVID-19 infection but especially at the end of life. Furthermore, in the spirit of non-maleficence, the very frail, old-old and severely demented would be actively protected from dying on ventilation. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/jgs.16554

Endocrine and Diabetes


This commentary highlights the use of digital technology in pediatric patients with diabetes as a response to the COVID-19 crisis. The authors note the sudden shift to remote care for patients with diabetes and state that the pediatric population has fared better than adults because they are more at ease using the required technology. They also note how remote care has worked during this period and comment on how platforms like social media have been implemented to improve care. Commentary. Freely available at: https://www.thelancet.com/journals/landia/article/PIIS2213-8587(20)30155-8/fulltext


The antimalarial drug hydroxychloroquine (HCQ) has long been used as a disease-modifying antirheumatic drug for the treatment of several inflammatory rheumatic diseases. Over the last three decades, various studies have shown that HCQ plays also a role in the regulation of glucose homeostasis. Although the mechanisms of action underlying the glucose-lowering properties of HCQ are still not entirely clear, evidence suggests that this drug may exert multifaceted effects on glucose regulation, including improvement of insulin sensitivity, increase of insulin secretion, reduction of hepatic insulin clearance and reduction of systemic inflammation. Preliminary studies have shown the safety and efficacy of HCQ (at a dose ranging from 400 to 600 mg/day) in patients with type 2 diabetes over a short-
term period. In 2014, HCQ has been approved in India as an add-on hypoglycemic agent for patients with uncontrolled type 2 diabetes. However, large randomized controlled trials are needed to establish the safety and efficacy profile of HCQ in patients with type 2 diabetes over a long-term period. With regard to the COVID-19 pandemic, several medications (including HCQ) have been used as off-label drugs due to the lack of proven effective therapies. However, emerging evidence shows limited benefit from HCQ use in COVID-19 in general. The aim of this manuscript is to comprehensively summarize the current knowledge on the antihyperglycemic properties of HCQ and to critically evaluate the potential risks and benefits related to HCQ use in patients with diabetes, even in light of the current pandemic scenario. 


Means, C. *Mechanisms of increased morbidity and mortality of SARS-CoV-2 infection in individuals with diabetes; what this means for an effective management strategy.* Metabolism, 28th April 2020. [Epub ahead of print].
This commentary explores several reasons why individuals with diabetes are more at risk from infectious processes such as COVID-19. The authors discuss how hyperglycemia and metabolic dysfunction may decrease the body’s immunity to fight infection and increase a proinflammatory state. The article highlights several theories regarding the pathogenesis of COVID-19 mortality in those with diabetes or taking diabetes medications. *Commentary. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7187878/*

Riddle, M. C. et al. *COVID-19 in people with diabetes: urgently needed lessons from early reports.* Diabetes Care, 14th May 2020. [Epub ahead of print]. Certain groups are more vulnerable to COVID-19, notably older people and those with underlying medical conditions. Because diabetes is one of the conditions associated with high risk, the diabetes community urgently needs to know more about COVID-19 and its effects on people with diabetes. *Commentary. Freely available at: https://care.diabetesjournals.org/content/diacare/early/2020/05/13/dci20-0024.full.pdf*

**Gastroenterology**

Elli, L. et al. *Endoscopy during the COVID-19 outbreak: experience and recommendations from a single center in a high--incidence scenario.* Digestive and Liver Disease, 27th April 2020. [Epub ahead of print]. A dramatic SARS-Cov-2 outbreak is hitting Italy hard. To face the new scenario all the hospitals have been re-organised in order to reduce all the outpatient services and to devote almost all their personnel and resources to the management of Covid-19 patients. As a matter of fact, all the services have undergone a deep re-organization guided by: the necessity to reduce exams, to create an environment that helps reduce the virus spread, and to preserve the medical personnel from infection. In these days a re-organization of the endoscopic unit, sited in a high-incidence area, has been adopted, with changes to logistics, work organization and patients selection. With the present manuscript, we want to support gastroenterologists and endoscopists in the organization of a “new” endoscopy unit that responds to the “new” scenario, while remaining fully aware that resources availability and local circumstances may extremely vary from unit to unit. *Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7183950/*


**Head and Neck Services**

See also *Infection Control and PPE*

Barca, I. et al. *Management in oral and maxillofacial surgery during the COVID-19 pandemic: our experience.* The Britis Journal of Oral and Maxillofacial Surgery, 27th April 2020. [Epub ahead of print]. A novel β-coronavirus (2019-nCOV), identified in Wuhan City in late December 2019, is generating a rapid and tragic health emergency in Italy due to the need to provide assistance to an uncontrollable number of infected patients and,
at the same time, treat all the non-deferrable oncological and traumatic maxillofacial conditions. This article summarises the clinical and surgical experience of Maxillofacial Surgery Unit of "Magna Graecia" University (Catanzaro -Italy) during the COVID-19 pandemic and would like to provide a number of recommendations that should facilitate the scheduling process of surgical activities during the COVID-19 pandemic and reduce the risk of infection among healthcare professionals. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7183988/

Howe, M. S. Re-opening of dental services: a rapid review of international sources. The Dental Elf, 14th May 2020. [Online]. The coronavirus 2 (SARS-CoV-2 [Covid-19]) pandemic has shut, or severely restricted the provision of only but the most essential dental care globally. From the data now currently available we have past the initial peak of infection within the population but it may still take a considerable time to develop a treatment or vaccine for the virus, in the meantime we will have to learn to function with the virus in the community. The purpose of this rapid review was to scope through the current international guidelines on re-opening dental services to help policy and decision makers establish robust practical evidence-based guidelines. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/re-opening-of-dental-services-review-international-sources/


