COVID-19 weekly update

7th March 2022

**clinical management**

**Title:** Mortality Rates Among Hospitalized Patients With COVID-19 Infection Treated With Tocilizumab and Corticosteroids: A Bayesian Reanalysis of a Previous Meta-analysis

jama| 28th february 2022

Question Can bayesian methods clarify the uncertainty around tocilizumab’s association with mortality benefit in subgroups of hospitalized patients with COVID-19 receiving corticosteroids?

Findings In this bayesian reanalysis of a previous meta-analysis of 15 randomized clinical trials comprising 5339 hospitalized patients with COVID-19 treated with tocilizumab and corticosteroids, those receiving simple oxygen only or noninvasive ventilation were associated with a clinically meaningful mortality benefit. In contrast, for those receiving invasive mechanical ventilation, an association with benefit was uncertain.

Meaning This study’s findings indicate that further research is needed to assess the association between mortality benefit or risk in patients with COVID-19 receiving invasive mechanical ventilation and treated with tocilizumab and corticosteroids.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789444>

**Title:** Comparison of Outcomes and Process of Care for Patients Treated at Hospitals Dedicated for COVID-19 Care vs Other Hospitals

JAMA| 3rd march 2022

Question Is treatment of COVID-19 at a dedicated hospital associated with improved care processes and outcomes?

Findings In this cohort study of 5504 patients with COVID-19, lower mortality rates were found in dedicated COVID-19 hospitals vs other hospitals.

Meaning Results of this study suggest that treatment at dedicated COVID-19 hospitals may be associated with reducing in-hospital mortality; this model may be useful during future pandemics.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789581>

**title:** Update to living WHO guideline on drugs for covid-19

BMJ | 2nd march 2022

The latest version of this WHO living guidance provides (a) a recommendation for the use of molnupiravir in patients with non-severe covid-19, for those at highest risk of hospitalisation and combined with implementation of mitigation strategies to reduce potential harms; (b) an update to the prior conditional recommendation for casirivimab-imdevimab in patients with non-severe covid-19 (for those at highest risk of hospitalisation) and severe or critical illness (for those with seronegative status)—the recommendation is now restricted to cases where rapid viral genotyping confirms infection with a susceptible SARS-CoV-2 variant (such as delta).
<https://www.bmj.com/content/376/bmj.o534>

**Title:** The COVID Heart—One Year After SARS-CoV-2 Infection, Patients Have an Array of Increased Cardiovascular Risks

JAMA| 2 march 2022

An analysis of data from nearly 154 000 US veterans with SARS-CoV-2 infection provides a grim preliminary answer to the question: What are COVID-19’s long-term cardiovascular outcomes? The study, published in Nature Medicine by researchers at the Veterans Affairs (VA) St Louis Health Care System, found that in the year after recovering from the illness’s acute phase, patients had increased risks of an array of cardiovascular problems, including abnormal heart rhythms, heart muscle inflammation, blood clots, strokes, myocardial infarction, and heart failure. What’s more, the heightened risks were evident even among those who weren’t hospitalized with acute COVID-19
<https://jamanetwork.com/journals/jama/fullarticle/2789793>

**title:** Covid-19: Anti-inflammatory treatment baricitinib reduces deaths in patients admitted to hospital, finds trial

BMJ| 21 FEBRUARY 2022

Anti-inflammatory treatment baricitinib, which is normally used to treat rheumatoid arthritis, reduces the risk of death in patients admitted to hospital with severe covid-19 by around one fifth, the Randomised Evaluation of Covid-19 Therapy (Recovery) trial has reported.

Researchers leading the trial from the University of Oxford said that the benefit of baricitinib was on top of those seen for dexamethasone2 and tocilizumab,3 the two other anti-inflammatory treatments that the trial previously found to reduce the risk of death in these patients.

The trial’s joint chief investigator Martin Landray, professor of medicine and epidemiology at Oxford Population Health, said, “This opens up the possibility of using combinations of anti-inflammatory drugs to further drive down the risk of death for some of the sickest patients.” <https://www.bmj.com/content/376/bmj.o573>

**title:** Molnupiravir’s authorisation was premature

BMJ | 24th FEBRUARY 2022

Regulatory decisions fall short of the wise stewardship required during a pandemic.

On 1 October 2021 Merck issued a press release1 reporting an interim analysis of Move-Out, a phase 3 randomised placebo controlled trial in unvaccinated adults with confirmed SARS-Co-V infection and mild-to-moderate symptoms outside hospital. The press release stated that molnupiravir, a nucleoside analogue that inhibits viral replication by mutagenesis, reduced risk of hospital admission or death by about 50% (P=0.0012) in the 29 days after infection.

The UK Medicines and Healthcare Products Regulatory Agency (MHRA) gave molnupiravir conditional marketing authorisation on 4 November 2021, based on the interim data underlying the press release.2 On 23 December, the US Food and Drug Administration (FDA) granted emergency use authorisation after seeing the trial’s full dataset.3 These authorisations, conducted behind closed doors, lack adequate scientific rigour, inhibit further necessary evaluations, and may ultimately lead to suboptimal resource allocation decisions. …

The evidence for incorporating molnupiravir into routine practice is fragile. Premature regulatory authorisation and guideline recommendation13 on the basis of truncated and non-replicated trial findings and without full consideration of clinical, not statistical, significance and cost effectiveness falls far short of the wise stewardship of limited healthcare resources required during a global healthcare emergency. We deserve and should demand better.
<https://www.bmj.com/content/376/bmj.o443>

**title:** A randomized double-blind placebo-controlled clinical trial of nitazoxanide for treatment of mild or moderate COVID-19

THE LANCET eClinical medicine| 28TH FEBRUARY 2022

Background. There is an urgent need for treatments of mild or moderate COVID-19 in an outpatient setting.

