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Covid-19 Evidence Update

Summarized and appraised resources

03/06/2021

The following resources are available via electronically or in print. Please follow links to access full text online, or contact the library if you have any difficulties with the links.

The resources included in this update are summaries or critically appraised articles. If you would like a more specific search conducted please email kgh-tr.library.service@nhs.net

Royal College/Society Guidance and Point of Care Tools

Latest information and guidance

NICE COVID-19 rapid guideline: managing COVID-19 (NG191) Published 23/03/2021 Rapid guidelines and evidence summaries Speciality guides (*NHS England and NHS Improvement advice has moved here)*	NHS England and NHS Improvement Secondary care *(Includes Prevention, Infection control, Assessment, Management, Discharge, Isolation, Estates and facilities, Finance, Workforce, Cancer …)*
Royal College of Emergency Medicine Covid-19 resources	Association for Palliative Medicine Covid 19 and Palliative, End of Life and Beareavement Care
Royal College of General Practitioners COVID-19	Royal College of Obstetrics & Gynaecologists Coronavirus (COVID-19), pregnancy and women's health
Royal College of Paediatrics and Child Health Key topics COVID 19	Royal College of Pathologists COVID-19 Resources Hub
Royal College of Psychiatrists COVID-19: Community mental health settings	Royal College of Surgeons COVID 19 Information Hub
Royal Pharmaceutical Society COVID-19	British Society of Echocardiography COVID-19 clinical guidance
British Society of Gastroenterology COVID 19 updates	British Society for Haematology COVID-19 Updates

British Society for Rheumatology COVID-19 updates for members	Combined Intensive Care Society, Association of Anaesthetists, Royal College of Anaesthetists, Faculty of Intensive Care Medicine guidance Clinical Guidance
BMJ Best Practice Coronavirus disease 2019 (COVID-19) Management of coexisting conditions in the context of COVID-19	DynaMed Covid 19 (Novel Coronavirus) Covid-19 and Pediatric Patients Covid 19 and Special Populations Covid-19 and Patients with Cancer Covid-19 and Cardiovascular Disease Patients Covid-19 and Patients with Chronic Kidney Disease and End-stage renal Disease Covid-19 and Pregnant Patients Covid-19-associated Coagulopathy
Don't forget the bubbles An evidence summary of paediatric Covid-19 literature Covid-19 – a seslection of evidence based summaries and articles.	

New NICE Guidance – no new guidance in this time period.

New Guidance and Reports from other sources

RECOVERY trial finds Regeneron's monoclonal antibody combination reduces deaths for hospitalised COVID-19 patients who have not mounted their own response.
RECOVERY:2021
https://www.recoverytrial.net/news/recovery-trial-finds-regeneron2019s-monoclonal-antibody-combination-reduces-deaths-for-hospitalised-covid-19-patients-who-have-not-mounted-their-own-immune-response-1
Results available on medRxiv – not yet peer reviewed:

> **Casirivimab and imdevimap in patients admitted to hospital with COVID-19 (RECOVERY): a randomised, controlled, open-label platform trial.**
> Hornby, PW et al
> https://www.medrxiv.org/content/10.1101/2021.06.15.21258542v1

Dosing information for COVID-19 Vaccines.
Specialist Pharmacy Service (SPS); 2021.
https://www.sps.nhs.uk/articles/dosing-information-for-covid-19-vaccines-2/
[This page discusses current recommendations regarding dose scheduling of Covid-19 vaccines, actions to be taken when the intervals are longer than or less than recommended, and the use of alternative brands for second doses.]
Freely available online

Using COVID-19 vaccines during hot weather.
Specialist Pharmacy Service (SPS); 2021.
https://www.sps.nhs.uk/articles/using-covid-19-vaccines-during-hot-weather/
[This article which forms part of a series on 'Maintaining the COVID-19 vaccines cold chain' reiterates that to minimise risk of higher temperatures, there is need to control ambient temperature, assess risks, and mitigate

against them.]
Freely available online

Covid-19 Evidence Alerts from McMaster Plus

COVID-19 Evidence Alerts to current best evidence for clinical care of people with threatened, suspected or confirmed COVID-19 infection. Reports are critically appraised for scientific merit, and those with acceptable scientific merit are appraised for relevance and importance by frontline clinicians. The studies listed below meet their criteria for quality. The site also lists other studies published which do not meet their criteria, or do not belong to a study category they appraise. (More information available).

