COVID-19 update

March 2021

**clinical management**

**Title:** Effect of Helmet Noninvasive Ventilation vs High-Flow Nasal Oxygen on Days Free of Respiratory Support in Patients With COVID-19 and Moderate to Severe Hypoxemic Respiratory Failure. The HENIVOT Randomized Clinical Trial

JAMA | 25th March 2021

High-flow nasal oxygen is recommended as initial treatment for acute hypoxemic respiratory failure and is widely applied in patients with COVID-19. The objective of this study was to assess whether helmet noninvasive ventilation can increase the days free of respiratory support in patients with COVID-19 compared with high-flow nasal oxygen alone.

The findings showed that among critically ill patients with moderate to severe hypoxemic respiratory failure due to COVID-19, helmet noninvasive ventilation, compared with high-flow nasal oxygen, resulted in no significant difference in the number of days free of respiratory support within 28 days.

Full detail: [Effect of Helmet Noninvasive Ventilation vs High-Flow Nasal Oxygen on Days Free of Respiratory Support in Patients With COVID-19 and Moderate to Severe Hypoxemic Respiratory Failure](https://jamanetwork.com/journals/jama/fullarticle/2778088)

Related editorial: [Respiratory Support During the COVID-19 PandemicIs It Time to Consider Using a Helmet?](https://jamanetwork.com/journals/jama/fullarticle/2778089)

**Title:** Effect of Intermediate-Dose vs Standard-Dose Prophylactic Anticoagulation on Thrombotic Events, Extracorporeal Membrane Oxygenation Treatment, or Mortality Among Patients With COVID-19 Admitted to the Intensive Care Unit. The INSPIRATION Randomized Clinical Trial

JAMA | 18th March 2021

This randomized trial compares the effect of intermediate-dose vs standard prophylactic enoxaparin on a composite outcome of acute venous thromboembolism (VTE), arterial thrombosis, need for extracorporeal membrane oxygenation (ECMO), and all-cause mortality within 30 days among

patients with COVID-19 admitted to the ICU.  The results do not support routine empirical use of intermediate-dose prophylactic anticoagulation in unselected patients with COVID-19 admitted to the ICU.

Full detail: [Effect of Intermediate-Dose vs Standard-Dose Prophylactic Anticoagulation on Thrombotic Events, Extracorporeal Membrane Oxygenation Treatment, or Mortality Among Patients With COVID-19 Admitted to the Intensive Care Unit](https://jamanetwork.com/journals/jama/fullarticle/2777829)

Related editorial: [Finding the Optimal Thromboprophylaxis Dose in Patients With COVID-19](https://jamanetwork.com/journals/jama/fullarticle/2777828)

**Title:** Protect, respect, connect – decisions about living and dying well during COVID-19

Care Quality Commission | 18th March 2021

This report describes variation in people’s experiences of do not attempt cardiopulmonary resuscitation decisions during the pandemic.

It finds some examples of good practice, the Care Quality Commission also heard from people who were not properly involved in decisions, or were unaware that such an important decision about their care had been made.

The report calls for the establishing of a Ministerial Oversight Group – working with partners in health and social care, local government and the voluntary sector – to take responsibility for delivering improvements in this vital and sensitive area.

Full report: [Protect, respect, connect – decisions about living and dying well during COVID-19 CQC’s review of ‘do not attempt cardiopulmonary resuscitation’ decisions during the COVID-19 pandemic](https://www.cqc.org.uk/sites/default/files/20210318_dnacpr_printer-version.pdf)

See also:

* [Improved oversight and reform needed as pressures of pandemic shine light on inconsistent and concerning approaches to DNACPR decisions](https://www.cqc.org.uk/news/releases/improved-oversight-reform-needed-pressures-pandemic-shine-light-inconsistent)
* [Frustrated, Angry And Unfair: Staff Experiences Of DNAR Decision-Making In 2020](https://www.bihr.org.uk/Handlers/Download.ashx?IDMF=f19220c9-500d-4b51-afdd-bb554f5d2150) | British Institute of Human Rights

**Title:** The Importance of Delirium and Delirium Prevention in Older Adults During Lockdowns

JAMA | 15th March 2021

This JAMA Insights Clinical Update discusses the underrecognition of delirium in older adults with COVID-19 and provides delirium prevention strategies for hospitalized patients, such as providing remote visits with family members and therapeutic activity kits to the bedside.

Full detail: [The Importance of Delirium and Delirium Prevention in Older Adults During Lockdowns](https://jamanetwork.com/journals/jama/fullarticle/2777684)

**Title:** Effect of Ivermectin on Time to Resolution of Symptoms Among Adults With Mild COVID-19

JAMA | 4th March 2021

The objective of this study was to determine whether ivermectin is an efficacious treatment for mild COVID-19. The authors conclude that among adults with mild COVID-19, a 5-day course of ivermectin, compared with placebo, did not significantly improve the time to resolution of symptoms.

The findings do not support the use of ivermectin for treatment of mild COVID-19, although larger trials may be needed to understand the effects of ivermectin on other clinically relevant outcomes.

Full detail: [Effect of Ivermectin on Time to Resolution of Symptoms Among Adults With Mild COVID-19. A Randomized Clinical Trial](https://jamanetwork.com/journals/jama/fullarticle/2777389)

**Title:** Early outcomes after lung transplantation for severe COVID-19

The Lancet Respiratory Medicine | 31st March 2021

Lung transplantation is a life-saving treatment for patients with end-stage lung disease; however, it is infrequently considered for patients with acute respiratory distress syndrome (ARDS) attributable to infectious causes.

The authors of this paper aimed to describe the course of disease and early post-transplantation outcomes in critically ill patients with COVID-19 who failed to show lung recovery despite optimal medical management and were deemed to be at imminent risk of dying due to pulmonary complications.

The findings from our report show that lung transplantation is the only option for survival in some patients with severe, unresolving COVID-19-associated ARDS, and that the procedure can be done successfully, with good early post-transplantation outcomes, in carefully selected patients.

Full paper: [Early outcomes after lung transplantation for severe COVID-19: a series of the first consecutive cases from four countries](https://www.thelancet.com/action/showPdf?pii=S2213-2600%2821%2900077-1)

**Title:** Vitamin D supplementation to prevent acute respiratory infections

The Lancet Diabetes & Endocrinology | 30th March 2021

A 2017 meta-analysis of data from 25 randomised controlled trials (RCTs) of vitamin D supplementation for the prevention of acute respiratory infections (ARIs) revealed a protective effect of this intervention. The authors aimed to examine the link between vitamin D supplementation and prevention of ARIs in an updated meta-analysis.