Methods. A randomized double-blind placebo-controlled clinical trial in 36 centers in the U.S. between August 2020 and February 2021 investigated the safety and effectiveness of oral nitazoxanide 600 mg twice daily for five days in outpatients with symptoms of mild or moderate COVID-19 enrolled within 72 h of symptom onset (ClinicalTrials.gov NCT04486313). Efficacy endpoints were time to sustained clinical recovery (TSR, a novel primary endpoint) and proportion of participants progressing to severe illness within 28 days (key secondary).

Findings. 1092 participants were enrolled. 379 with laboratory-confirmed SARS-CoV-2 infection were analyzed. In the primary analysis, median (IQR) TSR were 13·3 (6·3, >21) and 12·4 (7·2, >21) days for the nitazoxanide and placebo groups, respectively (p = 0·88). 1 of 184 (0·5%) treated with nitazoxanide progressed to severe illness compared to 7 of 195 (3·6%) treated with placebo (key secondary analysis, odds ratio 5·6 [95% CI 0·7 - 46·1], relative risk reduction 85%, p = 0·07). In the pre-defined stratum with mild illness at baseline, nitazoxanide-treated participants experienced reductions in median TSR (3·1 days, p = 0·09) and usual health (5·2 days, p < 0·01) compared to placebo. Nitazoxanide was safe and well tolerated.

Interpretation. Further trials with larger numbers are warranted to evaluate efficacy of nitazoxanide therapy in preventing progression to severe illness in patients at high risk of severe illness and reducing TSR in patients with mild illness.
[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00040-2/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370%2822%2900040-2/fulltext)

**title:** Severe COVID-19 as a virus-independent immunothrombotic process [correspondence]

THE LANCEt rheumatology| march 2022

We read with interest the Viewpoint1 by Dennis McGonagle and colleagues in which they question the strategy of universal immunosuppression in patients with moderate-to-severe COVID-19 because of a concern about ongoing alveolar viral replication in these patients. We believe that this concern is unwarranted, as the key pathology driving severe COVID-19 is not active viral replication in the pneumocytes, but rather antibody-dependent inflammation leading to immunothrombosis.
[https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(22)00033-9/fulltext](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913%2822%2900033-9/fulltext)

**title:** The impact of remote home monitoring of people with COVID-19 using pulse oximetry: A national population and observational study

the lancet eclinical medicine | 1st march 2022

Background. Remote home monitoring of people testing positive for COVID-19 using pulse oximetry was implemented across England during the Winter of 2020/21 to identify falling blood oxygen saturation levels at an early stage. This was hypothesised to enable earlier hospital admission, reduce the need for intensive care and improve survival. This study is an evaluation of the clinical effectiveness of the pre-hospital monitoring programme, COVID oximetry @home (CO@h).

Methods. The setting was all Clinical Commissioning Group (CCG) areas in England where there were complete data on the number of people enrolled onto the programme between 2nd November 2020 and 21st February 2021. We analysed relationships at a geographical area level between the extent to which people aged 65 or over were enrolled onto the programme and outcomes over the period between November 2020 to February 2021.

Findings. For every 10% increase in coverage of the programme, mortality was reduced by 2% (95% confidence interval:4% reduction to 1% increase), admissions increased by 3% (-1% to 7%), in-hospital mortality fell by 3% (-8% to 3%) and lengths of stay increased by 1·8% (-1·2% to 4·9%). None of these results are statistically significant, although the confidence interval indicates that any adverse effect on mortality would be small, but a mortality reduction of up to 4% may have resulted from the programme.

Interpretation. There are several possible explanations for our findings. One is that CO@h did not have the hypothesised impact. Another is that the low rates of enrolment and incomplete data in many areas reduced the chances of detecting any impact that may have existed. Also, CO@h has been implemented in many different ways across the country and these may have had varying levels of effect.
[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00048-7/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370%2822%2900048-7/fulltext)

**title:** Defining post-COVID condition [correspondence]

The Lancet Infectious Diseases| mARCH 2022

Joan B Soriano and colleagues proposed a clinical case definition for post-COVID-19 condition. We thank this WHO-led working group for their efforts to provide an operational definition for this emerging, challenging condition.
[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00060-3/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2822%2900060-3/fulltext)

**title:** Compromised periodontal status could increase mortality for patients with COVID-19

The Lancet Infectious Diseases| mARCH 2022

In their active surveillance study of patients with COVID-19 in south India, Ramanan Laxminarayan and colleagues1 reported an increased risk of death in patients who had a history of diabetes (adjusted hazard ratio 2·28, 95% CI 1·79–2·91), hypertension (2·08, 1·62–2·66), other circulatory disorders (3·89, 2·66–5·71), cancer (8·04, 3·47–18·65), or respiratory disorders (4·57, 2·43–8·61). Male sex, older age, and chronic kidney disease were also associated with higher mortality in individuals with COVID-19.1. Here, we would like to add the possibility of a link between periodontal disease and COVID-19, which went unrecorded and might have played an important role through a direct correlation between periodontal compromise and the disease process in COVID-19 and through an indirect effect in worsening the status of underlying comorbidities.
[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00065-2/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2822%2900065-2/fulltext)

