COVID-19 weekly update

30th April 2021

**clinical management**

**Title:** Efficacy of the TMPRSS2 inhibitor camostat mesilate in patients hospitalized with Covid-19-a double-blind randomized controlled trial.

EClinicalMedicine | 22nd April 2021

The trans-membrane protease serine 2 (TMPRSS2) is essential for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cell entry and infection. Efficacy and safety of TMPRSS2 inhibitors in patients with coronavirus disease 2019 (Covid-19) have not been evaluated in randomized trials.

We conducted an investigator-initiated, double-blind, randomized, placebo-controlled multicenter trial in patients hospitalized with confirmed SARS-CoV-2 infection from April 4, to December 31, 2020. Within 48 h of admission, participants were randomly assigned in a 2:1 ratio to receive the TMPRSS2 inhibitor camostat mesilate 200 mg three times daily for 5 days or placebo. The primary outcome was time to discharge or clinical improvement. Other outcomes included 30-day mortality, safety and change in oropharyngeal viral load.

Under this protocol, camostat mesilate treatment was not associated with increased adverse events during hospitalization for Covid-19 and did not affect time to clinical improvement, progression to ICU admission or mortality.

Full article: [Efficacy of the TMPRSS2 inhibitor camostat mesilate in patients hospitalized with Covid-19-a double-blind randomized controlled trial](https://www.thelancet.com/action/showPdf?pii=S2589-5370%2821%2900129-2)

**Title:** Overview of SARS-CoV-2 infection in adults living with HIV

The Lancet HIV | May 2021

Around 2·5 million deaths and more than 110 million COVID-19 cases have been reported globally. Although it initially appeared that HIV infection was not a risk factor for COVID-19 or more severe disease, more recent large studies suggest that people living with HIV (particularly with low CD4 cell counts or untreated HIV infection) might have a more severe clinical course than those who are HIV-negative. Moreover, the COVID-19 pandemic has disrupted HIV prevention and treatment services worldwide, creating huge challenges to the continuity of essential activities.

This paper reviews the most relevant features of COVID-19 in people living with HIV and highlighted topics where further research is required.

Full article: [Overview of SARS-CoV-2 infection in adults living with HIV](https://www.thelancet.com/action/showPdf?pii=S2352-3018%2821%2900070-9)

**Title:** SARS-CoV-2 seroprevalence, and IgG concentration and pseudovirus neutralising antibody titres after infection, compared by HIV status: a matched case-control observational study

The Lancet HIV | 29th April 2021

Most cohorts show similar or lower COVID-19 incidence among people living with HIV compared with the general population. However, incidence might be affected by lower testing rates among vulnerable populations. This paper aimed to compare SARS-CoV-2 IgG seroprevalence, disease severity, and neutralising antibody activity after infection among people with and without HIV receiving care in a county hospital system over a 3-month period.

Although fewer infections were detected by SARS-CoV-2 IgG testing among people living with HIV than among those without HIV, people with HIV had more cases of severe COVID-19. Among people living with HIV with past SARS-CoV-2 infection, lower IgG concentrations and pseudovirus neutralising antibody titres might reflect a diminished serological response to infection, and the similar avidity could be driven by similar time since infection.

Full article: [SARS-CoV-2 seroprevalence, and IgG concentration and pseudovirus neutralising antibody titres after infection, compared by HIV status: a matched case-control observational study](https://www.thelancet.com/action/showPdf?pii=S2352-3018%2821%2900072-2)

**Title:** Interleukin-6 receptor blockade in patients with COVID-19: placing clinical trials into context

The Lancet Respiratory Medicine | 27th April 2021

The pleiotropic cytokine interleukin-6 (IL-6) has been implicated in the pathogenesis of COVID-19, but uncertainty remains about the potential benefits and harms of targeting IL-6 signalling in patients with the disease.

The efficacy and safety of tocilizumab and sarilumab, which block the binding of IL-6 to its receptor, have been tested in adults with COVID-19-related acute respiratory illness in randomised trials, with important differences in trial design, characteristics of included patients, use of co-interventions, and outcome measurement scales.

This Series paper reviews the clinical and methodological heterogeneity of studies of IL-6 receptor antagonists, and consider how this heterogeneity might have influenced reported treatment effects.

Timing from clinical presentation to treatment, severity of illness, and concomitant use of corticosteroids are among the factors that might have contributed to apparently inconsistent results.

With an understanding of the sources of variability in these trials, available evidence could be applied to guide clinical decision making and to inform the enrichment of future studies.