Despite evidence of significant heterogeneity across trials, vitamin D supplementation was safe and overall reduced the risk of ARI compared with placebo, although the risk reduction was small. Protection was associated with administration of daily doses of 400–1000 IU for up to 12 months, and age at enrolment of 1·00–15·99 years. The relevance of these findings to COVID-19 is not known and requires further investigation.

Full paper: [Vitamin D supplementation to prevent acute respiratory infections: a systematic review and meta-analysis of aggregate data from randomised controlled trials](https://www.thelancet.com/action/showPdf?pii=S2213-8587%2821%2900051-6)

**Title:** COVID-19 outcomes in patients with inflammatory rheumatic and musculoskeletal diseases treated with rituximab

The Lancet Rhematology | 25th March 2021

Various observations have suggested that the course of COVID-19 might be less favourable in patients with inflammatory rheumatic and musculoskeletal diseases receiving rituximab compared with those not receiving rituximab. This cohort study aimed to investigate whether treatment with rituximab is associated with severe COVID-19 outcomes in patients with inflammatory rheumatic and musculoskeletal diseases.

The authors conclude that rituximab therapy is associated with more severe COVID-19. Rituximab will have to be prescribed with particular caution in patients with inflammatory rheumatic and musculoskeletal diseases.

Full paper: [COVID-19 outcomes in patients with inflammatory rheumatic and musculoskeletal diseases treated with rituximab: a cohort study](https://www.thelancet.com/action/showPdf?pii=S2665-9913%2821%2900059-X)

**Title:** Mavrilimumab in patients with severe COVID-19 pneumonia and systemic hyperinflammation (MASH-COVID)

The Lancet Rheumatology | 17th March 2021

In patients with COVID-19, granulocyte-macrophage colony stimulating factor (GM-CSF) might be a mediator of the hyperactive inflammatory response associated with respiratory failure and death. This study aimed to evaluate whether mavrilimumab, a monoclonal antibody to the GM-CSF receptor, would improve outcomes in patients with COVID-19 pneumonia and systemic hyperinflammation.

There was no significant difference in the proportion of patients alive and off oxygen therapy at day 14, although benefit or harm of mavrilimumab therapy in this patient population remains possible given the wide confidence intervals, and larger trials should be completed.

Full article: [Mavrilimumab in patients with severe COVID-19 pneumonia and systemic hyperinflammation (MASH-COVID): an investigator initiated, multicentre, double-blind, randomised, placebo-controlled trial](https://www.thelancet.com/action/showPdf?pii=S2665-9913%2821%2900070-9)

**Title:** Azithromycin for community treatment of suspected COVID-19 in people at increased risk of an adverse clinical course in the UK (PRINCIPLE)

The Lancet | 4th March 2021

Azithromycin, an antibiotic with potential antiviral and anti-inflammatory properties, has been used to treat COVID-19, but evidence from community randomised trials is lacking. This study aimed to assess the effectiveness of azithromycin to treat suspected COVID-19 among people in the community who had an increased risk of complications.

The findings do not justify the routine use of azithromycin for reducing time to recovery or risk of hospitalisation for people with suspected COVID-19 in the community. These findings have important antibiotic stewardship implications during this pandemic, as inappropriate use of antibiotics leads to increased antimicrobial resistance, and there is evidence that azithromycin use increased during the pandemic in the UK.

Full article: [Azithromycin for community treatment of suspected COVID-19 in people at increased risk of an adverse clinical course in the UK (PRINCIPLE): a randomised, controlled, open-label, adaptive platform trial](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900461-X)

**Title:** Remote management of covid-19 using home pulse oximetry and virtual ward support

BMJ | 2021; 372: n677 | 25th March 2021

* Pulse oximeters used at home can detect hypoxia associated with acute covid-19
* Home oximetry requires clinical support, such as regular phone contact from a health professional in a virtual ward setting
* More research is needed to understand the safety and effectiveness of home oximetry and to optimise service models and referral pathways

Full detail: [Remote management of covid-19 using home pulse oximetry and virtual ward support](https://www.bmj.com/content/372/bmj.n677)

**Title:** Severe covid-19 pneumonia: pathogenesis and clinical management

BMJ | 2021; 372: n436 | 10th March 2021

Severe covid-19 pneumonia has posed critical challenges for the research and medical communities. Older age, male sex, and comorbidities increase the risk for severe disease. For people hospitalized with covid-19, 15-30% will go on to develop covid-19 associated acute respiratory distress syndrome (CARDS).

Autopsy studies of patients who died of severe SARS CoV-2 infection reveal presence of diffuse alveolar damage consistent with ARDS but with a higher thrombus burden in pulmonary capillaries. When used appropriately, high flow nasal cannula (HFNC) may allow CARDS patients to avoid intubation, and does not increase risk for disease transmission.

During invasive mechanical ventilation, low tidal volume ventilation and positive end expiratory pressure (PEEP) titration to optimize oxygenation are recommended.

Dexamethasone treatment improves mortality for the treatment of severe and critical covid-19, while remdesivir may have modest benefit in time to recovery in patients with severe disease but shows no statistically significant benefit in mortality or other clinical outcomes.

Covid-19 survivors, especially patients with ARDS, are at high risk for long term physical and mental impairments, and an interdisciplinary approach is essential for critical illness recovery.

Full clinical review: [Severe covid-19 pneumonia: pathogenesis and clinical management](https://www.bmj.com/content/372/bmj.n436)

**Title:** Update to living systematic review on drug treatments for covid-19

BMJ | 2021; 372: n858 | 31st March 2021

The latest version of this living systematic review includes results for new interventions angiotensin-converting enzyme inhibitors, anakinra, full dose anticoagulation, ivermectin, ivermectin plus doxycycline, JAK inhibitors, lopinavir-ritonavir plus interferon-beta, peginterferon lambda, proxalutamide, sulodexide, vitamin C, and vitamin D (but certainty is generally low or very low); evidence that azithromycin may not have an impact on any patient-important outcome; evidence that interleukin-6 inhibitors probably reduce mechanical ventilation (moderate certainty) and may reduce duration of hospitalisation (low certainty); evidence that JAK inhibitors probably reduce duration of mechanical ventilation (moderate certainty) and may reduce mortality (low certainty), mechanical ventilation (low certainty), and duration of hospitalisation (low certainty); evidence that colchicine may reduce mortality (low certainty) and mechanical ventilation (low certainty) in outpatients with non-severe disease; and evidence on ivermectin and ivermectin plus doxycycline, but whether they affect any patient-important outcome remains very uncertain.