Diagnosis
Rapid COVID-19 antigenic tests: Usefulness of a modified method for diagnosis. *Reza S, Corentin D, Te-Din H, et al.* **J Med Virol**
A systematic and meta-analysis review on the diagnostic accuracy of antibodies in the serological diagnosis of COVID-19. *Vengesai A, Midzi H, Kasambala M, et al.* **Syst Rev**
Chest CT versus RT-PCR for the detection of COVID-19: systematic review and meta-analysis of comparative studies. *Karam M, Althuwaikh S, Alazemi M, et al.* **JRSM Open**
Respiratory bacterial co-infections in intensive care unit-hospitalized COVID-19 patients: Conventional culture vs BioFire FilmArray pneumonia Plus panel. *Foschi C, Zignoli A, Gaibani P, et al.* **J Microbiol Methods**
Chest computed tomography as a primary tool in COVID-19 detection: an update meta-analysis. *Pang C, Hou Q, Yang Z, et al.* **Clin Transl Imaging**
Etiology
Comparison of renin-angiotensin-aldosterone system inhibitors with other antihypertensives in association with coronavirus disease-19 clinical outcomes. *Bezabih YM, Bezabih A, Alamneh E, et al.* **BMC Infect Dis**
Clinical Prediction Guide
Prognostic accuracy of emergency department triage tools for adults with suspected COVID-19: the PRIEST observational cohort study. *Thomas B, Goodacre S, Lee E, et al.* **Emerg Med J**
Early detection of hospitalized patients with COVID-19 at high risk of clinical deterioration: Utility of emergency department shock index. *van Rensen IHT, Hensgens KRC, Lekx AW, et al.* **Am J Emerg Med**
COVID-19 Pneumonia and ROX index: Time to set a new threshold for patients admitted outside the ICU. *Vega ML, Dongilli R, Olaizola G, et al.* **Pulmonology**
Prognosis
Early mortality outcomes of patients with fragility hip fracture and concurrent SARS-CoV-2 infection : a systematic review and meta-analysis. *Alcock H, Moppett EA, Moppett IK* **Bone Jt Open**
Cardio-Pulmonary Sequelae in Recovered COVID-19 Patients: Considerations for Primary Care. *Sarfraz Z, Sarfraz A, Barrios A, et al.* **J Prim Care Community Health**
The Differences in Clinical Presentation, Management, and Prognosis of Laboratory-Confirmed COVID-19 between Pregnant and Non-Pregnant Women: A Systematic Review and Meta-Analysis. *Khan DSA, Pirzada AN, Ali A, et al.* **Int J Environ Res Public Health**
Assessment of the Frequency and Variety of Persistent Symptoms Among Patients With COVID-19: A Systematic Review. *Nasserie T, Hittle M, Goodman SN* **JAMA Netw Open**