**title:** Association of COVID-19 Infection With Survival After In-Hospital Cardiac Arrest Among US Adults [research letter]

jama| 2nd mARCH 2022

Early on in the COVID-19 pandemic, investigators reported poor survival rates (<3%) after in-hospital cardiac arrest (IHCA) among patients with COVID-19 infection in the US and China.1-3 These findings have prompted discussions regarding universal do-not-resuscitate orders for patients with COVID-19.4 However, these results were from single-center studies that comprised only 295 patients with COVID-19 in hospitals that were overwhelmed early during the pandemic. Whether the poor IHCA survival rate reported in earlier studies is broadly representative of patients with COVID-19 in US hospitals remains unknown. This study examined the association of COVID-19 infection with survival outcomes of US adults after IHCA.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789573>

**title:** Fluvoxamine for the treatment of COVID-19 [correspondence]

the lancet global health | 3rd mARCH 2022

[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00006-7/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2822%2900006-7/fulltext)
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00003-1/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2822%2900003-1/fulltext)
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(21)00592-1/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2821%2900592-1/fulltext)
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(21)00590-8/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2821%2900590-8/fulltext)

**title:** Extracorporeal membrane oxygenation in children with COVID-19 and PIMS-TS during the second and third wave [correspondence]

the lancet child & adolescent health | 3rd mARCH 2022

During the first wave of the COVID-19 pandemic, the European Extracorporeal Life Support Organization (ELSO) established a prospective survey1 including 52 European neonatal and paediatric centres and reported the use of extracorporeal membrane oxygenation (ECMO) in seven children with acute respiratory distress syndrome (ARDS) related to COVID-19 and paediatric multisystem inflammatory syndrome temporally associated with SARS-CoV-2 (PIMS-TS; also known as multisystem inflammatory syndrome in children). All European neonatal and paediatric ECMO centres affiliated with ELSO were included in the survey. Non-ELSO centres were also invited and included as representation for neonatal and paediatric ECMO centres in their respective country. The study was approved by the Maastricht University Ethical Committee (the coordinating centre) and registered at ClinicalTrials.gov (NCT04366921). Data were collected once per week and were reported as anonymised and deidentified using password-protected datasheets, and hence individual parent and patient consent was waived.

This survey highlighted the low use of ECMO in children compared with adults2 3 (seven children vs 1531 adults), with similar survival to hospital discharge rates (57% in children vs 55% in adults). The survey continued to capture contemporaneous data on ECMO use during the second and third waves of the pandemic, which we report now.
[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(22)00065-7/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642%2822%2900065-7/fulltext)

**VACCINATION & infection control**

**title:** Efficacy of covid-19 vaccines in immunocompromised patients: systematic review and meta-analysis

bmj |2nd march 2022

Objective To compare the efficacy of covid-19 vaccines between immunocompromised and immunocompetent people.

Design Systematic review and meta-analysis.

Data sources PubMed, Embase, Central Register of Controlled Trials, COVID-19 Open Research Dataset Challenge (CORD-19), and WHO covid-19 databases for studies published between 1 December 2020 and 5 November 2021. ClinicalTrials.gov and the WHO International Clinical Trials Registry Platform were searched in November 2021 to identify registered but as yet unpublished or ongoing studies.

Study selection Prospective observational studies comparing the efficacy of covid-19 vaccination in immunocompromised and immunocompetent participants.

Methods A frequentist random effects meta-analysis was used to separately pool relative and absolute risks of seroconversion after the first and second doses of a covid-19 vaccine. Systematic review without meta-analysis of SARS-CoV-2 antibody titre levels was performed after first, second, and third vaccine doses and the seroconversion rate after a third dose. Risk of bias and certainty of evidence were assessed.

Results 82 studies were included in the meta-analysis. Of these studies, 77 (94%) used mRNA vaccines, 16 (20%) viral vector vaccines, and 4 (5%) inactivated whole virus vaccines. 63 studies were assessed to be at low risk of bias and 19 at moderate risk of bias. After one vaccine dose, seroconversion was about half as likely in patients with haematological cancers (risk ratio 0.40, 95% confidence interval 0.32 to 0.50, I2=80%; absolute risk 0.29, 95% confidence interval 0.20 to 0.40, I2=89%), immune mediated inflammatory disorders (0.53, 0.39 to 0.71, I2=89%; 0.29, 0.11 to 0.58, I2=97%), and solid cancers (0.55, 0.46 to 0.65, I2=78%; 0.44, 0.36 to 0.53, I2=84%) compared with immunocompetent controls, whereas organ transplant recipients were 16 times less likely to seroconvert (0.06, 0.04 to 0.09, I2=0%; 0.06, 0.04 to 0.08, I2=0%). After a second dose, seroconversion remained least likely in transplant recipients (0.39, 0.32 to 0.46, I2=92%; 0.35, 0.26 to 0.46), with only a third achieving seroconversion. Seroconversion was increasingly likely in patients with haematological cancers (0.63, 0.57 to 0.69, I2=88%; 0.62, 0.54 to 0.70, I2=90%), immune mediated inflammatory disorders (0.75, 0.69 to 0.82, I2=92%; 0.77, 0.66 to 0.85, I2=93%), and solid cancers (0.90, 0.88 to 0.93, I2=51%; 0.89, 0.86 to 0.91, I2=49%). Seroconversion was similar between people with HIV and immunocompetent controls (1.00, 0.98 to 1.01, I2=0%; 0.97, 0.83 to 1.00, I2=89%). Systematic review of 11 studies showed that a third dose of a covid-19 mRNA vaccine was associated with seroconversion among vaccine non-responders with solid cancers, haematological cancers, and immune mediated inflammatory disorders, although response was variable in transplant recipients and inadequately studied in people with HIV and those receiving non-mRNA vaccines.