Full paper: [Interleukin-6 receptor blockade in patients with COVID-19: placing clinical trials into context](https://www.thelancet.com/action/showPdf?pii=S2213-2600%2821%2900139-9)

**Title:** Prophylaxis against covid-19: living systematic review and network meta-analysis

BMJ | 2021; 373: n949 | 26th April 2021

The objective of this study was to determine and compare the effects of drug prophylaxis on SARS-CoV-2 infection and covid-19.

The review includes randomised trials of people at risk of covid-19 who were assigned to receive prophylaxis or no prophylaxis (standard care or placebo).

The authors found that Hydroxychloroquine prophylaxis has trivial to no effect on hospital admission and mortality, probably increases adverse effects, and probably does not reduce the risk of SARS-CoV-2 infection. Because of serious risk of bias and very serious imprecision, it is highly uncertain whether ivermectin combined with iota-carrageenan and ivermectin alone reduce the risk of SARS-CoV-2 infection.

This article is a living systematic review that will be updated to reflect emerging evidence. Updates may occur for up to two years from the date of original publication.

Full article: [Prophylaxis against covid-19: living systematic review and network meta-analysis](https://www.bmj.com/content/373/bmj.n949)

**Title:** Associations between body-mass index and COVID-19 severity in 6·9 million people in England: a prospective, community-based, cohort study

The Lancet Diabetes & Endocrinology | 28th April 2021

Obesity is a major risk factor for adverse outcomes after infection with SARS-CoV-2. This study aimed to examine this association, including interactions with demographic and behavioural characteristics, type 2 diabetes, and other health conditions.

At a BMI of more than 23 kg/m2, the authors found a linear increase in risk of severe COVID-19 leading to admission to hospital and death, and a linear increase in admission to an ICU across the whole BMI range, which is not attributable to excess risks of related diseases. The relative risk due to increasing BMI is particularly notable people younger than 40 years and of Black ethnicity.

Full article: [Associations between body-mass index and COVID-19 severity in 6·9 million people in England: a prospective, community-based, cohort study](https://www.thelancet.com/action/showPdf?pii=S2213-8587%2821%2900089-9)

Related: [New insights into the association between body-mass index and severe COVID-19](https://www.thelancet.com/journals/landia/article/PIIS2213-8587(21)00109-1/fulltext)

**Title:** SARS-CoV-2 outbreak in immune-mediated inflammatory diseases: the Euro-COVIMID multicentre cross-sectional study

The Lancet Rheumatology | 28th April 2021

The COVID-19 pandemic has raised numerous questions among patients with immune-mediated inflammatory diseases regarding potential reciprocal effects of COVID-19 and their underlying disease, and potential effects of immunomodulatory therapy on outcomes related to COVID-19.

The seroprevalence of SARS-CoV-2 and factors associated with symptomatic COVID-19 in patients with immune-mediated inflammatory diseases are still unclear. The Euro-COVIMID study aimed to determine the serological and clinical prevalence of COVID-19 among patients with immune-mediated inflammatory diseases, as well as factors associated with COVID-19 occurrence and the impact of the pandemic in its management.

The study provides key insights into the epidemiology and risk factors of COVID-19 among patients with immune-mediated inflammatory diseases. Overall, immunosuppressants do not seem to be deleterious in this scenario, and the control of inflammatory activity seems to be key when facing the pandemic.

Full article: [SARS-CoV-2 outbreak in immune-mediated inflammatory diseases: the Euro-COVIMID multicentre cross-sectional study](https://www.thelancet.com/action/showPdf?pii=S2665-9913%2821%2900112-0)

**Title:** COVID-19-associated coagulopathy and antithrombotic agents—lessons after 1 year

The Lancet Haematology | 27th April 2021

COVID-19 is associated with a high incidence of thrombotic complications, which can be explained by the complex and unique interplay between coronaviruses and endothelial cells, the local and systemic inflammatory response, and the coagulation system.

Empirically, an intensified dose of thrombosis prophylaxis is being used in patients admitted to hospital with COVID-19 and several guidelines on this topic have been published, although the insufficiency of high quality and direct evidence has led to weak recommendations.

This Viewpoint summarises the pathophysiology of COVID-19 coagulopathy in the context of patients who are ambulant, admitted to hospital, and critically ill or non-critically ill, and those post-discharge from hospital. It also reviews data from randomised controlled trials in the past year of antithrombotic therapy in patients who are critically ill. These data provide the first high-quality evidence on optimal use of antithrombotic therapy in patients with COVID-19.