Post-COVID-19 Syndrome: The Persistent Symptoms at the Post-viral Stage of the Disease. A Systematic Review of the Current Data. *Salamanna F, Veronesi F, Martini L, et al.* **Front Med (Lausanne)**
Primary Prevention
Efficacy and Safety of COVID-19 Vaccines: A Systematic Review and Meta-Analysis of Randomized Clinical Trials. *Pormohammad A, Zarei M, Ghorbani S, et al.* **Vaccines (Basel)**
Effect of Bamlanivimab vs Placebo on Incidence of COVID-19 Among Residents and Staff of Skilled Nursing and Assisted Living Facilities: A Randomized Clinical Trial. *Cohen MS, Nirula A, Mulligan MJ, et al.* **JAMA**
Same-day SARS-CoV-2 antigen test screening in an indoor mass-gathering live music event: a randomised controlled trial. *Revollo B, Blanco I, Soler P, et al.* **Lancet Infect Dis**
Association between vitamin D supplementation or serum vitamin D level and susceptibility to SARS-CoV-2 infection or COVID-19 including clinical course, morbidity and mortality outcomes? A systematic review. *Grove A, Osokogu O, Al-Khudairy L, et al.* **BMJ Open**
Treatment
Efficacy and safety of lopinavir-ritonavir in COVID-19: A systematic review of randomized controlled trials. *Patel TK, Patel PB, Barvaliya M, et al.* **J Infect Public Health**
Umbilical cord mesenchymal stromal cells as critical COVID-19 adjuvant therapy: A randomized controlled trial. *Dilogo IH, Aditianingsih D, Sugiarto A, et al.* **Stem Cells Transl Med**
Efficacy and safety of azithromycin in Covid-19 patients: A systematic review and meta-analysis of randomized clinical trials. *Kamel AM, Monem MSA, Sharaf NA, et al.* **Rev Med Virol**
Intermediate vs Standard-dose Prophylactic Anticoagulation in Patients with COVID-19 Admitted to ICU: Ninety-day Results from the INSPIRATION Trial. *Bikdeli B, Talasaz AH, Rashidi F, et al.* **Thromb Haemost**
Therapeutic versus prophylactic anticoagulation for patients admitted to hospital with COVID-19 and elevated D-dimer concentration (ACTION): an open-label, multicentre, randomised, controlled trial. *Lopes RD, de Barros E Silva PGM, Furtado RHM, et al.* **Lancet**
Colchicine for community-treated patients with COVID-19 (COLCORONA): a phase 3, randomised, double-blinded, adaptive, placebo-controlled, multicentre trial. *Tardif JC, Bouabdallaoui N, L'Allier PL, et al.* **Lancet Respir Med**
An Examination of COVID-19 Medications' Effectiveness in Managing and Treating COVID-19 Patients: A Comparative Review. *Al-Masaeed M, Alghawanmeh M, Al-Singlawi A, et al.* **Healthcare (Basel)**
Active Prescription of Low-dose Aspirin During or Prior to Hospitalization and Mortality in COVID-19 - A Systematic Review and Meta-analysis of Adjusted Effect Estimates. *Martha JW, Pranata R, Lim MA, et al.* **Int J Infect Dis**
Efficacy and safety of sofosbuvir/velpatasvir versus the standard of care in adults hospitalized with COVID-19: a single-centre, randomized controlled trial. *Sayad B, Khodarahmi R, Najafi F, et al.* **J Antimicrob Chemother**
Convalescent plasma therapy for Covid-19: A systematic review. *Seth T, Elavarasi A, Sahoo RK, et al.* **Natl Med J India**
The efficacy and safety of Favipiravir in treatment of COVID-19: a systematic review and meta-analysis of clinical trials. *Hassanipour S, Arab-Zozani M, Amani B, et al.* **Sci Rep**
Lopinavir/Ritonavir for COVID-19: a Systematic Review and Meta-Analysis. *Amani B, Khanijahani A, Amani B, et al.* **J Pharm Pharm Sci**

Micronutrients Deficiency, Supplementation and Novel Coronavirus Infections-A Systematic Review and Meta-Analysis. *Wang MX, Gwee SXW, Pang J* **Nutrients**
Favipiravir for the treatment of patients with COVID-19: a systematic review and meta-analysis. ***Manabe T, Kambayashi D, Akatsu H, et al.*** BMC Infect Dis
Effects of potent neutralizing antibodies from convalescent plasma in patients hospitalized for severe SARS-CoV-2 infection. *Gharbharan A, Jordans CCE, GeurtsvanKessel C, et al.* **Nat Commun**
Evidence for Chloroquine/Hydroxychloroquine in the Treatment of COVID-19. *Shetty RM, Namachivayam A* **Indian J Crit Care Med**
Safety and Efficacy of Remdesivir for the Treatment of COVID-19: A Systematic Review and Meta-Analysis. *Tasavon Gholamhoseini M, Yazdi-Feyzabadi V, Goudarzi R, et al.* **J Pharm Pharm Sci**

Cochrane Systematic Reviews

Cochrane Evidence on COVID-19: a roundup

No new Cochrane Systematic Reviews in this time period.

Evidence Aid

https://evidenceaid.org/evidence/coronavirus-covid-19/

This evidence collection contains plain-language summaries of high-quality research which are available in English, and translated into French, Spanish, Portuguese, Arabic and Chinese (simplified and traditional).

The collection includes summaries of systematic reviews that might be relevant to the direct impact of COVID-19 (including reviews of emerging research, as well as existing reviews of relevant interventions) on health and other outcomes, the impact of the COVID-19 response on other conditions, and issues to consider for the recovery period after COVID-19.

Vitamin D supplementation for treating COVID-19 patients (search done on 11 March 2021)

Citation: Stroehlein JK, Wallqvist J, Iannizzi C, et al. *Vitamin D supplementation for the treatment of COVID-19: a living systematic review*. Cochrane Database of Systematic Reviews. 2021;5:CD015043.

What is this? Vitamin D supplementation has been suggested as a possible treatment for COVID-19 patients.