Full detail: [Update to living systematic review on drug treatments for covid-19](https://www.bmj.com/content/372/bmj.n858)

**recovery**

**Title:** COVID-19 mental health and wellbeing recovery action plan

Department of Health and Social Care | 27th March 2021

The COVID-19 mental health and wellbeing recovery action plan sets out an ambitious, cross-government, whole-person approach to promoting positive mental health and supporting people living with mental illness to recover and live well.

While this plan sets out what government will do in the coming year, it is also a call to action for the whole of society, for local communities, families and for individuals, who can take simple steps to look after their own wellbeing and the wellbeing of those around them – and can reach out for support, including from mental health services when necessary.

Full detail: [COVID-19 mental health and wellbeing recovery action plan. Our plan to prevent, mitigate and respond to the mental health impacts of the pandemic during 2021 to 2022](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/973936/covid-19-mental-health-and-wellbeing-recovery-action-plan.pdf)

**Title:** Transforming the public health system

Department of Health and Social Care | 29th March 2021

The coronavirus pandemic has shone a light on our public health system. Just as we’ve learnt a lot about the virus, we’ve also learnt a lot about what works and what needs to change in public health.

Our experience has shown we need a relentless focus on our health security, while also preventing ill health to improve the general health of the population. To make our public health system fit for the future, we need to be simultaneously effective at both.

This policy document sets out reforms to the public health system in England to transform our national health protection capabilities, put health promotion at the heart of government, and more deeply embed prevention and health improvement expertise across local and national government and the NHS.

Full detail: [Transforming the public health system: reforming the public health system for the challenges of our times](https://www.gov.uk/government/publications/transforming-the-public-health-system/transforming-the-public-health-system-reforming-the-public-health-system-for-the-challenges-of-our-times)

**Title:** A connected recovery. Findings of the APPG on Loneliness Inquiry

All-Party Parliamentary Group (APPG) on Loneliness | 24th March 2021

This inquiry report makes the case for a ‘connected recovery’ from the Covid-19 pandemic.

Key inquiry findings:

* There are too many barriers preventing people from connecting – such as a lack of safe, welcoming and accessible green spaces, parks and gardens, public toilets, playing areas, local bus services, and ramps for people with disabilities.
* Too many people face barriers to digital connection as a result of lack of access to mobile technology and the internet, as well as a lack of digital skills and confidence.
* Poorly designed or unsuitable housing and neighbourhoods can make it hard for people to meet each other, maintain social connections and develop a sense of belonging.
* Some communities and groups were highlighted as facing particular disadvantage in relation to transport and mobility.

The APPG sets out a roadmap, calling on the government to adopt 15 recommendations, designed to:

* Tackle loneliness through national leadership
* Translate national policy into local action
* Invest in the community and social infrastructure needed to connect, particularly in areas with higher levels of deprivation.
* Loneliness proof all new transport and housing developments, and close the digital divide by increasing digital skills and confidence.

Full report: [A connected recovery. Findings of the APPG on Loneliness Inquiry](https://www.redcross.org.uk/-/media/documents/about-us/what-we-do/a-connected-recovery-findings-of-the-appg-on-loneliness-inquiry.pdf)

**Title:** The COVID decade: understanding the long-term societal impacts of COVID-19

The British Academy | 23rd March 2021

Society will continue to feel the impacts of COVID-19 for a decade or more without an urgent public policy overhaul, warns the British Academy in an independent research report on the anniversary of Britain’s first lockdown.

In its new multi-disciplinary evidence review, *The COVID decade: understanding the long-term societal impacts of COVID-19*, the Academy forecasts that significant intervention will be needed to avoid an acceleration towards poorer health, social and economic outcomes and a more extreme pattern of inequality.

The extensive evidence report is accompanied by a wide-ranging and thorough policy analysis, *Shaping the COVID decade*, which argues that these societal impacts have exposed several gaps in public policy making that the government now has the opportunity to address.

Evidence review: [The COVID decade: Understanding the long-term societal impacts of COVID-19](https://www.thebritishacademy.ac.uk/documents/3238/COVID-decade-understanding-long-term-societal-impacts-COVID-19.pdf)

Policy analysis: [Shaping the COVID decade: Addressing the long-term societal impacts of COVID-19](https://www.thebritishacademy.ac.uk/documents/3239/Shaping-COVID-decade-addressing-long-term-societal-impacts-COVID-19.pdf)

See also: [Social costs of the pandemic will be felt for a decade, says the British Academy](https://www.thebritishacademy.ac.uk/news/social-costs-of-the-pandemic-will-be-felt-for-a-decade-says-the-british-academy/)

**Title:** GP access during COVID-19

Healthwatch | 22nd March 2021

This report looks at how the Covid-19 pandemic has changed the way people access their GP and how this affected people's experience of care. Whilst remote consultations have made getting care quicker, more efficient and easier to fit around their lives for many people, many people are struggling to access care from their GP practice, leaving them feeling frustrated and confused. Certain groups also risk being left behind, such as older people, disabled people, people affected by homelessness and on low incomes, and those whose first language isn’t English.

Full report: [GP access during COVID-19](https://www.healthwatch.co.uk/sites/healthwatch.co.uk/files/20210215%20GP%20access%20during%20COVID19%20report%20final.pdf)

See also: [GP access review must be part of NHS COVID-19 recovery](https://www.healthwatch.co.uk/news/2021-03-22/gp-access-review-must-be-part-nhs-covid-19-recovery)

**Title:** State of health and care: The NHS Long Term Plan after Covid-19

Institute for Public Policy Research | 16th March 2021

After a decade of austerity, The NHS Long Term Plan was meant to be a turning point for healthcare. However, those plans have been severely disrupted by the coronavirus pandemic. This analysis shows the scale of the damage done by the pandemic across several major health conditions.

It recommends a package of six ambitious changes to ‘build back better’. These policies are designed to do three things.