Pharmacological thromboprophylaxis is not routinely recommended for patients who are ambulant and post-discharge. A first ever trial in non-critically ill patients who were admitted to hospital has shown that a therapeutic dose of low-molecular-weight heparin might improve clinical outcomes in this population. In critically ill patients, this same treatment does not improve outcomes and prophylactic dose anticoagulant thromboprophylaxis is recommended.

Full article: [COVID-19-associated coagulopathy and antithrombotic agents—lessons after 1 year](https://www.thelancet.com/action/showPdf?pii=S2352-3026%2821%2900105-8)

**Title:** An autopsy study of the spectrum of severe COVID-19 in children: From SARS to different phenotypes of MIS-C

EClinicalMedicine | 25th April 2021

COVID-19 in children is usually mild or asymptomatic, but severe and fatal paediatric cases have been described. The pathology of COVID-19 in children is not known; the proposed pathogenesis for severe cases includes immune-mediated mechanisms or the direct effect of SARS-CoV-2 on tissues. This paper describes the autopsy findings in five cases of paediatric COVID-19 and provide mechanistic insight into the mechanisms involved in the pathogenesis of the disease.

Full article: [An autopsy study of the spectrum of severe COVID-19 in children: From SARS to different phenotypes of MIS-C](https://www.thelancet.com/action/showPdf?pii=S2589-5370%2821%2900130-9)

**Title:** Tocilizumab in patients admitted to hospital with COVID-19 (RECOVERY): a randomised, controlled, open-label, platform trial

The Lancet | 1st May 2021

The randomised, controlled, open-label, platform trial (Randomised Evaluation of COVID-19 Therapy [RECOVERY]), is assessing several possible treatments in patients hospitalised with COVID-19 in the UK. This study aimed to evaluate the effects of tocilizumab in adult patients admitted to hospital with COVID-19 with both hypoxia and systemic inflammation.

The authors found that in hospitalised COVID-19 patients with hypoxia and systemic inflammation, tocilizumab improved survival and other clinical outcomes. These benefits were seen regardless of the amount of respiratory support and were additional to the benefits of systemic corticosteroids.

Full paper: [Tocilizumab in patients admitted to hospital with COVID-19 (RECOVERY): a randomised, controlled, open-label, platform trial](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900676-0)

**Title:** Association of Maternal SARS-CoV-2 Infection in Pregnancy With Neonatal Outcomes

JAMA | 29th April 2021

The outcomes of newborn infants of women testing positive for SARS-CoV-2 in pregnancy is unclear. The objective of this study was to evaluate neonatal outcomes in relation to maternal SARS-CoV-2 test positivity in pregnancy.

In this nationwide cohort of infants in Sweden, maternal SARS-CoV-2 infection in pregnancy was significantly associated with small increases in some neonatal morbidities. Given the small numbers of events for many of the outcomes and the large number of statistical comparisons, the findings should be interpreted as exploratory.

Full article: [Association of maternal SARS-CoV-2 infection in pregnancy with neonatal outcomes](https://jamanetwork.com/journals/jama/fullarticle/2779586)

Related editorial: [Understanding risk for newborns born to SARS-CoV-2–positive mothers](https://jamanetwork.com/journals/jama/fullarticle/2779587)

**recovery**

**Title:** SARS-CoV-2 elimination, not mitigation, creates best outcomes for health, the economy, and civil liberties

The Lancet | 28th April 2021

Countries which aimed to eliminate COVID-19 registered fewer deaths, better economic performance and fewer restrictions and lockdowns, according to this article in The Lancet. Countries’ responses to the pandemic were compared by a team of experts. The team found that, on average, over the first 12 months of the pandemic, but also at almost all time periods, countries which focused on mitigation saw more deaths, negative GDP growth and more severe restrictions on civil liberties.

Full article: [SARS-CoV-2 elimination, not mitigation, creates best outcomes for health, the economy, and civil liberties](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00978-8/fulltext)

**Title:** How has lockdown changed our relationship with nature?

Office for National Statistics | 26th April 2021

More than a year on from the first national lockdown in spring 2020, this article looks at how people's perception of nature changed during the pandemic and whether this is likely to continue as restrictions ease.

The coronavirus (COVID-19) pandemic has forced people to interact with familiar surroundings in new ways. While bedrooms have become offices, gardens – and the areas within walking distance of home – have become wildlife-watching spots and gyms. Nature has been a source of solace for many, as lockdown rules have heightened our appreciation for local parks and green spaces.