Suri, S. et al. Clinical orthodontic management during COVID-19 pandemic. The Angle Orthodontist, 27th April 2020. [Epub ahead of print]. During the spread of the COVID-19 pandemic, elective orthodontic treatment should be suspended and resumed only when permitted by federal, provincial, and local health regulatory authorities. Emergency orthodontic treatment can be provided by following a contingency plan founded on effective communication and triage. Treatment advice should be delivered remotely first when possible, and where necessary, in person treatment can be performed in a well-prepared operatory following the necessary precautions and infection prevention and control (IPAC) protocol. Review. Freely available at: https://meridian.allenpress.com/angle-orthodontist/article/doi/10.2319/033120-236.1/431784/Clinical-orthodontic-management-during-the-COVID

Thamboo, A. et al. Clinical evidence based review and recommendations of aerosol generating medical procedures in otolaryngology – head and neck surgery during the COVID-19 pandemic. Journal of Otolaryngology – Head and Neck Surgery, 49 (1) 2020, pp. 28. During the COVID-19 pandemic, special care should be taken when CO2 lasers, electrocautery and high-speed rotating devices are used in potentially infected tissue. Tracheal procedures like tracheostomy and endotracheal suctioning can also result in airborne transmission via small virus containing aerosols. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7202463/

Wierzbicka, M. et al. Recommendations of the Main Board of the Polish Society of Otorhinolaryngologists, Head and Neck Surgeons for providing services during the COVID-19 pandemic for outpatient and hospital practices. Polish Journal of Otolaryngology, 74 (3) 2020. [Online]. Recommendations of the Main Board of the Polish Society of Otorhinolaryngologists, Head and Neck Surgeons for providing services during the COVID-19 pandemic constitute the guidance to outpatient and hospital practices in all cases where contact with a patient whose status of COVID-19 is unknown. They have been created based on world publications and recommendations due to the current state of the COVID-19 pandemic. Justification for suspension of planned provision of services in the first phase of a pandemic was presented. The indication of the best medical practices for the time of stabilization, but with the persistence of the risk of COVID-19 infection in the population are discussed. The possibility of providing services in the following months of the pandemic is important. We provide the Covid-19 Evidence Update, Issue 9 22nd May 2020 15
Infection Control and PPE


Health care workers experience significant burdens from coronavirus infections, including SARS-CoV-2. Use of PPE and infection control training are associated with decreased infection risk, and certain exposures are associated with increased risk. Rapid Review. Freely available at: https://www.acpjournals.org/doi/10.7326/M20-1632


The 2019 novel coronavirus disease (COVID-19) pandemic has brought the effects of device-related pressure ulcers (DRPU) into sharp focus. With the increased use of personal protective equipment (PPE), including face masks, continuous positive airway pressure (CPP) masks and other devices, the incidence of DRPUs among health professionals and patients alike has risen starkly. As such, the Journal of Wound Care (JWC) consensus document, Device-related pressure ulcers: SECURE prevention, published in February 2020, is more relevant than ever. To help support patients and frontline health professionals, JWC is republishing the consensus in a digital format, along with a new introductory article outlining the DRPU risks posed by PPE and other medical devices used by patients and health professionals during the pandemic, and how the skin damage can be avoided. The aim is to provide frontline staff with a clear, simple strategy on how to prevent the risk of personal skin damage and/or DRPU during the pandemic, as well as point them in the direction of more indepth guidance on long-term strategies for prevention, for both themselves and patients. Practice Guidance. Freely available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/jowc.2020.29.5.245

Health Protection Scotland. Review of national and international guidance on infection prevention and control measures for personal protective equipment (PPE) and aerosol generating procedures (AGPs) for COVID-19. HPS, 20th May 2020. [Online]. This document outlines recommendations on Personal Protective Equipment (PPE) and Aerosol Generating Procedures (AGPs) from national and international guidance from key organisations and will be updated weekly during the COVID-19 pandemic. Guideline. Freely available at: https://hpspubsrepo.blob.core.windows.net/hps-website/nss/3048/documents/1_covid-19-ipc-guidance-comparison-for-ppe.pdf

Howe, M. S. Are we sleepwalking into PPE paralysis? The Dental Elf, 18th May 2020. [Online].

As we approach a return to clinical practice policy makers need to be mindful that the dental profession is already highly proficient in cross infection control, and the benefits of new elaborate PPE protocols regarding aerosol generating procedures may be marginal in the light of low disease prevalence. If we need 300,000 participants in a study it may be impossible to practically demonstrate significant benefits to patient safety from the perfect PPE model compared to the harms created by expense and access. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/sleepwalking-ppe-paralysis/

Howe, M. S. Eye protection equipment for preventing transmission of COVID-19 in primary care. The Dental Elf, 11th May 2020. [Online]. There is no direct evidence from randomised trials that eye protection equipment alone prevents transmission of COVID-19. Indirect evidence suggests that healthcare workers’ conjunctivae could be exposed to infective droplets and aerosols from patients during close contact. It is important to assess contagion risk

Covid-19 Evidence Update, Issue 9 22nd May 2020
of every encounter and take appropriate precautions. Where close contact is required, guidance for full personal protective equipment should be followed. For non-AGPs, there is no evidence from randomised trials that eye protective equipment provides additional protection. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/eye-protection-preventing-transmission-covid-19-primary-care/.

Howe, M. S. PPE: which comes first, the mask or the gown? The Dental Elf. 13th May 2020. [Online].