Conclusion. Seroconversion rates after covid-19 vaccination were significantly lower in immunocompromised patients, especially organ transplant recipients. A second dose was associated with consistently improved seroconversion across all patient groups, albeit at a lower magnitude for organ transplant recipients. Targeted interventions for immunocompromised patients, including a third (booster) dose, should be performed.
<https://www.bmj.com/content/376/bmj-2021-068632>

**title:** Assessment of Clinical Effectiveness of BNT162b2 COVID-19 Vaccine in US Adolescents

jama| 3rd march 2022

Question What is the association between the BNT162b2 COVID-19 vaccine and SARS-CoV-2 positivity among adolescents?

Findings This case-control study of 542 adolescents was conducted when the Delta variant of SARS-CoV-2 was predominant and within 4 months of the vaccine rollout for adolescents. Overall, the estimated effectiveness of the BNT162b2 vaccine was 91%, with 93% protection against symptomatic infections and 85% effectiveness against asymptomatic infection.

Meaning These findings suggest that the BNT162b2 vaccine was effective in adolescents within 4 months of immunization, including against infections caused by the Delta variant.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789579>

**title:** Revoking Vaccination As A Condition Of Deployment Across All Health And Social Care: Consultation Response

Department of Health and Social Care | 2nd march 2022

The government conducted a public consultation from 9 to 16 February 2022 on whether to revoke provisions which require Covid-19 vaccination as a condition of deployment in health and social care settings. This is the formal government response to that consultation. The government’s response confirms that they intend to proceed with bringing forward regulations to revoke vaccination as a condition of deployment.

• [Consultation response](https://www.gov.uk/government/consultations/revoking-vaccination-as-a-condition-of-deployment-across-all-health-and-social-care/outcome/revoking-vaccination-as-a-condition-of-deployment-across-all-health-and-social-care-consultation-response)
• [Department of Health and Social Care - consultations](https://www.gov.uk/government/consultations/revoking-vaccination-as-a-condition-of-deployment-across-all-health-and-social-care/outcome/revoking-vaccination-as-a-condition-of-deployment-across-all-health-and-social-care-consultation-response)

**title:** Covid-19 Vaccine Effectiveness against the Omicron (B.1.1.529) Variant

nejm | 2nd march 2022

Background. A rapid increase in coronavirus disease 2019 (Covid-19) cases due to the omicron (B.1.1.529) variant of severe acute respiratory syndrome coronavirus 2 in highly vaccinated populations has aroused concerns about the effectiveness of current vaccines.

Methods. We used a test-negative case–control design to estimate vaccine effectiveness against symptomatic disease caused by the omicron and delta (B.1.617.2) variants in England. Vaccine effectiveness was calculated after primary immunization with two doses of BNT162b2 (Pfizer–BioNTech), ChAdOx1 nCoV-19 (AstraZeneca), or mRNA-1273 (Moderna) vaccine and after a booster dose of BNT162b2, ChAdOx1 nCoV-19, or mRNA-1273.

Results. Between November 27, 2021, and January 12, 2022, a total of 886,774 eligible persons infected with the omicron variant, 204,154 eligible persons infected with the delta variant, and 1,572,621 eligible test-negative controls were identified. At all time points investigated and for all combinations of primary course and booster vaccines, vaccine effectiveness against symptomatic disease was higher for the delta variant than for the omicron variant. No effect against the omicron variant was noted from 20 weeks after two ChAdOx1 nCoV-19 doses, whereas vaccine effectiveness after two BNT162b2 doses was 65.5% (95% confidence interval [CI], 63.9 to 67.0) at 2 to 4 weeks, dropping to 8.8% (95% CI, 7.0 to 10.5) at 25 or more weeks. Among ChAdOx1 nCoV-19 primary course recipients, vaccine effectiveness increased to 62.4% (95% CI, 61.8 to 63.0) at 2 to 4 weeks after a BNT162b2 booster before decreasing to 39.6% (95% CI, 38.0 to 41.1) at 10 or more weeks. Among BNT162b2 primary course recipients, vaccine effectiveness increased to 67.2% (95% CI, 66.5 to 67.8) at 2 to 4 weeks after a BNT162b2 booster before declining to 45.7% (95% CI, 44.7 to 46.7) at 10 or more weeks. Vaccine effectiveness after a ChAdOx1 nCoV-19 primary course increased to 70.1% (95% CI, 69.5 to 70.7) at 2 to 4 weeks after an mRNA-1273 booster and decreased to 60.9% (95% CI, 59.7 to 62.1) at 5 to 9 weeks. After a BNT162b2 primary course, the mRNA-1273 booster increased vaccine effectiveness to 73.9% (95% CI, 73.1 to 74.6) at 2 to 4 weeks; vaccine effectiveness fell to 64.4% (95% CI, 62.6 to 66.1) at 5 to 9 weeks.

Conclusions. Primary immunization with two doses of ChAdOx1 nCoV-19 or BNT162b2 vaccine provided limited protection against symptomatic disease caused by the omicron variant. A BNT162b2 or mRNA-1273 booster after either the ChAdOx1 nCoV-19 or BNT162b2 primary course substantially increased protection, but that protection waned over time.
<https://www.nejm.org/doi/full/10.1056/NEJMoa2119451>

**title:** UK scales back routine covid-19 surveillance [editorial]

bmj| 4th march 2022

A walk in the dark.
On 24 February 2022, the UK government removed the legal requirement for people in England to self-isolate after a positive covid-19 test result, with the other UK nations also easing restrictions. In doing so, the UK is acting ahead of many of its international peers to embark on a “vaccines only” strategy, hoping that existing immunity in the population will allow a “return to normal.” This view is in sharp contrast to public opinion. In a recent poll by market research company YouGov, only 17% of respondents thought that ending mandatory self-isolation was appropriate.