In this Cochrane living review, the authors searched for randomized trials of vitamin D supplementation for COVID-19 patients. They did not restrict their searches by language of publication and did the search for the current version of the review on 11 March 2021. They included 3 trials (356 patients) and identified an additional 3 completed trials without published results and 21 ongoing trials.

What works: Nothing noted.

What doesn't work: Nothing noted.

What's uncertain: At the time of this version of this living review, there was insufficient evidence to determine the benefits and harms of vitamin D supplementation for COVID-19 patients.

Laboratory findings, comorbidities and clinical outcomes of COVID-19 in medical staff compared to the general population (search up to 12 April 2020)

Citation: Ebrahim M, Malehi A, Rahim F. *COVID-19 Patients: A Systematic Review and Meta-analysis of Laboratory Findings, Comorbidities, and Clinical Outcomes Comparing Medical Staff versus the General Population*. Osong Public Health and Research Perspectives. 2020;11(5):269-79.

What is this? Information on laboratory findings, comorbidities and clinical outcomes of COVID-19 in medical staff compared to the general population might improve the speed, efficiency and accuracy of the diagnosis of COVID-19.

In this rapid review, the authors searched for articles that reported laboratory findings, comorbidities and clinical outcomes of COVID-19. They did not restrict their searches by language of publication and did the most recent search on 12 April 2020. They included 10 case-control studies and 14 cross-sectional studies (total: 11,564 members of the general public and 394 medical staff).

What was found: At the time of the review, the included studies showed that laboratory findings were significantly different between medical staff and the general population for white blood cell counts, lymphocyte counts, platelet counts, procalcitonin levels, lactate dehydrogenase levels and creatinine levels.

At the time of the review, the included studies showed that medical staff had milder symptoms and lower mortality and hospitalization rates than the general population.

Rheumatic symptoms in COVID-19 (search done on 18 May 2020)

Citation: Ciaffi J, Meliconi R, Ruscitti P, et al. *Rheumatic manifestations of COVID-19: a systematic review and meta-analysis*. BMC Rheumatology. 2020;4:65.

What is this? Some COVID-19 patients present with rheumatologic symptoms.

In this rapid review, the authors searched for articles reporting rheumatic symptoms related to COVID-19. They restricted their searches to studies published in English and did the most recent search on 18 May 2020. They included 14 case series, 10 case reports, 59 retrospective observational studies and 3 randomized trials and were able to use 51 of these studies in meta-analyses. Most (50) of the included studies were from China.

What was found:. At the time of this review, the included studies showed that muscle pain and fatigue were common presenting symptoms for COVID-19 patients.

At the time of this review, the included studies showed that although vasculitis, chilblains, haematologic manifestations and autoantibodies have been reported in COVID-19 case reports and case studies, additional research was needed to further elucidate their prevalence.

At the time of this review, the included studies showed that the persistence and evolution of rheumatological symptoms in COVID-19 patients were uncertain.

Coagulation factors and COVID-19 (search done on 6 May 2020)

Citation: Bashash D, Abolghasemi H, Salari S, et al. *Elevation of D-Dimer, But Not PT and aPTT, Reflects the Progression of COVID-19 Toward an Unfavorable Outcome: A Meta-Analysis*. Iranian Journal of Blood and Cancer. 2020;12(2):47-53.

What is this? COVID-19 patients with altered coagulation may be at risk of more severe illness and higher mortality.

In this rapid review, the authors searched for studies of the association between prothrombin time, activated partial thromboplastin time and elevated D-dimers and disease severity for COVID-19 patients. They did not restrict their searches by date, language or type of publication and did the most recent search on 6 May 2020. They included 21 articles, all of which were from China.

What was found: At the time of this review, the included studies showed that the mean value of D-dimers was significantly higher in patients with severe COVID-19, compared to patients with non-severe disease.

At the time of this review, the included studies showed that the relationships between prothrombin time and activated partial thromboplastin time and the severity of COVID-19 were uncertain.