At present there is a high degree of uncertainty over the prevalence of infected/recovered individuals in the population who could attend a dental surgery for treatment, this uncertainty increases the possibility of cross infection via the sessional use of PPE if an asymptomatic patient should attend for treatment. This also holds true if the PPE is going to be changed between AGPs as there is also a risk of cross contamination of the new PPE, wearer, and surgery environment if doffing and re-donning is not performed perfectly. In a study by Phan and co-workers they found that 11% of scrub samples, and 7% of face samples were positive for respiratory virus after doffing, and overall 90% of observed doffing was incorrect. As a precautionary principle perhaps these small but important changes in the donning of PPE should be considered; mask, visor, hand hygiene, then gown and gloves. The concern here is not about maintaining sterility as in routine surgery but trying to avoid virus transfer to the new PPE while we await more data on the risk posed by AGPs of dental origin to both the patients and the dental team. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/ppe/.

Howe, M. S. What is the most appropriate gown/apron for preventing Covid-19 contaminated fluids transfer in dental practice? The Dental Elf. 8th May 2020. [Online].

From this reanalysis of the primary data the reusable cotton surgical gown may be more practical in the dental environment in the long-term than the disposable fluid resistant gown due to its reduce potential for cross contamination during use. The plastic apron creates the most cross contamination and should only be used if there is significant risk of fluid contamination. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/what-is-the-most-appropriate-gown/apron-for-preventing-covid-19-contaminated-fluids-transfer-in-dental-practice/.

Howe, M. S. Which occupations have the highest potential exposure to the coronavirus (COVID-19)? The Dental Elf. 19th May 202. [Online].

From the data presented in this opinion piece we can clearly see that the dental profession works in an environment that poses a high risk of exposure to respiratory disease. We can also see that as a profession we suffer less respiratory disease than our peers, especially those not working in the healthcare sector, and I would propose this is due to the high degree of training regarding cross-infection and careful use of PPE. It is important however to remember that this data was collected between 2001 and 2010 so it does not represent the current situation regarding Covid-19. Rapid Review. Freely available at: https://www.nationalelfservice.net/dentistry/dental-workforce/occupations-highest-potential-exposure-covid-19/.


One important aspect, highlighted by many global health organizations, is that this novel coronavirus outbreak may be especially hazardous to healthcare personnel, including laboratory professionals. Therefore, the aim of this document, prepared by the COVID-19 taskforce of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC), is to provide a set of recommendations, adapted from official documents of international and national health agencies, on biosafety measures for routine clinical chemistry laboratories that operate at biosafety levels 1 (BSL-1; work with agents posing minimal threat to laboratory workers) and 2 (BSL-2; work with agents associated with human disease which pose moderate hazard). We believe that the interim measures proposed in this document for best practice will help minimizing the risk of developing COVID-19 while working in clinical laboratories. Evidence Based Guideline. Freely available at: https://www.degruyter.com/view/journals/cclm/ahead-of-print/article-10.1515-cclm-2020-0633/article-10.1515-cclm-2020-0633.xml.
Intensive and Critical Care

Antommaria, A. H. M. et al. Ventilator triage policies during the COVID-19 pandemic at U.S. hospitals with members of the Association of Bioethics Program Directors. Annals of Internal Medicine, 24th April 2020. [Epub ahead of print]. The criteria for allocating medications or mechanical ventilators in a time of scarcity and the processes for implementing those criteria are being developed in parallel by hospitals, healthcare systems, and governments around the United States. The authors invited members of the Association of Bioethics Program Directors (ABPD), an organization of the leadership of academic bioethics programs in the United States and Canada, to share their ventilator triage policies in this qualitative survey. In 67 programs, they found that half did not yet have approved ventilator triage policies, and those that did were heterogenous in terms of their clinical criteria, patient criteria (such as age or status as a healthcare worker), implementation, minimization of bias, or mechanisms for appeal or re-evaluation. Survey and Mixed Methods. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7207244/

Kim, J. H. et al. Therapeutic hypothermia in critically ill patients: a systematic review and metal-analysis of high quality randomized trials. Critical Care Medicine, 30th April 2020. [Epub ahead of print]. High-quality randomized evidence indicates that therapeutic hypothermia is associated with higher mortality and no difference in good neurologic outcome compared with normothermia in critically ill patients. Although there still might be a possibility that therapeutic hypothermia is beneficial in a specific setting, routine application of therapeutic hypothermia would better be avoided outside the settings indicated by international guidelines (adult cardiac arrest and hypoxic-ischemic encephalopathy of newborns). Systematic Review. Abstract only, please contact the library for full text.

Li, L. et al. Therapeutic strategies for critically ill patients with COVID-19. Annals of Intensive Care, 10 (1) 2020. [Online]. Since the 2019 novel coronavirus disease (COVID-19) outbreak originated from Wuhan, Hubei Province, China, at the end of 2019, it has become a clinical threat to the general population worldwide. Among people infected with the novel coronavirus (2019-nCoV), the intensive management of the critically ill patients in intensive care unit (ICU) needs substantial medical resource. In the present article, we have summarized the promising drugs, adjunctive agents, respiratory supportive strategies, as well as circulation management, multiple organ function monitoring and appropriate nutritional strategies for the treatment of COVID-19 in the ICU based on the previous experience of treating other viral infections and influenza. These treatments are referable before the vaccine and specific drugs are available for COVID-19. Review. Freely available at: https://www.sciencedirect.com/science/article/pii/S2212017320300661

Liang, W. et al. Development and validation of a clinical risk score to predict the occurrence of critical illness in hospitalised patients with Covid-19. JAMA Internal Medicine, 12th May 2020. [Epub ahead of print]. Early identification of patients with novel corona virus disease 2019 (COVID-19) who may develop critical illness is of great importance and may aid in delivering proper treatment and optimizing use of resources. The objective of this study was to develop and validate a clinical score at hospital admission for predicting which patients with COVID-19 will develop critical illness based on a nationwide cohort in China. It concludes that a risk score based on characteristics of COVID-19 patients at the time of admission to the hospital was developed that may help predict a patient’s risk of developing critical illness. Clinical Prediction Guide. Freely available at: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2766086