* First, they intend to ensure the pandemic does not cause lasting damage to healthcare services for future generations.
* Second, they look to bring in areas – like social care and public health – that are not covered in The NHS Long Term Plan, but which Covid-19 has harshly reminded us are integral to healthcare.
* Third, they look to capture the innovations that occurred during the pandemic.

Together, the recommendations form a £12 billion blueprint to ‘build back better’ health and care.

Full detail: [State of health and care: The NHS Long Term Plan after Covid-19](https://www.ippr.org/files/2021-03/state-of-health-and-care-mar21.pdf)

**Title:** Building back elective care. A new framework for recovery

NHS Confederation | 7th March 2021

This report warns that the NHS in England could face a hidden waiting list of nearly six million people who have not come forward or been referred for treatment yet due to the significant disruption brought about by the pandemic. It explores what lies ahead for the health service and patients, based on modelling of referral-to-treatment waiting trajectories in 2021. It offers an outline policy framework for starting to reduce waiting lists in an effective, equitable and efficient way.

Full report: [Building back elective care. A new framework for recovery](https://www.nhsconfed.org/-/media/Confederation/Files/Publications/Documents/Building-back-elective-care.pdf)

See also: [Warning NHS waiting list could be scratching the surface](https://www.nhsconfed.org/news/2021/03/copy-of-warning-that-nhs-waiting-list-could-be-scratching-the-surface)

**Title:** Living Safely with Covid: Moving toward a Strategy for Sustainable Exit from the Pandemic

Association of Directors of Public Health (ADPH) | February 2021

This guidance aims to support Directors of Public Health, local authorities and wider partners in considering the approaches that are most appropriate as the country moves out of lockdown. It focuses specifically on the inequalities that have been observed during the pandemic and the actions that should be taken to address them. It also explores early thinking on recovery and how this might be maximised to address the wider health and economic impacts of Covid-19 in an equitable and fair way.

Full guidance: [Living Safely with Covid Moving toward a Strategy for Sustainable Exit from the Pandemic](https://www.adph.org.uk/wp-content/uploads/2021/02/Living-Safely-with-Covid-ADPH-Guidance.pdf)

**Title:** Four-Month Clinical Status of a Cohort of Patients After Hospitalization for COVID-19

JAMA | 17th March 2021

This cohort study describes coronavirus disease sequelae at 4 months in patients hospitalized for COVID-19 between March and May 2020, including assessment of respiratory, cognitive, and functional symptoms and test and imaging findings.

Four months after hospitalization for COVID-19, a cohort of patients frequently reported symptoms not previously present, and lung-scan abnormalities were common among those who were tested. Further research is needed to understand longer-term outcomes and whether these findings reflect associations with the disease.

Full detail: [Four-Month Clinical Status of a Cohort of Patients After Hospitalization for COVID-19](https://jamanetwork.com/journals/jama/fullarticle/2777787)

Related editorial: [Outcomes for Patients Following Hospitalization for COVID-19](https://jamanetwork.com/journals/jama/fullarticle/2777784)

**Title:** Post-covid syndrome in individuals admitted to hospital with covid-19: retrospective cohort study

BMJ | 2021; 372: n693 | 31st March 2021

This study looked to quantify rates of organ specific dysfunction in individuals with covid-19 after discharge from hospital compared with a matched control group from the general population.

The authors found that individuals discharged from hospital after covid-19 had increased rates of multiorgan dysfunction compared with the expected risk in the general population. The increase in risk was not confined to the elderly and was not uniform across ethnicities.

The diagnosis, treatment, and prevention of post-covid syndrome requires integrated rather than organ or disease specific approaches, and urgent research is needed to establish the risk factors.

Full article: [Post-covid syndrome in individuals admitted to hospital with covid-19: retrospective cohort study](https://www.bmj.com/content/bmj/372/bmj.n693.full.pdf)

Related editorial: [Fresh evidence of the scale and scope of long covid](https://www.bmj.com/content/373/bmj.n853)

**Title:** Middle aged women face greater risk of debilitating long term symptoms

BMJ | 2021; 372: n829 | 25th March 2021

Middle aged women have a higher risk of experiencing a range of debilitating ongoing symptoms, such as fatigue, breathlessness, muscle pain, anxiety, depression, and “brain fog” after hospital treatment for covid-19, suggest the findings of two unpublished studies available as preprints.

Seven in 10 patients admitted to hospital with covid-19 reported “long covid” symptoms an average of five months after discharge in the larger PHOSP-COVID study, and symptoms were more prevalent in women aged 40-60.  Only 29% of the 1077 patients studied felt fully recovered when followed up, on average five months after discharge. Over a quarter had clinically significant symptoms of anxiety and depression, 12% had symptoms of post-traumatic stress disorder, 17% had at least mild cognitive impairment, 46% had lower physical performance than age and sex matched controls, and 20% had a new disability.

Before hospital admission 68% of patients had worked full time, but 18% of these had not returned to work and 19% had had to change their way of working because of long-lasting effects.

A smaller second study, from the International Severe Acute Respiratory and emerging Infections Consortium (ISARIC), found that women under 50 were five times less likely to report feeling recovered, twice as likely to report worse fatigue, seven times more likely to become more breathless, and more likely to have greater disability than men of the same age who had been admitted to hospital with covid-19.

Further detail: [Middle aged women face greater risk of debilitating long term symptoms](https://www.bmj.com/content/372/bmj.n829)

Research papers:

[Physical, cognitive and mental health impacts of COVID-19 following hospitalisation: a multi-centre prospective cohort study](https://www.medrxiv.org/content/10.1101/2021.03.22.21254057v2.full.pdf)

[Long covid in adults discharged from UK hospitals after covid-19: a prospective, multicentre cohort study using the ISARIC WHO Clinical Characterisation Protocol](https://www.medrxiv.org/content/10.1101/2021.03.18.21253888v3.full.pdf)

**Infection control**

**Title:** COVID-19: Test, track and trace (part 1)

House of Commons Public Accounts Committee | 10th March 2021

In May 2020 NHS Test and Trace (NHST&T) was set up with a budget of £22 billion. Since then it has been allocated £15 billion more: totalling £37 billion over two years. This report says that there is still no clear evidence of NHST&T's overall effectiveness. It also finds that it’s unclear whether its contribution to reducing infection levels - as opposed to the other measures introduced to tackle the pandemic - and questions whether this can justify the costs.