Dynamed - COVID-19 (Novel Coronavirus)

Latest updates

EvidenceUpdated 16 Jun 2021
among unvaccinated residents in skilled nursing and assisted living, prophylactic bamlanivimab within 7 days of detection of ≥ 1 laboratory-confirmed SARS-CoV-2 infection reduces risk of COVID-19 (JAMA 2021 Jun 3 early online)
View in topic

Drug/Device Alert Updated 8 Jun 2021
Ad26.COV2-S recombinant (Janssen COVID-19 vaccine) granted conditional marking authorization by United Kingdom Medicines and Healthcare products Regulatory Agency (MHRA) for active immunization to prevent COVID-19 in persons ≥ 18 years old (MHRA Press Release 2021 May 28)
View in topic

Drug/Device Alert Updated 8 Jun 2021
COVID-19 mRNA vaccine from Pfizer-BioNTech (Comirnaty) authorization by the European Commission for active immunization to prevent COVID-19 expanded for children aged 12-15 years (European Medicines Agency [EMA] Press Release 2021 May 28)
View in topic

Drug/Device Alert Updated 8 Jun 2021
Pfizer/BioNTech COVID-19 mRNA vaccine BNT162b2 receives expanded authorization by United Kingdom Medicines and Healthcare products Regulatory Agency (MHRA) to include children aged 12-15 years (MHRA Press Release 2021 Jun 4)
View in topic

EvidenceUpdated 8 Jun 2021

myocarditis and pericarditis have been reported after mRNA COVID-19 vaccination, predominantly among male adolescents and young adults (CDC 2021 May 28)
View in topic

EvidenceUpdated 7 Jun 2021
SARS-CoV-2 notable emerging variants update (CDC 2021 Jun 4)
View in topic

EvidenceUpdated 7 Jun 2021
prevalence of olfactory dysfunction reported in 48% of adults with COVID-19 (Laryngoscope 2021 Apr)
View in topic

EvidenceUpdated 7 Jun 2021
greater severity of organ dysfunction, chronic liver disease, HIV/AIDS, chronic kidney disease, and diabetes each associated with increased in-hospital mortality in adults with COVID-19 in Africa (Lancet 2021 May 22)
View in topic

EvidenceUpdated 7 Jun 2021
estimated 979,000 excess deaths associated with SARS-CoV-2 pandemic in 29 high-income countries in 2020, with highest number of excess deaths in the United States, Italy, England and Wales, Spain, and Poland (BMJ 2021 May 19)
View in topic

EvidenceUpdated 7 Jun 2021
inactivated SARS-CoV-2 vaccines (WIV04 and HB02) may be 73%-78% effective against symptomatic COVID-19 in adults in the United Arab Emirates and Bahrain (JAMA 2021 May 26 early online)
View in topic

EvidenceUpdated 7 Jun 2021
Pfizer-BioNTech mRNA vaccine (BNT162b2) appears to be 75%-100% effective against COVID-19 in adolescents aged 12-15 years (N Engl J Med 2021 May 27 early online)
View in topic

BMJ Best Practice

10 Jun 2021

MHRA authorises use of Pfizer/BioNTech vaccine in 12 to 15 year olds

- The UK's Medicines and Healthcare products Regulatory Agency has extended the authorisation of the Pfizer/BioNTech vaccine to include 12 to 15 year olds. This follows on from recent authorisations to use the vaccine in this age group in the US and Europe.
- The European Medicines Agency has also started evaluating an application to extend the use of the Moderna vaccine to include young people aged 12 to 17 years.
- See the Primary prevention section for more information.
-

Delta variant now dominant in the UK

- Public Health England experts now believe that the Delta variant has overtaken the Alpha variant as the dominant SARS-CoV-2 variant in the UK. Early evidence suggests there may be an increased risk of hospitalisation for the Delta variant compared with the Alpha variant, although more data is needed.
- See the Aetiology section for more information.

IDSA publishes new guidelines for antigen testing

- The Infectious Diseases Society of America has published new guidelines for the use of SARS-CoV-2 antigen tests. Based on current evidence, molecular testing remains the test of choice for diagnosis. However, antigen testing can be used when molecular testing is not readily available or is logistically unfeasible.
- See the Investigations section for more information.

NICE does not recommend azithromycin

- The National Institute for Health and Care Excellence has updated its COVID-19 rapid guideline to add a new recommendation on azithromycin. NICE does not recommend azithromycin to treat COVID-19 based on low-certainty evidence. The guideline panel considered that the results from studies of azithromycin for moderate to critical disease in the hospital setting and mild to moderate disease in the community setting showed no meaningful benefit in any of the critical outcomes.
- See the Emerging section for more information.

Useful Links

BMJ – latest news and resources for COVID-19
Cochrane Library **Coronavirus (COVID-19): evidence relevant to critical care**
Elsevier - Novel Coronavirus Information Center – Elsevier
European Centre for Disease Prevention and Control
GOV.UK
Health protection Scotland
New England Journal of Medicine
NHS UK
Oxford University Press
Patient.Info

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