McGrath, B. A. et al. Multidisciplinary guidance for safe tracheostomy care during the COVID-19 pandemic. The NHS National Patient Safety Improvement Programme (NatPatSIP). Anesthesia, 12th May 2020. [Epub ahead of print]. The COVID-19 pandemic is causing a significant increase in the number of patients requiring relatively prolonged invasive mechanical ventilation and an associated surge in patients who need a tracheostomy to facilitate weaning from respiratory support. In parallel, there has been a global increase in guidance from professional bodies representing staff who care for patients with tracheostomies at different points in their acute hospital journey, rehabilitation, and recovery. Of concern are the risks to healthcare staff of infection arising from tracheostomy insertion and subsequent management. Hospitals are also facing extraordinary demands on critical care services such that many patients who require a tracheostomy will be managed outside established intensive care or head and neck

Covid-19 Evidence Update, Issue 9 22nd May 2020
units, cared for by staff with little tracheostomy experience. These concerns led NHS England and NHS Improvement to expedite the National Patient Safety Improvement Programme’s ‘Safe Tracheostomy Care’ workstream as part of the NHS COVID-19 response. Supporting this workstream, UK stakeholder organisations involved in tracheostomy care were invited to develop consensus guidance based on the available literature and existing multidisciplinary guidelines. Topics with direct relevance for frontline staff were identified. The consensus guidance includes: infectivity of patients with respect to tracheostomy indications and timing; aerosol-generating procedures and risks to staff; insertion procedures; and management following tracheostomy. These consensus recommendations are based on expert opinion and informed by the best available evidence and published guidance where possible. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/anae.15120

Singer, B. D. et al. A call for rational intensive care in the era of COVID-19. American Journal Respiratory Cell and Molecular Biology, 21st April 2020. [Epub ahead of print]. Recent findings in COVID-19 have made some researchers believe that the associated respiratory failure with this disease is an acute respiratory distress syndrome (ARDS) variant. They have questioned the implementation of the known, well-established treatments including intubation and low tidal volume ventilation, prone positioning, surveillance for nosocomial infections, and others proven in robust randomized controlled trials conducted in the past. However, consideration of only biological plausibility is not enough to justify administering a medication to a critically ill patient outside a clinical trial. Freely available at: https://www.atsjournals.org/doi/10.1165/rcmb.2020-0151LE


Liver and Hepatic Diseases


Mental Health and Well-being

Cooch, N. COVID-19: Impact of frontline workers’ mental health. Practice Update, 7th May 2020. [Online]. Before the COVID-19 pandemic, working in healthcare was stressful. Research on mental distress in healthcare workers had already shown that, compared with those in other industries, healthcare workers were more likely to suffer from psychiatric disorders, that approximately half of all physicians were experiencing burnout, and that doctors suffered higher rates of suicide than the general population. News. Freely available at: https://www.practiceupdate.com/expertopinion/46571/24?elsca1=emc_enews_expert-insight&elsca2=email&elsca3=practiceupdate_onc&elsca4=oncology&elsca5=newsletter&rid=MzI2NDczOTk2MjQwS0&lid=10332481

Covid-19 Evidence Update, Issue 9 22nd May 2020

To examine the psychological effects on clinicians of working to manage novel viral outbreaks, and successful measures to manage stress and psychological distress. Effective interventions are available to help mitigate the psychological distress experienced by staff caring for patients in an emerging disease outbreak. These interventions were similar despite the wide range of settings and types of outbreaks covered in this review, and thus could be applicable to the current covid-19 outbreak. **Rapid Review.** Freely available at: https://www.bmj.com/content/bmj/369/bmj.m1642.full.pdf

Lupe, S. E., Keefer, L. and Szigethy, E. **Gaining resilience and reducing stress in the age of COVID-19.** Current Opinion in Gastroenterology, 7th May 2020. [Epub ahead of print].

The world is experiencing the evolving situation associated with the outbreak of the Corona Virus Disease-2019 (COVID-19) virus, and there is more need than ever for stress management and self-care. In this article, we will define the physiological, psychological and social aspects, stages, and components of stress reactions in the context of COVID-19, review the relevant literature on stress reactions, and offer some guidance on how to help patients mitigate the physiological and psychological impact of the pandemic through resilience-building techniques. **Evidence Based Review.** Freely available at: https://journals.lww.com/co-gastroenterology/Abstract/9000/Gaining_resilience_and_reducing_stress_in_the_age.99126.aspx


Research and clinical observations suggest that during times of pandemic many people exhibit stress- or anxiety-related responses that include fear of becoming infected, fear of coming into contact with possibly contaminated objects or surfaces, fear of foreigners who might be carrying infection (i.e., disease-related xenophobia), fear of the socio-economic consequences of the pandemic, compulsive checking and reassurance-seeking regarding possible pandemic-related threats, and traumatic stress symptoms about the pandemic (e.g., nightmares, intrusive thoughts). We developed the 36-item COVID Stress Scales (CSS) to measure these features, as they pertain to COVID-19. The CSS were developed to better understand and assess COVID-19-related distress. The scales were intentionally designed so they could be readily adapted for future pandemics. The CSS were developed and initially validated in population-representative samples from Canada (N = 3479) and the United States (N = 3375). A stable 5-factor solution was identified, corresponding to scales assessing COVID-related stress and anxiety symptoms: (1) Danger and contamination fears, (2) fears about economic consequences, (3) xenophobia, (4) compulsive checking and reassurance seeking, and (5) traumatic stress symptoms about COVID-19. The scales performed well on various indices of reliability and validity. The scales were intercorrelated, providing evidence of a COVID Stress Syndrome. The scales offer promise as tools for better understanding the distress associated with COVID-19 and for identifying people in need of mental health services. Freely available at: https://www.sciencedirect.com/science/article/pii/S0887618520300463

Wang, S. et al. **Sleep disturbances among medical workers during the outbreak of COVID-19.** Occupational Medicine, 6th May 2020. [Epub ahead of print].