Full report: [COVID-19: Test, track and trace (part 1)](https://committees.parliament.uk/publications/4976/documents/50058/default/)

See also: [“Unimaginable” cost of Test & Trace failed to deliver central promise of averting another lockdown](https://committees.parliament.uk/committee/127/public-accounts-committee/news/150988/unimaginable-cost-of-test-trace-failed-to-deliver-central-promise-of-averting-another-lockdown/)

**Title:** RCN Independent review of guidelines for the prevention and control of Covid-19 in health care settings in the United Kingdom

Royal College of Nursing (RCN) | 7th March 2021

This report of an independent review finds that the government’s Covid-19 infection control guidelines, which are used across the UK, are in need of updating. It calls for all NHS staff to be given a higher level of personal protective equipment as a precautionary measure pending the outcome of a review.

Full report: [RCN Independent review of guidelines for the prevention and control of Covid-19 in health care settings in the United Kingdom: evaluation and messages for future infection-related emergency planning](https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/publications/2021/march/009-627.pdf?la=en)

See also: [Government must act now as report shows infection control guidelines are ‘fundamentally flawed’](https://www.rcn.org.uk/news-and-events/news/uk-government-must-act-now-as-report-shows-infection-control-guidelines-fundamentally-flawed-070321)

**Title:** COVID-19 Vaccines vs Variants—Determining How Much Immunity Is Enough

JAMA | 17th March 2021

This Medical News feature examines what is known about the efficacy of COVID-19 vaccines against SARS-CoV-2 variants.

Full detail: [COVID-19 Vaccines vs Variants—Determining How Much Immunity Is Enough](https://jamanetwork.com/journals/jama/fullarticle/2777785)

**Title:** Approaches for Optimal Use of Different COVID-19 Vaccines. Issues of Viral Variants and Vaccine Efficacy

JAMA | 4th March 2021

This Viewpoint proposes ways to maximize vaccine efficacy and allocation given the rise of coronavirus variants and authorization of a Johnson & Johnson vaccine, including reserving the latter for younger healthier populations, boosting it with a single-dose messenger RNA (mRNA) vaccination, and single mRNA immunization of people with prior documented SARS-CoV-2 infection.

Full detail: [Approaches for Optimal Use of Different COVID-19 Vaccines. Issues of Viral Variants and Vaccine Efficacy](https://jamanetwork.com/journals/jama/fullarticle/2777390)

Related editorial: [SARS-CoV-2 Viral Variants—Tackling a Moving Target](https://jamanetwork.com/journals/jama/fullarticle/2776542)

**Title:** Immunogenicity of the Ad26.COV2.S Vaccine for COVID-19

JAMA | 11th March 2021

This randomized trial compares the immunogenicity of a SARS-CoV-2 Ad26.COV2.S vaccine (Janssen/Johnson & Johnson) at high vs low vs no dose (placebo) in humans, including the kinetics, magnitude, and phenotype of coronavirus spike-specific humoral and cellular immune responses.

In this phase 1 study, a single immunization with Ad26.COV2.S induced rapid binding and neutralization antibody responses as well as cellular immune responses. Two phase 3 clinical trials are currently underway to determine the efficacy of the Ad26.COV2.S vaccine.

Full detail: [Immunogenicity of the Ad26.COV2.S Vaccine for COVID-19](https://jamanetwork.com/journals/jama/fullarticle/2777598)

See also: [The Johnson & Johnson Vaccine for COVID-19](https://jamanetwork.com/journals/jama/fullarticle/2777172)

**Title:** COVID-19 in 2021—Continuing Uncertainty

JAMA | 4th March 2021

This Viewpoint summarizes the current best evidence about COVID-19 vaccines, immunity, and whether SARS-CoV-2 will become an endemic or seasonal virus.

Full detail: [COVID-19 in 2021—Continuing Uncertainty](https://jamanetwork.com/journals/jama/fullarticle/2777391)

**Title:** The Potential Future of the COVID-19 Pandemic. Will SARS-CoV-2 Become a Recurrent Seasonal Infection?

JAMA | 3rd March 2021

This Viewpoint discusses the prospect that COVID-19 could become a recurrent seasonal disease like influenza and proposes strategies to mitigate the consequences for communities and health systems, including changes in surveillance, medical and public health response, and socioeconomic programs.

Full detail: [The Potential Future of the COVID-19 Pandemic. Will SARS-CoV-2 Become a Recurrent Seasonal Infection?](https://jamanetwork.com/journals/jama/fullarticle/2777343)

**Title:** Filtering Facepiece Respirator (N95 Respirator) Reprocessing. A Systematic Review

JAMA | 3rd March 2021

In the context of widespread reuse and reprocessing of N95 respirators due to shortages caused by the COVID-19 pandemic, this systematic review summarizes evidence on effectiveness and feasibility of 5 decontaminating processes: UV irradiation, vaporized hydrogen peroxide, moist-heat incubation, microwave-generated steam, and ethylene oxide.

Full detail: [Filtering Facepiece Respirator (N95 Respirator) Reprocessing. A Systematic Review](https://jamanetwork.com/journals/jama/fullarticle/2777342)

**Title:** Prioritising COVID-19 vaccination in changing social and epidemiological landscapes: a mathematical modelling study

The Lancet Infectious Diseases | 31st March 2021

During the COVID-19 pandemic, authorities must decide which groups to prioritise for vaccination in a shifting social–epidemiological landscape in which the success of large-scale non-pharmaceutical interventions requires broad social acceptance. This paper aimed to compare projected COVID-19 mortality under four different strategies for the prioritisation of SARS-CoV-2 vaccines.

Full detail: [Prioritising COVID-19 vaccination in changing social and epidemiological landscapes: a mathematical modelling study](https://www.thelancet.com/action/showPdf?pii=S1473-3099%2821%2900057-8)

**Title:** Covid vaccine: Prioritise over 16s living with immunosuppressed adults, says JCVI

BMJ | 2021; 372: n852 | 29th March 2021

People aged 16 or over who live with immunosuppressed adults should be prioritised for covid-19 vaccination alongside priority group 6 (people aged 16 to 65 who have a clinical condition that puts them at higher risk), the UK government’s vaccine advisory committee has said.