Drawing on several sources, this article looks at the impact of lockdown on exercise levels, usage of public green spaces and the link between nature and wellbeing, asking ‘has the pandemic changed our relationship with the outdoors forever’?

Full detail: [How has lockdown changed our relationship with nature?](https://www.ons.gov.uk/economy/environmentalaccounts/articles/howhaslockdownchangedourrelationshipwithnature/2021-04-26)

**Title:** Designated settings for people with COVID-19 leaving hospital

Care Quality Commission | 28th April 2021

CQC is continuing to work with the Department of Health and Social Care (DHSC), local authorities and individual care providers to provide assurance of safe and high-quality care in designated settings, which are part of a scheme to allow people with a COVID-positive test result to be discharged safely from hospitals.

These settings are admitting people who are discharged from hospital with a COVID-positive test who will be moving or going back into a care home setting. This is to help prevent the spread of COVID-19 (coronavirus) in care homes and will allow for a focus on the care that people who have contracted COVID-19 need. The Government’s aim is for each local authority to have access to at least one designated setting as soon as possible.

Full detail: [Designated settings for people with COVID-19 leaving hospital](https://www.cqc.org.uk/news/stories/designated-settings-people-covid-19-leaving-hospital#YorkshireHumber)

**Infection control**

**Title:** Vaccine side-effects and SARS-CoV-2 infection after vaccination in users of the COVID Symptom Study app in the UK

The Lancet Infectious Diseases | 27th April 2021

The Pfizer-BioNTech (BNT162b2) and the Oxford-AstraZeneca (ChAdOx1 nCoV-19) COVID-19 vaccines have shown excellent safety and efficacy in phase 3 trials. This study aimed to investigate the safety and effectiveness of these vaccines in a UK community setting.

The authors examined the proportion and probability of self-reported systemic and local side-effects within 8 days of vaccination in individuals using the COVID Symptom Study app who received one or two doses of the BNT162b2 vaccine or one dose of the ChAdOx1 nCoV-19 vaccine.

They also compared infection rates in a subset of vaccinated individuals subsequently tested for SARS-CoV-2 with PCR or lateral flow tests with infection rates in unvaccinated controls.

The authors conclude that short-term adverse effects of both vaccines are moderate in frequency, mild in severity, and short-lived. Adverse effects are more frequently reported in younger individuals, women, and among those who previously had COVID-19. Both vaccines decrease the risk of SARS-CoV-2 infection after 12 days.

Full paper: [Vaccine side-effects and SARS-CoV-2 infection after vaccination in users of the COVID Symptom Study app in the UK: a prospective observational study](https://www.thelancet.com/action/showPdf?pii=S1473-3099%2821%2900224-3)

**Title:** Shift work is associated with positive COVID-19 status in hospitalised patients

Thorax | 26 April 2021

This study examined data from more than half a million shift workers to determine if following a shift pattern was associated with Covid-19. The experts behind this research analysed data from the UK Biobank- a database that contains detailed health information of 500 000 UK citizens. Their findings show that both permanent and irregular shift workers (encompassing both day and night shift workers) had increased odds, compared with workers who never worked shifts, shift work therefore is treated as a modifiable risk factor for COVID-19. This risk could potentially be mitigated via additional workplace precautions or vaccination.

Full article: [Shift work is associated with positive COVID-19 status in hospitalised patients](https://thorax.bmj.com/content/thoraxjnl/early/2021/03/30/thoraxjnl-2020-216651.full.pdf)

**Title:** One dose of COVID-19 vaccine can cut household transmission by up to half

Public Health England | 28th April 2021

A new study by Public Health England (PHE) has shown that one dose of the COVID-19 vaccine reduces household transmission by up to half. Studies have already demonstrated that being vaccinated against coronavirus (COVID-19) significantly reduces your risk of being infected.

This new research shows that those who do become infected 3 weeks after receiving one dose of the Pfizer-BioNTech or AstraZeneca vaccine were between 38% and 49% less likely to pass the virus on to their household contacts than those who were unvaccinated.

Protection was seen from around 14 days after vaccination, with similar levels of protection regardless of age of cases or contacts. This protection is on top of the reduced risk of a vaccinated person developing symptomatic infection in the first place, which is around 60 to 65% – 4 weeks after one dose of either vaccine.