A cross-sectional, anonymized, self-reported questionnaire survey was conducted at the Children's Healthcare Centre of Renmin Hospital, Wuhan University. In total, 47 out of 123 participants were identified as having sleep disturbance. We observed that during the outbreak of COVID-19, sleep disturbance was highly prevalent among paediatric healthcare workers, and sleep disturbance was independently associated with being an only child, exposure to COVID-19 patients, and depression. **Cross Sectional Study.** Freely available at: https://academic.oup.com/occmed/advance-article/doi/10.1093/occmed/kqaa074/5830854

Yang, H. and Ma, J. **How an epidemic outbreak impacts happiness: factors that worsen (vs. protect) emotional well-being bring coronavirus pandemic.** Psychiatry Research, 289 (July) 2020. Online.

Through two large-scale nationwide surveys conducted in China immediately before, and during the coronavirus outbreak, we found that the onset of the epidemic led to a 74% drop in overall emotional well-being. Factors associated with the likelihood of contracting the disease, extent of potential harm, and relational issues exacerbated the detrimental effect. Further, those perceiving themselves as more knowledgeable were able to experience more happiness during the outbreak. **Survey.**

Neurology and Stroke


The coronavirus disease 2019 (COVID-19) pandemic has broad implications on stroke patient triage. Emergency medical services providers have to ensure timely transfer of patients while minimizing the risk of infectious exposure for themselves, their co-workers, and other patients. This statement paper provides a conceptual framework for acute stroke patient triage and transfer during the COVID-19 pandemic and similar healthcare emergencies in the future. Evidence Based Guideline. Freely available at: https://www.ahajournals.org/doi/pdf/10.1161/STROKEAHA.120.030340


This review consolidates the current body of literature regarding the neurological impact of coronaviruses, discusses the reported neurologic manifestations of COVID-19, and highlights recommendations for patient management. Specific recommendations pertaining to clinical practice for neurologists and neurosurgeons are provided. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7202815/

Obstetrics and Gynaecology


Neonates born to women with confirmed or suspected severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection should have testing of the nasopharynx, placenta and cord blood as soon as possible after birth, after thorough cleaning of the neonate. Sample timing, collection methods and types of samples should be documented to help differentiate congenital, intrapartum and postpartum acquisition of SARS-CoV-2 infection in neonates. Case Report. Freely available at: https://www.cmaj.ca/content/cmaj/early/2020/05/14/cmaj.200821.full.pdf


Novel coronavirus (2019-nCov) infection (COVID-19) rapidly spread across China and 25 countries in the worldwide, which infected not only adults but also children, even neonates. Each year, about 15 million newborns are delivered in China. Newborn screening (NBS) helps effectively prevent some mental retardation, premature death, and adverse outcomes in the early stage of baby, which could detect some inherited metabolic disorders (IMDs). During this COVID-19 epidemic, how to balance the risk of infected 2019-nCov and the risk of disability and teratogenesis of IMDs. Expert members of NBS extra quality assessment in National Clinical Center of Laboratory (NCCL) give a brief consensus for NBS of IMDs in the COVID-19 epidemic, hoping that the brief consensus could be reference for NBS of IMDs in the other epidemic areas or periods all over the world. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7210144/pdf/atm-08-07-429.pdf


In hospitalized pregnant women with severe or critical COVID-19 infection, admission typically occurred about 7 days after symptom onset, and the duration of hospitalization was 6 days (6 severe versus 12 critical). Critically ill women had a high rate of ARDS, and there was one case of cardiac arrest, but there were no cases of cardiomyopathy, or maternal mortality. Hospitalization for severe or critical COVID-19 infection resulted in delivery during the course of infection in 50% of this cohort, usually in the third trimester. There were no perinatal deaths in this cohort. Cohort Study. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7205698/


The COVID-19 pandemic has consumed considerable resources and has impacted the delivery of cancer care. Patients with cancer may have factors which place them at high risk for COVID-19 morbidity or mortality. Highly immunosuppressive chemotherapy regimens and possible exposure to COVID-19 during treatment may put patients...
at additional risk. The Society of Gynecologic Oncology convened an expert panel to address recommendations for best practices during this crisis to minimize risk to patients from deviations in cancer care and from COVID-19 morbidity. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7177100/


Novel coronavirus, known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a new strain of coronavirus causing the COVID-19 infection. The incubation period is estimated at 0–14 days (mean 5–6 days). The majority of people with COVID-19 infection have mild symptoms. Typical symptoms include a fever and cough which may progress to a severe pneumonia causing breathing difficulties. Severe symptoms are more likely in people with weakened immune systems, older people and people with long-term conditions. Pregnant women do not appear to be more susceptible to the consequences of an infection with COVID-19 than the general population. Special consideration should be given to pregnant women with concomitant medical illnesses. There is currently no evidence concerning transmission through genital fluids or breastmilk. Guidance. Freely available at: https://www.magonlinelibrary.com/doi/pdf/10.12968/bjom.2020.28.5.324

Ophthalmology


This study reported the incidence of symptomatic COVID-19 among eye professionals in Wuhan, China, and demonstrated that decrease in patient volume coinciding with city lockdown, adequate PPE, and diligent hand hygiene are important in preventing disease transmission. Survey. Freely available at: https://www.sciencedirect.com/science/article/pii/S0161642020304036


Basic concepts and strategies to implement telehealth in ophthalmology are presented, including billing considerations. Review. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7191296/