This would include people living in households with an adult who has a weakened immune system, such as those with blood cancer or HIV, or people on immunosuppressive treatment, including chemotherapy, the Joint Committee on Vaccination and Immunisation said. These people are not only more likely to have poorer outcomes after SARS-CoV-2 infection but may not respond as well to the vaccine as others, recent evidence indicates, said the JCVI.

The committee said it had made the new recommendation after evidence emerged showing that the covid-19 vaccines may reduce transmission, meaning that vaccinating those around immunosuppressed individuals could help reduce their risk of infection.

Full detail: [Covid vaccine: Prioritise over 16s living with immunosuppressed adults, says JCVI](https://www.bmj.com/content/372/bmj.n852)

**Title:** The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in the UK

The Lancet Infectious Diseases | 18th March 2021

In response to the COVID-19 pandemic, the UK first adopted physical distancing measures in March, 2020. Vaccines against SARS-CoV-2 became available in December, 2020. This paper explores the health and economic value of introducing SARS-CoV-2 immunisation alongside physical distancing in the UK to gain insights about possible future scenarios in a post-vaccination era.

The model findings highlight the substantial health and economic value of introducing SARS-CoV-2 vaccination. Smaller outbreaks could continue even with vaccines, but population-wide implementation of increased physical distancing might no longer be justifiable. The study provides early insights about possible future post-vaccination scenarios from an economic and epidemiological perspective.

Full article: [The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in the UK: a transmission model-based future scenario analysis and economic evaluation](https://www.thelancet.com/action/showPdf?pii=S1473-3099%2821%2900079-7)

**Title:** Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study

The Lancet Infectious Diseases | 18th March 2021

The dynamics of vaccination against SARS-CoV-2 are complicated by age-dependent factors, changing levels of infection, and the relaxation of non-pharmaceutical interventions (NPIs) as the perceived risk declines, necessitating the use of mathematical models.

The authors aimed to use epidemiological data from the UK together with estimates of vaccine efficacy to predict the possible long-term dynamics of SARS-CoV-2 under the planned vaccine rollout.

For all vaccination scenarios investigated, their predictions highlight the risks associated with early or rapid relaxation of NPIs. Although novel vaccines against SARS-CoV-2 offer a potential exit strategy for the pandemic, success is highly contingent on the precise vaccine properties and population uptake, both of which need to be carefully monitored.

Full article: [Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study](https://www.thelancet.com/action/showPdf?pii=S1473-3099%2821%2900143-2)

**Title:** Efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 variant of concern 202012/01 (B.1.1.7)

The Lancet | 30th March 2021

A new variant of SARS-CoV-2, B.1.1.7, emerged as the dominant cause of COVID-19 disease in the UK from November, 2020. This paper reports a post-hoc analysis of the efficacy of the adenoviral vector vaccine, ChAdOx1 nCoV-19 (AZD1222), against this variant.

ChAdOx1 nCoV-19 showed reduced neutralisation activity against the B.1.1.7 variant compared with a non-B.1.1.7 variant in vitro, but the vaccine showed efficacy against the B.1.1.7 variant of SARS-CoV-2.

Full article: [Efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 variant of concern 202012/01 (B.1.1.7): an exploratory analysis of a randomised controlled trial](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900628-0)

**Title:** SARS-CoV-2 infection and transmission in primary schools in England in June–December, 2020 (sKIDs): an active, prospective surveillance study

The Lancet Child & Adolescent Health | 16th March 2021

Little is known about the risk of SARS-CoV-2 infection and transmission in educational settings. Public Health England initiated a study, COVID-19 Surveillance in School KIDs (sKIDs), in primary schools when they partially reopened from June 1, 2020, after the first national lockdown in England to estimate the incidence of symptomatic and asymptomatic SARS-CoV-2 infection, seroprevalence, and seroconversion in staff and students.

The study found that in England, SARS-CoV-2 infection rates were low in primary schools following their partial and full reopening in June and September, 2020.

Full article: [SARS-CoV-2 infection and transmission in primary schools in England in June–December, 2020 (sKIDs): an active, prospective surveillance study](https://www.thelancet.com/action/showPdf?pii=S2352-4642%2821%2900061-4)

**Title:** Efficacy of the ChAdOx1 nCoV-19 Covid-19 Vaccine against the B.1.351 Variant

New England Journal of Medicine | 16th March 2021

A double-blind randomized trial in South Africa documented poor efficacy of two doses of the ChAdOx1 nCoV-19 vaccine against the B.1.351 variant of SARS-CoV-2 that emerged in South Africa. Infections occurred in 3.2% of placebo recipients and in 2.5% of vaccine recipients. Thirty-nine of the 42 virus isolates were the B.1.351 variant. None of the cases led to hospitalization or death.

Full article: [Efficacy of the ChAdOx1 nCoV-19 Covid-19 Vaccine against the B.1.351 Variant](https://www.nejm.org/doi/full/10.1056/NEJMoa2102214?query=featured_coronavirus)

**Title:** Pfizer reports 100% vaccine efficacy in children aged 12 to 15

BMJ | 2021; 373: n881 | 1st April 2020

The Pfizer-BioNTech covid-19 vaccine has shown 100% efficacy against SARS-CoV-2 in 12 to 15 year olds in the preliminary results of a phase III trial.

Pfizer announced the results in a press release, although full details have yet to be published. It said that it would now submit the data to the US Food and Drug Administration and the European Medicines Agency as it requests expanded marketing authorisation.

Full detail: [Pfizer reports 100% vaccine efficacy in children aged 12 to 15](https://www.bmj.com/content/373/bmj.n881)

**Title:** Adherence to the test, trace, and isolate system in the UK: results from 37 nationally representative surveys

BMJ | 2021; 372: n608 | 31st March 2021

The objective of this research was to investigate rates of adherence to the UK’s test, trace, and isolate system over the initial 11 months of the covid-19 pandemic.

The study concludes that **l**evels of adherence to test, trace, and isolate are low, although some improvement has occurred over time. Practical support and financial reimbursement are likely to improve adherence. Targeting messaging and policies to men, younger age groups, and key workers might also be necessary.

Full detail: [Adherence to the test, trace, and isolate system in the UK: results from 37 nationally representative surveys](https://www.bmj.com/content/bmj/372/bmj.n608.full.pdf)

Related editorial: [Test, trace, and isolate in the UK](https://www.bmj.com/content/372/bmj.n822)

**Title:** Vaccine hesitancy fell after vaccination programme started

BMJ | 2021; 372: n837 | 26th March 2021

More than eight out of 10 UK adults who were initially reluctant to have a covid vaccine now plan to do so, survey data suggest.