The removal of legal restrictions makes the people of England part of an experiment in which much remains uncertain. This is acknowledged by chief government advisers Chris Whitty and Patrick Vallance, who accompanied Boris Johnson’s announcement with a warning that rates of covid-19 infection and hospital admission remain high.4 Of equal concern, the government’s announcement also introduced plans to scale back two crucial pillars of the UK’s covid-19 surveillance: the Office for National Statistics’ (ONS) covid-19 infection survey and daily reporting of data on the UK Health Security Agency (UKHSA) covid-19 dashboard.15 When, and to what extent, these important resources will be scaled back remains unclear.
<https://www.bmj.com/content/376/bmj.o562>

**title:** UK testing was “a shambles” so why hasn’t the government learnt from its mistakes, asks Paul Nurse

bmj| 2nd march 2022

The winner of the 2001 Nobel Prize in Physiology or Medicine tells Mun-Keat Looi of his experience with testing during the pandemic and the effect of covid-19 on UK research

Paul Nurse is no expert, he says. The geneticist and former president of the Royal Society is humble about the limits of his knowledge when it comes to covid-19, and yet on the hot topic of testing he does not hesitate to use his prominent voice.
<https://www.bmj.com/content/376/bmj.o168>

**title:** Covid-19: Public vaccine funding needs “strings attached” for equitable access, say campaigners

bmj | 3rd march 2022

Public funding given to companies for future vaccine development should have global access requirements built into agreements to avoid the inequity seen during the covid-19 pandemic, campaigners have said.

Speaking at the Westminster Health Forum on 21 February, Tahir Amin, co-founder and co-executive director of I-MAK—a US based group that campaigns for increased access to affordable drugs—highlighted that pharmaceutical companies have been given billions of dollars in public funds for vaccine development in recent years with “no strings attached.”
<https://www.bmj.com/content/376/bmj.o565>

**title:** COVID-19 vaccination in young children

the lancet respiratory medicine| 3rd march 2022

On Feb 16, 2022, the UK Joint Committee on Vaccination and Immunisation (JCVI) issued a statement recommending that all children aged 5–11 years should be offered the COVID-19 vaccine. “Although this age group is generally at very low risk of serious illness from the virus, a very small number of children who get infected do develop severe disease”, wrote the committee. “Latest evidence suggests that offering the vaccine ahead of another potential wave will protect this very small number of children from serious illness and hospitalisation—and will also provide some short-term protection against mild infection across the age group.”
[https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00085-6/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600%2822%2900085-6/fulltext)

**title:** Waning immune responses against SARS-CoV-2 variants of concern among vaccinees in Hong Kong

the lancet ebio medicine| 3rd march 2022

Background. Nearly 4 billion doses of the BNT162b2-mRNA and CoronaVac-inactivated vaccines have been administrated globally, yet different vaccine-induced immunity against SARS-CoV-2 variants of concern (VOCs) remain incompletely investigated.

Methods. We compare the immunogenicity and durability of these two vaccines among fully vaccinated Hong Kong people.

Findings. Standard BNT162b2 and CoronaVac vaccinations were tolerated and induced neutralizing antibody (NAb) (100% and 85.7%) and spike-specific CD4 T cell responses (96.7% and 82.1%), respectively. The geometric mean NAb IC50 and median frequencies of reactive CD4 subsets were consistently lower among CoronaVac-vaccinees than BNT162b2-vaccinees. CoronaVac did not induce measurable levels of nucleocapsid protein-specific IFN-γ+ CD4+ T or IFN-γ+ CD8+ T cells compared with unvaccinated. Against VOCs, NAb response rates and geometric mean IC50 titers against B.1.617.2 (Delta) and B.1.1.529 (Omicron) were significantly lower for CoronaVac (50%, 23.2 and 7.1%, <20) than BNT162b2 (94.1%, 131 and 58.8%, 35.0), respectively. Three months after vaccinations, NAbs to VOCs dropped near to detection limit, along with waning memory T cell responses, mainly among CoronaVac-vaccinees.

Interpretation. Our results indicate that vaccinees especially CoronaVac-vaccinees with significantly reduced NAbs may probably face higher risk to pandemic VOCs breakthrough infection.
[https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964(22)00088-3/fulltext](https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964%2822%2900088-3/fulltext)

**title:** Effectiveness of Ad26.COV2.S Vaccine vs BNT162b2 Vaccine for COVID-19 Hospitalizations

JAMA| 2nd march 2022

Although the Ad26.COV2.S vaccine (Janssen) showed an efficacy of 85.4% against severe and critical COVID-19 in the pivotal trial,1 its effectiveness in the general population against COVID-19 hospitalization was estimated to be approximately 68%,2,3 compared with approximately 90% for mRNA vaccines.4 However, to date, the effectiveness of Ad26.COV2.S has not been compared with that of other COVID-19 vaccines. In France, the Ad26.COV2.S vaccine was used from April 24, 2021, in people aged 55 years or older, whereas the BNT162b2 mRNA vaccine (Pfizer-BioNTech) was the most widely administered (78% of first doses). As of the end of July 2021, 19 million people aged 55 years or older (84% of the population in that age group) were partially or fully vaccinated. In this comparative effectiveness research study, we compare the effectiveness of full vaccination with Ad26.COV2.S vs BNT162b2 against COVID-19–related hospitalization … This study found that the Ad26.COV2.S vaccine is less effective against COVID-19–related hospitalization than the BNT162b2 vaccine. These results strengthen the evidence supporting a second dose in people who received the Ad26.COV2.S vaccine by an mRNA vaccine as recommended in both France and the US.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789572>

**title:** The ChAdOx1 vectored vaccine, AZD2816, induces strong immunogenicity against SARS-CoV-2 beta (B.1.351) and other variants of concern in preclinical studies

the lancet ebio medicine | 1st 2022

Background. There is an ongoing global effort to design, manufacture, and clinically assess vaccines against SARS-CoV-2. Over the course of the ongoing pandemic a number of new SARS-CoV-2 virus isolates or variants of concern (VoC) have been identified containing mutations in key proteins.