Paediatric and Neonatal Services


The authors have found task-shifting, teamwork, awareness of the mental health impact, and increased use of technology to be critical in continuing to provide ongoing care to our patients with eating disorders and their families in the context of COVID-19 and Singapore’s public health response. They need to constantly evaluate changing needs of our patients and their families in this rapidly evolving situation. A strong foundation in interprofessional education and collaboration empowers team members to adapt and sustain quality care to all our patients despite the challenges in a time of crisis. As COVID-19 impacts more countries, their institution’s experience can provide some insight into challenges to providing ongoing care for eating disorder patients in this environment. Clinical Observation. Freely available at: https://www.jahonline.org/article/S1054-139X(20)30153-1/pdf


Few paediatric cases of COVID-19 have been reported and we know little about the epidemiology in children, though more is known about other coronaviruses. We aimed to understand the infection rate, clinical presentation, clinical outcomes and transmission dynamics for SARS-CoV-2, in order to inform clinical and public health measures. Systematic Review. Freely available at: https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa556/5835843

The COVID-19 pandemic is one of the most serious global challenges to delivering affordable and equitable treatment to children with cancer we have witnessed in the last few decades. This Special Report aims to summarize general principles for continuing multidisciplinary care during the SARS-CoV-2 (COVID-19) pandemic. With contributions from the leadership of the International Society for Pediatric Oncology (SIOP), Children's Oncology Group (COG), St Jude Global program, and Childhood Cancer International, we have sought to provide a framework for healthcare teams caring for children with cancer during the pandemic. We anticipate the burden will fall particularly heavily on children, their families, and cancer services in low- and middle-income countries. Therefore, we have brought together the relevant clinical leads from SIOP Europe, COG, and SIOP-PODC ( Pediatric Oncology in Developing Countries) to focus on the six most curable cancers that are part of the WHO Global Initiative in Childhood Cancer. We provide some practical advice for adapting diagnostic and treatment protocols for children with cancer during the pandemic, the measures taken to contain it (e.g., extreme social distancing), and how to prepare for the anticipated recovery period. Evidence Based Guideline. Freely available at: https://onlinelibrary.wiley.com/doi/full/10.1002/pbc.28409.


On May 14, 2020, the CDC issued an official Heath Advisory dealing with COVID-19-associated Multisystem Inflammatory Syndrome in Children (MIS-C).[1] This advisory was based on the rapid emergence of pediatric cases of severe inflammatory syndrome with Kawasaki disease-like manifestations. The first U.S. cases were reported in early May from our “epicenter” in New York City. Over the ensuring days, 102 cases were reported to the New York State Department of Health. Expert Opinion. Freely available at: https://www.practiceupdate.com/c/100883/1/24/?elsca1=emc_enews_daily-digest&elsca2=email&elsca3=practiceupdate_rm&elsca4=respiratorymedicine&elsca5=newsletter&rid=MzI2NDczOTk2MjQwS0&lid=10332481.

Palliative and End of Life Care

Ayra, A. et al. Pandemic palliative care: beyond ventilators and saving lives. CMAJ: Canadian Medical Association Journal, 14th April 2020. [Online]. Palliative care should be an essential part of any response to a humanitarian crisis, including the current SARS-CoV-2 pandemic. A multipronged approach that is focussed on stuff, staff, space, systems, sedation, separation, communication and equity can guide planning and ensure that the palliative care needs of patients and their family members are met. Any triage system that does not integrate palliative care principles is unethical. Patients who are not expected to survive should not be abandoned but must receive palliative care as a human right. Analysis. Freely available at: https://www.cmaj.ca/content/cmaj/192/15/E400.full.pdf.


Kirkman, J. N. et al. Allocating scarce resources and triaging patients during the COVID-19 pandemic. Journal of the American College of Cardiology, 11th May 2020. [Epub ahead of print]. The COVID-19 pandemic and its sequelae have created scenarios of scarce medical resources, leading to the prospect that healthcare systems have faced or will face difficult decisions about triage, allocation and reallocation. These decisions should be guided by ethical principles and values, should not be made before crisis standards have been declared by authorities, and, in most cases, will not be made by bedside clinicians. Do not attempt resuscitation.
(DNAR) and withholding and withdrawing decisions should be made according to standard determination of medical appropriateness and futility, but there are unique considerations during a pandemic. Transparent and clear communication is crucial, coupled with dedication to provide the best possible care to patients, including palliative care. As medical knowledge about COVID-19 grows, more will be known about prognostic factors that can guide these difficult decisions. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7213960/

Patient Information
None this issue.

Pharmacy

Pharmacists and pharmacy professionals have been at the frontlines in responding to the COVID-19 pandemic. Yet, challenges remain, such as limited availability of personal protection equipment, high risk of infectious exposures inherent in healthcare professions, and legislative hurdles resulting in lack of provider status and related reimbursements. Recommendations to enhance pharmacy’s scope as public health professionals involved in EP&R include targeted training and education on key framework areas and policymaking. Pharmacy professionals should further integrate with interdisciplinary public health teams. Additional research and dissemination on impacts and outcomes of EP&R can enhance recognition of pharmacy professionals’ contribution and value during public health emergencies. The PEPR Framework can be utilized to develop, implement, evaluate, and disseminate results in order to strengthen existing efforts and to establish new initiatives in EP&R. Evidence Based Guideline. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7146711/

Physical Activity and Nutrition

This paper describes the impact of sedentarism, caused by the COVID-19 home confinement on the neuromuscular, cardiovascular, metabolic and endocrine systems. Just few days of sedentary lifestyle are sufficient to induce muscle loss, neuromuscular junction damage and fibre denervation, insulin resistance, decreased aerobic capacity, fat deposition and low-grade systemic inflammation. Regular low/medium intensity high volume exercise, together with a 15-25% reduction in caloric intake are recommended for preserving neuromuscular, cardiovascular, metabolic and endocrine health. Evidence Based Guideline. Freely available at: https://www.tandfonline.com/doi/pdf/10.1080/17461391.2020.1761076?needAccess=true

Post Discharge and Rehabilitation

Coronavirus Disease 2019 (Covid-19) is an active pandemic that has required rapid conversion of practice patterns to mitigate disease spread. Although recommendations have been released for physicians to postpone elective procedures, the utility of common physiatry procedures and their infectious risk profile have yet to be clearly delineated. In this article, we describe an update on existing national recommendations and outline considerations as practitioners and institutions strive to meet the needs of patients with disabilities. Evidence Based Guideline. Freely available at:
Primary Care Practice
None this issue.