Preliminary findings from University College London’s Virus Watch study suggest that 86% of those who were unsure about having the vaccine or planned to refuse it in December 2020 have now changed their minds.

Further detail: [Vaccine hesitancy fell after vaccination programme started](https://www.bmj.com/content/372/bmj.n837)

Link to UCL study: [Trends, patterns, and psychological influences on covid-19 vaccination intention: findings from a large prospective community cohort study in England and Wales.](https://ucl-virus-watch.net/wp-content/uploads/2021/03/Trends-patterns-and-psychological-influences-on-COVID-19-vaccination-intention-findings-from-a-large-prospective-community-cohort-study-in-England-and-Wales-Virus-Watch.pdf)

**workforce wellbeing**

**Title:** Recover, Reward, Renew: A post-pandemic plan for the healthcare workforce

IPPR | 30th March 2021

As many as one in four healthcare workers – equivalent to 330,000 staff - say they are more likely to leave the NHS due to a year of unprecedented pressure, according to new polling by IPPR/YouGov. The figure - which includes the equivalent of 100,000 nurses and 8,000 midwives – adds pressure to a workforce that was experiencing a crisis of unfilled vacancies even before the pandemic.

A new IPPR report ‘*Recover, Reward, Renew’*argues that this is a direct result of pandemic pressures, on top of a decade of austerity.

A bold workforce policy for healthcare staff is urgently needed, according to today’s report. It says the government should focus this ‘new deal’ on three key areas:

* **Recover -**Many have not taken leave during the pandemic or have lost access to flexible working. IPPR recommends a shift to flexible working by default; guaranteed rollover of all accumulated annual leave for the next five years; and a new NHS-wide compensation scheme that provides either additional time off in lieu or a pay bonus to staff who are refused annual leave on the dates requested.
* **Reward -**Not only is a substantial pay award fair after the pressures of Covid-19, but it would also support retention, the wider economic recovery and worker’s mental health. IPPR argues for a 5 per cent average pay award, tilted in favour of the lower paid, and a government-subsidised living wage guarantee for social care workers.
* **Renew -**Progression is important to retention and IPPR argues skills developed during the pandemic should be formally recognised through a national certification scheme. IPPR also argues that the NHS must change its recruitment, training and progression processes to stamp out institutional racism.

Full report: [Recover, Reward, Renew: A post-pandemic plan for the healthcare workforce](https://www.ippr.org/files/2021-03/recover-reward-renew-march-21.pdf)

Press release: [Commit to new deal for healthcare workers or risk ‘deadly exodus’, IPPR warns government](https://www.ippr.org/news-and-media/press-releases/commit-to-new-deal-for-healthcare-workers-or-risk-deadly-exodus-ippr-warns-government)

**Title:** Rest, recover, restore: Getting UK health services back on track

British Medical Association | 19th March 2021

This report states that the Covid-19 pandemic has left the health service running on empty, with staff burnt out, disillusioned, and even considering leaving the NHS as a result of the intense pressures and stress of the past year.

The report points out that pushing doctors to ‘get the NHS back to normal’, without giving them the respite and support they need, will not only result in increasingly high absence rates and staff reducing their hours, but also threaten patient care and safety.

 It sets out a series of recommendations to UK governments to ensure that services resume safely for both staff and patients.

Full report: [Rest, recover, restore: Getting UK health services back on track](https://www.bma.org.uk/media/3910/nhs-staff-recover-report-final.pdf)

Press release: [Overworked doctors must be allowed to rest and recover so we can keep patients safe, BMA warns](https://www.bma.org.uk/bma-media-centre/overworked-doctors-must-be-allowed-to-rest-and-recover-so-we-can-keep-patients-safe-bma-warns)

**Title:** Putting people first: supporting NHS staff in the aftermath of COVID-19

NHS Confederation | 24th March 2021

Caring for patients and service users during the Covid-19 pandemic has taken an enormous toll on NHS and social care staff. This report, part of the NHS Reset campaign, considers the five key factors needed for the NHS to provide the most effective environment to retain – and sustain – staff over the weeks and months ahead:

1. Rest and recovery
2. Health and wellbeing
3. Recognition and reward
4. Visible, compassionate leadership
5. Capacity and conditions to enable a reset

Full report: [Putting people first: supporting NHS staff in the aftermath of COVID-19](https://www.nhsconfed.org/-/media/Confederation/Files/Publications/Documents/NHS-Reset-Putting-People-First.pdf)

See also: [Real risk that thousands of NHS staff will leave unless they are allowed to recover](https://www.nhsconfed.org/news/2021/03/real-risk-that-thousands-of-nhs-staff-will-leave-unless-they-are-allowed-to-recover)

**Title:** Assessing risk for healthcare workers during the covid-19 pandemic

BMJ | 2021; 372: n602 | 15th March 2021

* In addition to risk factors for severe covid-19 identified across broader populations, such as older age and male sex, data from the UK and the US have shown that healthcare staff of ethnic minority backgrounds have been disproportionately affected by covid-19
* Risk assessment of the workplace, workforce, and individual can help reduce potential workplace hazards for all staff, regardless of ethnicity
* Individuals who are at greatest risk of adverse outcomes from infection may need adjustments to their roles

Full detail: [Assessing risk for healthcare workers during the covid-19 pandemic](https://www.bmj.com/content/372/bmj.n602)

**other**

**Title:** The 12-month stretch. Where the Government has delivered – and where it has failed – during the Covid-19 crisis

Resolution Foundation | 18th March 2021

This briefing note explores the past 12 months of the pandemic through the health crisis, the economic crisis, and their impact on households’ ability to cope financially. It considers the big picture of what policy makers have done, how well they have done it, and where it’s left people, both in terms of health and economic outcomes.

It concludes that the past year has been marked by successes on income support and vaccines, but also failures on lockdown that have cost lives and deepened the economic crisis, and a legacy of inequality that needs to be addressed in the recovery.