Methods. In this study we describe the generation and preclinical assessment of a ChAdOx1-vectored vaccine (AZD2816) which expresses the spike protein of the Beta VoC (B.1.351).

Findings. We demonstrate that AZD2816 is immunogenic after a single dose. When AZD2816 is used as a booster dose in animals primed with a vaccine encoding the original spike protein (ChAdOx1 nCoV-19/ [AZD1222]), an increase in binding and neutralising antibodies against Beta (B.1.351), Gamma (P.1) and Delta (B.1.617.2) is observed following each additional dose. In addition, a strong and polyfunctional T cell response was measured all booster regimens.

Interpretation. Real world data is demonstrating that one or more doses of licensed SARS-CoV-2 vaccines confer reduced protection against hospitalisation and deaths caused by divergent VoC, including Omicron. Our data support the ongoing clinical development and testing of booster vaccines to increase immunity against highly mutated VoC.
those with a high risk of infectiousness from SARS-CoV-2, to investigate the impact of the stage and severity of disease, and to compare predictions made by influential mathematical models with findings of empirical studies. Design Linked data analysis combining empirical evidence of the accuracy of the Innova LFT, the probability of positive viral culture or transmission to secondary cases, and the distribution of viral loads of SARS-CoV-2 in individuals in different settings. Setting Testing of individuals with symptoms attending NHS Test-and-Trace centres across the UK, residents without symptoms attending municipal mass testing centres in Liverpool, and students without symptoms screened at the University of Birmingham. Participants Evidence for the sensitivity of the Innova LFT, based on 70 individuals with SARS-CoV-2 and LFT results. Infectiousness was based on viral culture rates on 246 samples (176 people with SARS-CoV-2) and secondary cases among 2 474 066 contacts; distributions of cycle threshold (Ct) values from 231 497 index individuals attending NHS Test-and-Trace centres; 70 people with SARS-CoV-2 detected in Liverpool and 62 people with SARS-CoV-2 in Birmingham (54 imputed). Main outcome measures The predicted proportions who were missed by LFT and viral culture positive and missed by LFT and sources of secondary cases, in each of the three settings. Predictions were compared with those made by mathematical models. Results The analysis predicted that of those with a viral culture positive result, Innova would miss 20% attending an NHS Test-and-Trace centre, 29% without symptoms attending municipal mass testing, and 81% attending university screen testing without symptoms, along with 38%, 47%, and 90% of sources of secondary cases. In comparison, two mathematical models underestimated the numbers of missed infectious individuals (8%, 10%, and 32% in the three settings for one model, whereas the assumptions from the second model made it impossible to miss an infectious individual). Owing to the paucity of usable data, the inputs to the analyses are from limited sources.

Conclusions The proportion of infectious people with SARS-CoV-2 missed by LFTs is substantial enough to be of clinical importance. The proportion missed varied between settings because of different viral load distributions and is likely to be highest in those without symptoms. Key models have substantially overestimated the sensitivity of LFTs compared with empirical data. An urgent need exists for additional robust well designed and reported empirical studies from intended use settings to inform evidence based policy.
[https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964(22)00086-X/fulltext](https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964%2822%2900086-X/fulltext)

**title:** Final Analysis of Efficacy and Safety of Single-Dose Ad26.COV2.S

nejm | 3rd march 2022

Background. The Ad26.COV2.S vaccine was highly effective against severe–critical coronavirus disease 2019 (Covid-19), hospitalization, and death in the primary phase 3 efficacy analysis.

Methods. We conducted the final analysis in the double-blind phase of our multinational, randomized, placebo-controlled trial, in which adults were assigned in a 1:1 ratio to receive single-dose Ad26.COV2.S (5×1010 viral particles) or placebo. The primary end points were vaccine efficacy against moderate to severe–critical Covid-19 with onset at least 14 days after administration and at least 28 days after administration in the per-protocol population. Safety and key secondary and exploratory end points were also assessed.

Results. Median follow-up in this analysis was 4 months; 8940 participants had at least 6 months of follow-up. In the per-protocol population (39,185 participants), vaccine efficacy against moderate to severe–critical Covid-19 at least 14 days after administration was 56.3% (95% confidence interval [CI], 51.3 to 60.8; 484 cases in the vaccine group vs. 1067 in the placebo group); at least 28 days after administration, vaccine efficacy was 52.9% (95% CI, 47.1 to 58.1; 433 cases in the vaccine group vs. 883 in the placebo group). Efficacy in the United States, primarily against the reference strain (B.1.D614G) and the B.1.1.7 (alpha) variant, was 69.7% (95% CI, 60.7 to 76.9); efficacy was reduced elsewhere against the P.1 (gamma), C.37 (lambda), and B.1.621 (mu) variants. Efficacy was 74.6% (95% CI, 64.7 to 82.1) against severe–critical Covid-19 (with only 4 severe–critical cases caused by the B.1.617.2 [delta] variant), 75.6% (95% CI, 54.3 to 88.0) against Covid-19 leading to medical intervention (including hospitalization), and 82.8% (95% CI, 40.5 to 96.8) against Covid-19–related death, with protection lasting 6 months or longer. Efficacy against any severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection was 41.7% (95% CI, 36.3 to 46.7). Ad26.COV2.S was associated with mainly mild-to-moderate adverse events, and no new safety concerns were identified.