Prognosis
None this issue.

Renal and Urology
None this issue.

Research and Trials
See also World Health Organisation.

Residential and Specialist Care
None this issue.

Statistics and Mortality
The study findings show how covid-19 can have a considerable impact on the health of a small community. Furthermore, the results suggest that the full implications of the covid-19 pandemic can only be completely understood if, in addition to confirmed deaths related to covid-19, consideration is also given to all cause mortality in a given region and time frame. Population Study. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7223479/

We have quantified a range of clinical risk factors for death from COVID-19, some of which were not previously well characterised, in the largest cohort study conducted by any country to date. People from Asian and black groups are at markedly increased risk of in-hospital death from COVID-19, and contrary to some prior speculationthis is only partially attributable to pre-existing clinical risk factors or deprivation; further research into the drivers of this association is therefore urgently required. Deprivation is also a major risk factor with, again, little of the excess risk explained by co-morbidity or other risk factors. The findings for clinical risk factors are concordant with policies in the UK for protecting those at highest risk. Our OpenSAFELY platform is rapidly adding further NHS patients’ records; we will update and extend these results regularly. Cohort Study. Freely available at: https://opensafely.org/outputs/2020/05/covid-risk-factors/

Surgery
The COVID-19 pandemic poses a critical global public health crisis. Operating room (OR) best practice in this crisis is poorly defined. This systematic review was performed to identify contemporary evidence relating to OR practice in the context of COVID-19. There was little evidence to inform this systematic review, but there was consensus regarding many aspects of OR practice. Within the context of a rapidly evolving pandemic, timely amalgamation of global...


COVID-19 is a new disease, based on currently available limited information, older adults and people of any age who have severe underlying medical conditions may be at higher risk for severe illness from COVID-19. People of all age groups are also at risk. Healthcare providers have always been the professionals most exposed to the risk of contracting to any kind of infection due to the nature of their profession. Elective interventions have been postponed to give care of patients with COVID-19. However, some interventions cannot be delayed, such as trauma surgery, acute abdomen, and emergency endoscopies. To maintain the sustainability of the healthcare system, the protection of healthcare providers should be the top priority. On the other hand, patients, who need emergency healthcare, should also be provided with appropriate treatment. Healthcare professionals should choose a treatment method appropriately in the circumstances to protect themselves and their patients as much as possible. This paper aims to summarize how a surgeon may act appropriately when an intervention is inevitable during the COVID-19 pandemic. **Evidence Based Guideline.** Freely available at: [https://www.journalagent.com/travma/pdfs/UTD-79954-REVIEW-GOK.pdf](https://www.journalagent.com/travma/pdfs/UTD-79954-REVIEW-GOK.pdf)

**Telemedicine and Technology**

None this issue.

**Trauma and Orthopaedic Services**

See also *Surgery*

**Treatments for COVID**


This study aimed to assess the role of Tocilizumab therapy (TCZ) in terms of ICU admission and mortality rate of critically ill patients with severe COVID-19 pneumonia. TCZ administration did not reduce ICU admission or mortality rate in a cohort of 21 patients. Additional data are needed to understand the effect(s) of TCZ in treating patients diagnosed with COVID-19. **Cohort Study.** Freely available at: [https://www.mdpi.com/2076-2607/8/5/695/htm](https://www.mdpi.com/2076-2607/8/5/695/htm)

Gbinigie, K. and Frie, K. *Should azithromycin be used to treat COVID-19? A rapid review.* BJGP Open, 12th May 2020. [Epub ahead of print].

There are no established effective treatments for COVID-19. While novel drugs are being developed, azithromycin has been identified as a candidate treatment in the interim. There is no evidence to support the use of azithromycin for the treatment of COVID-19 outside of the context of clinical trials, unless it is used to treat bacterial super-infection. There is extremely limited evidence of a possible synergy between azithromycin and hydroxychloroquine. The adverse events profile of azithromycin in the context of COVID-19 has not yet been established. Well-conducted clinical trials are urgently needed in this area. **Rapid Review.** Freely available at: [https://bjgpopen.org/content/early/2020/05/12/bjgpopen20X101094](https://bjgpopen.org/content/early/2020/05/12/bjgpopen20X101094)


The rapidly spreading Coronavirus Disease (COVID-19) pandemic, caused by the severe acute respiratory syndrome coronavirus (SARS-CoV-2), represents an unprecedented serious challenge to the global public health community. The extremely rapid international spread of the disease with significant morbidity and mortality made finding possible therapeutic interventions a global priority. While approved specific antiviral drugs against SARS-CoV-2 are still lacking, a large number of existing drugs are being explored as a possible treatment for COVID-19 infected patients. Recent publications have re-examined the use of Chloroquine (CQ) and/or Hydroxychloroquine (HCQ) as a potential therapeutic option for these patients. In an attempt to explore the evidence that supports their use in COVID-19 patients, we comprehensively reviewed the previous studies which used CQ or HCQ as an antiviral treatment. Both
CQ and HCQ demonstrated promising in vitro results, however, such data have not yet been translated into meaningful in vivo studies. While few clinical trials have suggested some beneficial effects of CQ and HCQ in COVID-19 patients, most of the reported data are still preliminary. Given the current uncertainty, it is worth being mindful of the potential risks and strictly rational the use of these drugs in COVID-19 patients until further high quality randomized clinical trials are available to clarify their role in the treatment or prevention of COVID-19. Review. Freely available at: https://pubmed.ncbi.nlm.nih.gov/32387694/