Full detail: [The 12-month stretch Where the Government has delivered – and where it has failed – during the Covid-19 crisis](https://www.resolutionfoundation.org/app/uploads/2021/03/The-12-month-stretch.pdf)

See also: [The Covid effect ­– £186bn of income support, 25 million jabs, and around 25,000 avoidable deaths in the winter wave](https://www.resolutionfoundation.org/press-releases/the-covid-effect-186bn-of-income-support-25-million-jabs-and-around-25000-avoidable-deaths-in-the-winter-wave/)

**Title:** Government transparency and accountability during Covid 19: The data underpinning decisions

Public Administration and Constitutional Affairs Committee | 15th March 2021

In this report the Committee warns that the failure of government to provide sufficient explanation of the data underpinning key decisions during Covid-19 placed needless strain on public confidence. It urges the government to reinvigorate how data is communicated with the public and shared with partner agencies in the fight against Covid-19 to enable fast, flexible response to the future challenges of the pandemic, and ensure they are supported by society.

Full report: [Government transparency and accountability during Covid 19: The data underpinning decisions](https://committees.parliament.uk/publications/5076/documents/50285/default/)

See also: [Improving data transparency critical in long-term Covid-19 fight](https://committees.parliament.uk/committee/327/public-administration-and-constitutional-affairs-committee/news/152473/pacac-improving-data-transparency-critical-in-longterm-covid19-fight/)

**Title:** Maternal mental health during a pandemic: A rapid evidence review of Covid-19’s impact

Maternal Mental Health Alliance | Centre for Mental Health | 16th March 2021

Maternal mental health during a pandemic is a rapid evidence review of the impact of Covid-19 on the mental health of women during pregnancy and after they’ve given birth, and the support that’s been available during the pandemic.

The report finds that women and their families have faced extra pressures on their mental health, including anxiety about giving birth during lockdown or about becoming unwell, fears about losing employment, and increasing levels of domestic violence. It finds that some groups of women face a higher than average risk of poor mental health, including women from racialised communities and women experiencing economic deprivation.

These findings call for the Government to review what is needed to fully support women’s mental health during the perinatal period and to commit to provide this both in the aftermath of the pandemic and in any future crisis situation.

Full publication: [Maternal mental health during a pandemic: A rapid evidence review of Covid-19’s impact](https://maternalmentalhealthalliance.org/wp-content/uploads/CentreforMH_MaternalMHPandemic_FullReport.pdf)

Executive summary: [Maternal mental health during a pandemic: A rapid evidence review of Covid-19’s impact](https://maternalmentalhealthalliance.org/wp-content/uploads/CentreforMH_MaternalMHPandemic_ExecutiveSummary.pdf)

**Title:** The Other Pandemic: The Impact Of Covid-19 On Britain’s Mental Health

Public First | 7th March 2021

The findings in this report lay bare the genuine, wide and profound mental health crisis in Britain today. 15 percent of the public have lost a close friend or relative to the virus. And 40 per cent say their mental health has been negatively affected in the last 12 months.

The key findings of the report show that:

* Young people have endured much worse mental health than older people
* Women have carried a particularly heavy burden
* Women were more likely to say they found homeschooling “stressful”, with 62 per cent of women reporting that, compared to 41 per cent of men
* 38 per cent of men are finding it easier to talk about poor mental health since the start of the pandemic, a potential sign that stigma around mental health is being broken down.
* Those with children have worried terribly about a “lost year” of childhood and well over half of all parents – 61 per cent – say that lockdown has had a negative impact on their children’s mental health
* The better off have coped much better financially
* Furlough has not shielded people from extreme worry about their financial situation

Full report: [The Other Pandemic: The Impact Of Covid-19 On Britain’s Mental Health](http://www.publicfirst.co.uk/wp-content/uploads/2021/03/The-Other-Pandemic.pdf)

**Title:** Cancer Won't Wait. Building resilience in cancer screening and diagnostics in Europe based on lessons from the pandemic

The IQVIA Institute | 8th March 2021

The ongoing impact of Covid-19 on health services across Europe has in most cases led to significant reductions in cancer screening, testing and diagnosis. Responses in individual countries have differed, but there are common challenges in all countries.

This report highlights some of the approaches already being taken, as well as suggestions for what should be done going forward. Free registration is required to access this report.

Full report: [Cancer Won't Wait. Building resilience in cancer screening and diagnostics in Europe based on lessons from the pandemic](https://www.iqvia.com/insights/the-iqvia-institute/reports/cancer-wont-wait)

**Title:** Risk of mortality in patients infected with SARS-CoV-2 variant of concern 202012/1

BMJ | 2021; 372: n579 | 10th March 2021

The objective of this study was to establish whether there is any change in mortality from infection with a new variant of SARS-CoV-2, designated a variant of concern (VOC-202012/1) in December 2020, compared with circulating SARS-CoV-2 variants.

The paper concludes the probability that the risk of mortality is increased by infection with VOC-202012/01 is high. If this finding is generalisable to other populations, infection with VOC-202012/1 has the potential to cause substantial additional mortality compared with previously circulating variants.

Healthcare capacity planning and national and international control policies are all impacted by this finding, with increased mortality lending weight to the argument that further coordinated and stringent measures are justified to reduce deaths from SARS-CoV-2.

Full article: [Risk of mortality in patients infected with SARS-CoV-2 variant of concern 202012/1: matched cohort study](https://www.bmj.com/content/bmj/372/bmj.n579.full.pdf)

**Title:** COVID-19 and its impact on the cardiovascular system

BMJ Openheart |15th March 2021

This paper reviews the cardiac presentations, in-hospital outcomes and development of cardiovascular complications in the initial cohort of SARS-CoV-2 positive patients at Imperial College Healthcare National Health Service Trust, UK.

We

[TRFT Library & Knowledge Service](https://www.trftlibraryknowledge.com/) aim to bring together the latest guidelines, research and news on Covid-19 through our [Covid-19 portal](https://www.trftlibraryknowledge.com/coronavirus.html). For daily updates on Covid-19 visit our '[Latest Health](https://trfthealthweeklydigest.wordpress.com/)' newsfeed, or use the hashtag [#covid19rftlks](https://twitter.com/hashtag/covid19rftlks?src=hashtag_click) to see our latest tweets on Covid-19 research, guidelines and news.

We also produce a range of subject-specific news feeds to ensure our clinical and professional teams stay up to date with developments in their work areas. Please visit our [website](http://www.trftlibraryknowledge.com/) for more information

<https://www.trftlibraryknowledge.com/health-newsfeeds.html>

Full paper: [COVID-19 and its impact on the cardiovascular system](https://openheart.bmj.com/content/openhrt/8/1/e001472.full.pdf)