Full research: [Impact of vaccination on household transmission of SARS-COV-2 in England](https://khub.net/documents/135939561/390853656/Impact+of+vaccination+on+household+transmission+of+SARS-COV-2+in+England.pdf/35bf4bb1-6ade-d3eb-a39e-9c9b25a8122a?t=1619601878136)

Press release: [One dose of COVID-19 vaccine can cut household transmission by up to half](https://www.gov.uk/government/news/one-dose-of-covid-19-vaccine-can-cut-household-transmission-by-up-to-half)

See also: [One vaccine dose significantly reduces COVID-19 infections and boosts immunity](https://www.nihr.ac.uk/news/one-vaccine-dose-significantly-reduces-covid-19-infections-and-boosts-immunity/27540) | National Institute for Health Research

**Title:** Safety and immunogenicity of one versus two doses of the COVID-19 vaccine BNT162b2 for patients with cancer

The Lancet Oncology | 27th April 2021

The efficacy and safety profiles of vaccines against SARS-CoV-2 in patients with cancer is unknown. This paper aimed to assess the safety and immunogenicity of the BNT162b2 (Pfizer–BioNTech) vaccine in patients with cancer.

The authors found that in patients with cancer, one dose of the BNT162b2 vaccine yields poor efficacy. Immunogenicity increased significantly in patients with solid cancer within 2 weeks of a vaccine boost at day 21 after the first dose. These data support prioritisation of patients with cancer for an early (day 21) second dose of the BNT162b2 vaccine.

Full paper: [Safety and immunogenicity of one versus two doses of the COVID-19 vaccine BNT162b2 for patients with cancer: interim analysis of a prospective observational study](https://www.thelancet.com/action/showPdf?pii=S1470-2045%2821%2900213-8)

**Title:** Interim findings from first-dose mass COVID-19 vaccination roll-out and COVID-19 hospital admissions in Scotland: a national prospective cohort study

The Lancet | 23rd April 2021

The BNT162b2 mRNA (Pfizer–BioNTech) and ChAdOx1 nCoV-19 (Oxford–AstraZeneca) COVID-19 vaccines have shown high efficacy against disease in phase 3 clinical trials and are now being used in national vaccination programmes in the UK and several other countries. Studying the real-world effects of these vaccines is an urgent requirement.

The aim of this study was to investigate the association between the mass roll-out of the first doses of these COVID-19 vaccines and hospital admissions for COVID-19.

The authors found that mass roll-out of the first doses of the BNT162b2 mRNA and ChAdOx1 vaccines was associated with substantial reductions in the risk of hospital admission due to COVID-19 in Scotland. There remains the possibility that some of the observed effects might have been due to residual confounding.

Full paper: [Interim findings from first-dose mass COVID-19 vaccination roll-out and COVID-19 hospital admissions in Scotland: a national prospective cohort study](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900677-2)

**Title:** COVID-19 vaccine coverage in health-care workers in England and effectiveness of BNT162b2 mRNA vaccine against infection (SIREN)

The Lancet | 23rd April 2021

BNT162b2 mRNA and ChAdOx1 nCOV-19 adenoviral vector vaccines have been rapidly rolled out in the UK from December, 2020. This study aimed to determine the factors associated with vaccine coverage for both vaccines and documented the vaccine effectiveness of the BNT162b2 mRNA vaccine in a cohort of health-care workers undergoing regular asymptomatic testing.

The study findings show that the BNT162b2 vaccine can prevent both symptomatic and asymptomatic infection in working-age adults. This cohort was vaccinated when the dominant variant in circulation was B1.1.7 and shows effectiveness against this variant.

Full article: [COVID-19 vaccine coverage in health-care workers in England and effectiveness of BNT162b2 mRNA vaccine against infection (SIREN): a prospective, multicentre, cohort study](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2900790-X)

**Title:** Analysis of the potential impact of durability, timing, and transmission blocking of COVID-19 vaccine on morbidity and mortality

EClinicalMedicine | 25th April 2021

COVID-19 vaccines have been approved and made available. While questions of vaccine allocation strategies have received significant attention, important questions remain regarding the potential impact of the vaccine given uncertainties regarding efficacy against transmission, availability, timing, and durability.

The authors of this study adapted a susceptible-exposed-infectious-recovered (SEIR) model to examine the potential impact on hospitalization and mortality assuming increasing rates of vaccine efficacy, coverage, and administration. The study also evaluated the uncertainty of the vaccine to prevent infectiousness as well as the impact on outcomes based on the timing of distribution and the potential effects of waning immunity.