Mahevas, M. Clinical efficacy of hydroxychloroquine in patients and covid-19 pneumonia who require oxygen observational comparative study using routine care data. BMJ, 14th May 2020. Hydroxychloroquine has received worldwide attention as a potential treatment for covid-19 because of positive results from small studies. However, the results of this study do not support its use in patients admitted to hospital with covid-19 who require oxygen. Observational Study. Freely available at: https://www.bmj.com/content/369/bmj.m1844.long

Million, M. et al. Early treatment of COVID-19 patients with hydroxychloroquine and azithromycin: a retrospective analysis of 1061 cases in Marseille, France. Travel Medicine and Infectious Disease, 5th May 2020. [Epub ahead of print]. As a conclusion, based on our experience, we consider reasonable to follow the recommendations made in Asian countries for the control of COVID-19, notably in Korea and China that consist in early testing as many patients as possible and treating them with available drugs where this strategy has produced much better results than in countries where no active policy has been implemented outside containment. In China, drugs that were recommended were primarily HCQ but also α-interferon, lopinavir, ronitavir and umifenovir, in Korea, recommended drugs were lopinavir/ritonavir and chloroquine. In the context of a pandemic with a lethal respiratory virus, we believe that early detection of positive cases and carefully controlled treatment with safe and well-tolerated drugs should be generalized in outpatient medicine, i.e. in individuals with mild symptoms before signs of severity appear. Strict attention should be paid to contraindications and possible interactions with concomitant medication. Finally, there is a need to repurpose existing drugs and evaluate these in controlled trials where possible in the constraints of a pandemic. Retrospective Study. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7199729/


Rosenberg, E. S. et al. Association of treatment with hydroxychloroquine or azithromycin with in-patient mortality in patients with COVID-19 in New York State. JAMA Network, 11th May 2020. [Epub ahead of print]. Among patients hospitalized in metropolitan New York with COVID-19, treatment with hydroxychloroquine, azithromycin, or both, compared with neither treatment, was not significantly associated with differences in in-hospital mortality. However, the interpretation of these findings may be limited by the observational design. Retrospective Cohort Study. Freely available at: https://jamanetwork.com/journals/jama/fullarticle/2766117

Tang, W. et al. Hydroxychloroquine in patients with mainly mild to moderate coronavirus disease 2019: an open label, randomised controlled trial. BMJ, 14th May 2020. [Online]. The aim of this study was to assess the efficacy and safety of hydroxychloroquine plus standard of care compared with standard of care alone in adults with coronavirus disease 2019 (covid-19). It concludes that administration of hydroxychloroquine did not result in a significantly higher probability of negative conversion than standard of care alone in patients admitted to hospital with mainly persistent mild to moderate covid-19. Adverse events were higher in hydroxychloroquine recipients than in non-recipients. Randomised Control Trial. Freely available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7221473/

Very little direct evidence exists on use of corticosteroids in patients with coronavirus disease 2019 (COVID-19). Indirect evidence from related conditions must therefore inform inferences regarding benefits and harms. To support a guideline for managing COVID-19, the authors conducted systematic reviews examining the impact of corticosteroids in COVID-19 and related severe acute respiratory illnesses. They conclude that corticosteroids may reduce mortality for patients with COVID-19 and ARDS. For patients with severe COVID-19 but without ARDS, evidence regarding benefit from different bodies of evidence is inconsistent and of very low quality. Systematic Review. Freely available from: https://www.cmaj.ca/content/cmaj/early/2020/05/14/cmaj.200645.full.pdf

The coronavirus disease 2019 (COVID-19) pandemic spread globally in the beginning of 2020. At present, predictors of severe disease and the efficacy of different treatments are not well-understood. We conducted a systematic review and meta-analysis of all published studies up to March 15, 2020 which reported COVID-19 clinical features and/or treatment outcomes. 45 studies reporting 4203 patients were included. Pooled rates of intensive care unit (ICU) admission, mortality and acute respiratory distress syndrome (ARDS) were 10.9%, 4.3% and 18.4%, respectively. On meta-regression, ICU admission was predicted by raised leukocyte count (p<0.0001), raised alanine aminotransferase (p=0.024), raised aspartate transaminase (p=0.0040), elevated lactate dehydrogenase (LDH) (p<0.0001) and increased procalcitonin (p<0.0001). ARDS was predicted by elevated LDH (p<0.0001), while mortality was predicted by raised leukocyte count (p=0.0005) and elevated LDH (p<0.0001). Treatment with lopinavir-ritonavir showed no significant benefit in mortality and ARDS rates. Corticosteroids were associated with a higher rate of ARDS (p=0.0003). Systematic Review. Freely available at: https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa576/5837140

Vaccines, Antibodies and Immunity
None this issue.

Resources and Databases
NHS Education for Scotland. COVID-19 (coronavirus) resources. NHSES, 20th May 2020. [Online]. The resource list has been collated by Public Health Scotland and NHSSScotldand Library and Knowledge Services. They are intended for health and social care professionals and researchers to access guidance, evidence, research and support on COVID-19. Online Resources. Freely available at: https://www.nice.org.uk/advice/mib217
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
- PubMed
- SCIE
- The Lancet
- Trip Database
- Twitter
- Uncover
- Up-To-Date
- World Health Organisation

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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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