Conclusions. A single dose of Ad26.COV2.S provided 52.9% protection against moderate to severe–critical Covid-19. Protection varied according to variant; higher protection was observed against severe Covid-19, medical intervention, and death than against other end points and lasted for 6 months or longer.
<https://www.nejm.org/doi/full/10.1056/NEJMoa2117608>

**title:** Vaccine approval before phase 3 trial results: a consequence of vaccine access inequity [correspondence]

the lancet| 2nd march 2022

The final phase 3 clinical data for CanSino Biologics' adenovirus type 5 vector vaccine show that Ad5-nCoV is efficacious. However, emergency approval was granted in ten countries before data on its efficacy were available, even though other vaccines were already approved. If the results of the trial had been unfavourable, millions of people would have been vaccinated and granted a false sense of protection. If this scenario had happened, the decision to approve the vaccine for emergency use would have been an unforgivable one, given other proven vaccines existed at the time. The authorisation of the unproven vaccine at the time, an already criticisable decision, was the consequence of the COVID-19 pandemic (and governments) aggravating the previously existing health inequities between and within countries
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00164-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2822%2900164-7/fulltext)

**title:** Travel measures in the SARS-CoV-2 variant era need clear objectives

the lancet | 2nd march 2022

The rapid global spread of new SARS-CoV-2 variants despite travel restrictions has revealed deficiencies in existing strategies and a need to evaluate them.

Such strategies—eg, vaccine passports, reactive flight bans, isolation of travellers who test positive for SARS-CoV-2 or blanket quarantines, and major changes to travel protocols—have often had weak accompanying justifications. Many governments continue to adapt various combinations of international travel measures and, increasingly, scale them back (figure) without stating clear objectives or the evidence behind them. In an era of SARS-CoV-2 variants and for future pandemic preparedness, there is a need for a transparent and evidence-based approach to travel strategies, supported by the development of clear international standards.
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00366-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2822%2900366-X/fulltext)

**title:** Comparison of vaccine efficacy must be based on good clinical data

the lancet western pacific | 1st march 2022

The conclusion by Nur Asheila et al that “the mortality rate of those who received inactivated vaccine was higher than the recipients of the BNT162b2 and ChAdOx1 vaccines” cannot be supported by their data because patients receiving the 3 types of vaccine may not be comparable.

 The authors in fact noted that in their sample,“vaccine allocation was not entirely random”. They can correct this limitation by applying statistical tests on the baseline characteristics of the 3 patient groups, especially the number and severity of co-morbidities, to see if indeed comparison across the 3 groups is valid. There is good evidence that vaccine efficacy drops with time.

Therefore their conclusion is further weakened because we do not know the time interval from vaccination to death in their study population. For any comparison of vaccine efficacy to be valid, we must be sure to compare similar time intervals after full vaccination. Finally their logic defying result in the inactivated vaccine group, showing fully vaccinated patients to have higher mortality than those partially vaccinated, suggests that sample size is too small to correct for important mortality affecting bias in this population group. After all, in actual community use, total Covid-19 deaths per million is lower in Laos (59 deaths per million) which uses inactivated vaccines for a majority of its population compared to richer regional neighbour Singapore (154 deaths per million) with its mRNA based program.
[https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065(22)00025-6/fulltext](https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065%2822%2900025-6/fulltext)

**title:** SARS-CoV-2 Laboratory-Developed TestsIntegrity Restored

jama | 4th march 2022

On November 15, 2021, the US Department of Health and Human Services (HHS) rescinded a Trump-era policy that had directed the US Food and Drug Administration (FDA) to discontinue the premarket reviews of laboratory-developed tests (LDTs), including those for SARS-CoV-2.1 In a statement detailing the reversal, HHS Secretary Xavier Becerra noted that the policy “limited FDA’s ability to address certain problematic COVID-19 tests.”1 Secretary Becerra also noted that restoring the integrity of the regulatory process required that the FDA reinstate its “longstanding approach” to the oversight of the LDTs.1 Given the ever-growing demand for LDTs for detecting SARS-CoV-2, the restoration of integrity to the FDA review process could not be more timely. In this Viewpoint, we review the regulatory oversight of the LDTs, discuss its recent policy permutations, and explore potential future considerations.
<https://jamanetwork.com/journals/jama/fullarticle/2789917>

**title:** Delivering Pandemic Vaccines in 100 Days — What Will It Take?

nejm | 2nd march 2022
The development of SARS-CoV-2 vaccines in less than 1 year was a scientific triumph. Yet, during the 326 days between the viral sequence becoming available in January 2020 and emergency authorization of the first vaccines by a stringent regulatory authority, more than 70 million Covid-19 cases and 1.6 million resulting deaths were recorded worldwide.1 In recognition of the potential benefits associated with earlier, widespread availability of vaccines, the Coalition for Epidemic Preparedness Innovations (CEPI), where some of us work, articulated an aspirational goal: vaccines should be ready for initial authorization and manufacturing at scale within 100 days after the next pandemic pathogen is recognized. This “moonshot” goal has been widely adopted by governments throughout the world, and several vaccine developers are exploring strategies for achieving this aim.<https://www.nejm.org/doi/full/10.1056/NEJMp2202669?query=featured_coronavirus>