Increased vaccine efficacy against disease reduces hospitalizations and deaths from COVID-19; however, the relative benefit of transmission blocking varied depending on the timing of vaccine distribution. Early in an outbreak, a vaccine that reduces transmission will be relatively more effective than one introduced later in the outbreak. In addition, earlier and accelerated implementation of a less effective vaccine is more impactful than later implementation of a more effective vaccine. These findings are magnified when considering the durability of the vaccine. Vaccination in the spring will be less impactful when immunity is less durable.

Policy choices regarding non-pharmaceutical interventions, such as social distancing and face mask use, will need to remain in place longer if the vaccine is less effective at reducing transmission or distributed slower. In addition, the stage of the local outbreak greatly impacts the overall effectiveness of the vaccine in a region and should be considered when allocating vaccines.

Full paper: [Analysis of the potential impact of durability, timing, and transmission blocking of COVID-19 vaccine on morbidity and mortality](https://www.thelancet.com/action/showPdf?pii=S2589-5370%2821%2900143-7)

**Title:** Accelerated vaccine rollout is imperative to mitigate highly transmissible COVID-19 variants

EClinicalMedicine | 24th April 2021

More contagious variants of SARS-CoV-2 have emerged around the world, sparking concerns about impending surge in cases and severe outcomes. Despite the development of effective vaccines, rollout has been slow. This paper evaluated the impact of accelerated vaccine distribution on curbing the disease burden of novel SARS-CoV-2 variants.

The authors found that the current pace of vaccine rollout is insufficient to prevent the exacerbation of the pandemic that will be attributable to the novel, more contagious SARS-CoV-2 variants. Accelerating the vaccination rate should be a public health priority for averting the expected surge in COVID-19 hospitalizations and deaths that would be associated with widespread dissemination of the SGTF variants. The results underscore the need to bolster the production and distribution of COVID-19 vaccines, to rapidly expand vaccination priority groups and distribution sites.

Full paper: [Accelerated vaccine rollout is imperative to mitigate highly transmissible COVID-19 variants](https://www.thelancet.com/action/showPdf?pii=S2589-5370%2821%2900145-0)

**Title:** UK secures extra 60 million Pfizer/BioNTech COVID-19 vaccines

Department of Health and Social Care | 28th April 2021

An extra 60 million doses of the Pfizer/BioNTech vaccine have been secured by the UK government to help support the booster COVID-19 vaccination programme beginning from the autumn. To protect the most vulnerable ahead of the winter, the government is preparing for a booster programme based on clinical need to ensure people have the strongest possible protection against COVID-19.

The additional Pfizer/BioNTech jabs will be used alongside other approved COVID-19 vaccines for the booster programme.

Full detail: [UK secures extra 60 million Pfizer/BioNTech COVID-19 vaccines](https://www.gov.uk/government/news/uk-secures-extra-60-million-pfizerbiontech-covid-19-vaccines)

See also:

* [UK orders 60m more doses of Pfizer Covid vaccine for booster jabs](https://www.theguardian.com/society/2021/apr/28/uk-orders-60m-more-doses-of-pfizer-covid-vaccine-for-booster-jabs) | The Guardian
* [Booster vaccine to be rolled out in autumn as UK secures 60m more Pfizer doses](https://www.bmj.com/content/373/bmj.n1116) | BMJ

**Title:** Self-taken swabs can track a pandemic’s hidden patterns

Science | 23rd April 2021

Regular swabbing of a random sample of the population quickly detects the resurgence of SARS-CoV-2 infections, even in young adults.

The researchers tested nose and throat samples from 594,000 randomly selected UK residents, who swabbed themselves or their children between 1 May and 8 September 2020. The study found that, during that time, the SARS-CoV-2 infection rate dipped as low as 0.04% in the tested population — down from around 5% in early 2020 at the height of the United Kingdom’s first wave — and then began climbing to a peak of about 0.13% in the final round of testing.

Prevalence rates early in the second wave were highest among young adults aged 18–24, at 0.25%, compared with 0.04% among those aged 65 and older. This suggests that increased socializing by younger people probably drove the resurgence. These age patterns were not reflected in data from routine surveillance at health-service providers, which underestimated infection rates in younger age groups.

The researchers say that their study demonstrates the benefit of large-scale community testing in providing an early warning of spikes in infections, even at low levels of transmission.

Full article: [Resurgence of SARS-CoV-2: detection by community viral surveillance](https://science.sciencemag.org/content/sci/early/2021/04/22/science.abf0874.full.pdf)

**Title:** Coronavirus (COVID-19) testing for hospices

Department of Health and Social Care | 29th April 2021

NHS Test and Trace is making weekly COVID-19 testing available to all hospices in England, Wales and Northern Ireland. Separate arrangements are in place for hospices in Scotland.

All registered hospices have been contacted with details of how to apply for test kits for their staff and patients. Hospices will be responsible for ordering test kits for both ‘inpatient’ and ‘community-based’ settings. Different testing routes apply depending on where the testing will be carried out, and these routes are described in detail in this document.

The guidance also covers rapid testing for visitors and visiting professionals for inpatient hospice settings.

Full guidance: [Coronavirus (COVID-19) testing for hospices](https://www.gov.uk/guidance/coronavirus-covid-19-testing-for-hospices)

**Title:** Should masks be worn outdoors?

BMJ | 2021; 373: n1036 | 28th April 2021

This article looks at two sides to the question of should masks be worn outdoors. One side of the debate argues wearing face coverings outside should be normalised because it may reduce transmission of SARS-CoV-2 in some situations - and may encourage mask wearing indoors, where risks are greater. The other side argues that outdoor transmission contributes very little to overall infection rates and that efforts should focus on reducing indoor transmission.

Full article: [Should masks be worn outdoors?](https://www.bmj.com/content/373/bmj.n1036)

**workforce wellbeing**

**Title:** How can we keep the world’s doctors safe?

BMJ | 2021; 373: n1100 | 29th April 2021

The world’s doctors have been at the forefront of the pandemic response. Already overstretched by workforce shortages, they have carried exhaustion, uncertainty, and risk, redeploying to unfamiliar specialties, learning at speed, and adopting different ways of working and new technology,while all the time fearing for their patients, their families, and themselves.

This article asks as the pandemic continues, how can we properly look after doctors so they can look after their patients and communities?

Full detail: [How can we keep the world’s doctors safe?](https://www.bmj.com/content/373/bmj.n1100)

**Title:** Experiences and emotional strain of NHS frontline workers during the peak of the COVID19 pandemic

International Journal of Social Psychiatry | 13th April 2021

The mental health of the population has been negatively affected due to the pandemic. Frontline healthcare workers with increased exposure to COVID diagnosis, treatment and care were especially likely to report psychological burden, fear, anxiety and depression.

The aim of this paper was to elicit how working as a health professional during the pandemic is impacting on the psychological wellbeing of frontline staff.

Survey collected data from 395 NHS staff was developed into three themes; (1) Despair and uncertainty: feeling overwhelmed trying to protect everyone, (2) Behavioural and psychological impact: affecting wellbeing and functioning and (3) Coping and employer support: getting the right help. NHS staff felt enormous burden to adequately complete their professional, personal and civil responsibility to keep everyone safe leading to negative psychological and behavioural consequences and desire for NHS employers to offer better support.

As the pandemic progresses, the results of this study may inform NHS employers on how optimum support can be offered to help them cope with negative psychological consequences of the pandemic.

Full article: [Experiences and emotional strain of NHS frontline workers during the peak of the COVID19 pandemic](https://journals.sagepub.com/doi/pdf/10.1177/00207640211006153)

**Title:** Impact of the COVID-19 pandemic on the mental health and well-being of UK healthcare workers

BJPsych Open | 29th April 2021

Shortly after the April 2020 UK COVID-19 peak 2773 HCWs completed a survey containing measures of anxiety, depression, post-traumatic stress disorder and stress, as well as questions around potential predictors such as roles, COVID-19 risk perception and workplace-related factors.

Nearly a third of HCWs reported moderate to severe levels of anxiety and depression, and the number reporting very high symptoms was more than quadruple that pre-COVID-19. Several controllable factors were associated with the most severe level of psychiatric symptoms: insufficient personal protective equipment availability, workplace preparation, training and communication, and higher workload. Being female, ‘front line’, previous psychiatric diagnoses, traumatic events, and being an allied HCW or manager were also significantly associated with severe psychiatric symptoms.

Sharing stress, resilience and ethical support for treatment decisions were significantly associated with low psychiatric symptoms. Front-line workers showed greater worsening of mental health compared with non-front-line HCWs.

The study concludes that poor mental well-being was prevalent during the COVID-19 response, however, controllable factors associated with severe psychiatric symptoms are available to be targeted to reduce the detrimental impact of COVID-19 and other pandemics on HCW mental health.

Full paper: [Impact of the COVID-19 pandemic on the mental health and well-being of UK healthcare workers](https://www.cambridge.org/core/journals/bjpsych-open/article/impact-of-the-covid19-pandemic-on-the-mental-health-and-wellbeing-of-uk-healthcare-workers/D7E2EA268395EC63205017929CD720D2)

**Health management**

**Title:** Learnings from the Covid-19 pandemic to accelerate medical innovation

Northern Health Science Alliance | 27th April 2021

This report, published following the IGNITE Summit 2020 (a medical innovation summit), sets out a series of “key game changers” to help build a resilient, prosperous and pioneering world-leading health innovation system. The summit brought together a diverse group of leaders from across the country, and internationally, to focus on what the pandemic has taught us and how we can use that learning to optimise the UK’s medical innovation system moving forward.

Full report: [IGNITE Summit 2020 Learnings from the Covid-19 pandemic to accelerate medical innovation](https://www.thenhsa.co.uk/app/uploads/2021/04/IGNITE-2020-REPORT-5-1.pdf)

Press release: [Barriers to innovation must be broken down post-Covid](https://www.thenhsa.co.uk/2021/04/barriers-to-medical-innovation-must-be-broken-down-post-covid/)

**other**

**Title:** Track And Trace: Identifying Corruption Risks In UK Public Procurement For The Covid-19 Pandemic

Transparency International UK | 22nd April 2021

This study of procurement during the pandemic involved a review of nearly 1,000 contracts worth a total of £18 billion. It concludes that the way the UK government handled bids for supplying personal protective equipment (PPE) and other Covid-19 response contracts appears partisan and systemically biased in favour of those with political access.

Full report: [Track and Trace: Identifying corruption risks in UK public procurement for the Covid-19 pandemic](https://www.transparency.org.uk/sites/default/files/pdf/publications/Track%20and%20Trace%20-%20Transparency%20International%20UK.pdf)

Press release: [Concern over corruption red flags in 20% of UK's PPE procurement](https://www.transparency.org.uk/track-and-trace-uk-PPE-procurement-corruption-risk-VIP-lane)

**Title:** We need clinical guidelines fit for a pandemic

BMJ | 2021; 373: n1093 | 29th April 2021

The covid-19 pandemic unleashed itself onto healthcare services at pace. Evidence evolved, opinions conflicted,and both real and perceived resource constraints were confronted.Against this backdrop, clinicians had to make time-critical decisions about what treatments to offer, or not, to their patients.

This editorial states that centrally produced guidance was conspicuously slow to emerge, and suggests that the pandemic has brought the limitations of the traditional clinical guidance model into sharp focus and highlighted opportunities to improve it.

Full detail: [We need clinical guidelines fit for a pandemic](https://www.bmj.com/content/373/bmj.n1093)

**Title:** The coronavirus inquiry. The case for an investigation of government actions during the Covid-19 pandemic

Institute for Government | 29th April 2021

While the UK’s vaccine rollout deserves credit, on many key measures the UK has done worse than many of its peers in Europe and across the developed world. Decisions made by the UK government – from delaying lockdowns to bungled plans for school re-openings – may have led to more deaths, more economic harm and more other costs to livelihoods than need have been the case.

The fact the UK experienced two waves within 12 months reinforces the importance of learning lessons sooner rather than later, and of fixing systemic weaknesses in how this and future governments react to complex situations.

This report sets out the case for an inquiry.

Full report: [The coronavirus inquiry. The case for an investigation of government actions during the Covid pandemic](https://www.instituteforgovernment.org.uk/sites/default/files/publications/coronavirus-inquiry.pdf)

**Title:** Assessing England’s response to Covid-19: A framework

The Kings Fund | 29th April 2021

The Covid-19 pandemic has been a deep shock to the country, whether counted in terms of deaths and ill health, the damage to the economy and livelihoods, or in the deep disruption to daily life. Covid-19 has also had a disproportionate impact on some communities, increasing and emphasising the inequalities that existed before the pandemic arrived. This combination of high number of deaths and deep inequalities will leave a long and difficult legacy.

Learning the lessons from Covid-19 would allow England to better prepare for any future pandemic, but also to understand the general weaknesses and strengths of its health, care and public health systems. Given the wide-ranging nature of the pandemic and its impact on so much of so many people’s lives, health and the economy, a public inquiry to assess the response will be essential. This article proposes a framework for such an inquiry.

Full detail: [Assessing England’s response to Covid-19: A framework](https://www.kingsfund.org.uk/publications/assessing-englands-response-covid-19)

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

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