**title:** Response to additional COVID-19 vaccine doses in people who are immunocompromised: a rapid review [correspondence]

the lancet global health | 3rd march 2022

Individuals with compromised immune systems, whether because of immunodeficiency or immunosuppressive therapy, are among those most susceptible to COVID-19. In fact, people who are immunocompromised are doubly susceptible. On the one hand, people who are immunocompromised are more likely to suffer the gravest consequences of SARS-CoV-2 infection, including severe or fatal disease. On the other hand, such individuals are less likely to mount a sufficient immune response to COVID-19 vaccination. Our findings also highlight the need for continued caution among people who are immunocompromised while SARS-CoV-2 transmission remains high globally. Many people who are immunocompromised with severe immunosuppression are likely to remain susceptible to COVID-19 even after an additional dose. Indeed, cumulative antibody response rates after the additional dose in people who are immunocompromised typically fall some way short of the response rates observed after a standard primary series in people who are not immunocompromised. Accordingly, additional protective measures within the households and care facilities of people who are immunocompromised, including vaccination of close contacts as well as other public health and social measures, will be crucial to reduce the risk of transmission to this susceptible population.
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(21)00593-3/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2821%2900593-3/fulltext)

**title:** Caregiver COVID-19 Vaccination Status in Pediatric Hospitals—Ethics of Exclusion

jama pediatrics | 28th FEBRUARY 2022

Before the advent of vaccines against COVID-19, hospitals worldwide invoked visitation restrictions to protect health care workers, patients, and the general public in the context of overwhelmed inpatient wards, limited personal protective equipment, and heightened community prevalence. In the postvaccine era, institutions have grappled with how COVID-19 vaccination status might impact visitation of inpatients or access to certain health care resources. In light of vaccine mandates and vaccine passports,1 some health care institutions have adopted policies restricting visitation of adult patients by unvaccinated individuals. Should COVID-19 vaccination status determine caregiver presence in pediatric hospitals?<https://jamanetwork.com/journals/jamapediatrics/fullarticle/2789459>

**recovery / HEALTH MANGEMENT & SERVICES**

**title:** Has the covid pandemic changed the debate about nationalising GPs?

BMJ | 2nd march 2022

The pandemic has led the UK health secretary into a debate on whether GPs should be directly employed by the NHS. Azeem Majeed argues that this is an opportunity to correct a flawed model, but Simon Hodes says that partnerships are still the best model for primary care
<https://www.bmj.com/content/376/bmj.o406>

**title:** Pandemic has accelerated demand for private healthcare, report finds

bmj | 3rd march 2022

More UK adults are seeking private healthcare as poor access to care exacerbated by the pandemic threatens to create a two tier system, a report has warned.

Research by the Institute for Public Policy Research (IPPR) think tank found that the long term decline in NHS access and quality had been rapidly accelerated by covid-19, prompting more people to purchase private health insurance or pay for treatment.

Polling by IPPR and YouGov for the report found that of 3466 UK adults surveyed, almost a third (31%) struggled to access the care they needed during the pandemic. Of these, almost one in eight (12%) used some form of paid alternative and one in five considered doing so, with this proportion rising for wealthier people. But support for the core principles of the NHS was high, with 88% of people polled across all political viewpoints expressing support for care being free at the point of delivery.
<https://www.bmj.com/content/376/bmj.o566>

**title:** Why has mental health been forgotten in the government’s recovery plans?

bmj | 4th march 2022

Over the last few weeks, we’ve seen the publication of several major government strategies setting out plans for our recovery from covid-19, including the NHS elective backlog strategy and white papers on integration and levelling up. However, something obvious is missing. For those of us working in frontline services, the lack of comparative action on mental health is increasingly worrying. In some respects, we seem to be moving backwards.
<https://www.bmj.com/content/376/bmj.o585>

**title:** What can we learn from the language of “living with covid”?

bmj | 23rd FEBRUARY 2022

Since the start of the covid-19 pandemic, in the UK and elsewhere, the phrase “living with covid”—and variations such as “live with it,” “learning to live with the virus”—has circulated in public discourse. It refers to, and summarises, increasingly polarised positions with regards to the pandemic: on the one hand, accept the virus and resist adaptations; on the other, adopt mitigations and adapt to a new normal. Since the same phrase is used by different parties with diverse stakes and interests, it is emblematic of the way pandemic discourse has dichotomized over the past two years.
<https://www.bmj.com/content/376/bmj.o575>

**title:** Government’s plan for “living with covid-19” neglects the most vulnerable

BMJ | 1st march 2022

To doctors and much of the public, who have spent the last two years doing the right thing to protect one another, last week’s “Living with covid-19” strategy appeared less about living with the virus, and more about ignoring its continued impact on people, society, and the health service.

It is of course positive that through the successful vaccination programme and better treatments for covid the levels of serious illness have reduced with fewer people in hospital and fewer deaths. However, the decision last Monday to lift all legally enforceable public health measures feels rash and premature with infection rates still high and the latest Office of National Statistic survey suggesting one in 25 people in England were infected in the week ending 19 February.1 And while the prime minister talks about omicron resulting in a mild illness for most, others will still become very unwell with covid-19. There are almost 11 000 people in hospital and just under a thousand deaths per week, as well as an estimated more than one million people living with long covid—themselves needing ongoing care—an issue the prime minister airbrushed out of his announcement.
<https://www.bmj.com/content/376/bmj.o540>

**title:** Health System Recovery From Covid-19: International Lessons For The NHS

nuffield trust | 4th march 2022

This report outlines the challenges confronting the NHS in recovering from the pandemic, such as the waiting lists created by the scaling down of elective services. It finds that the pandemic has left even the most well-equipped health systems vulnerable and looks across 16 countries to gain an understanding of the recovery challenge worldwide.
•[Report](https://www.nuffieldtrust.org.uk/files/2022-03/health-system-recovery-final-pdf-1-.pdf)

•[Nuffield Trust - publications](https://www.nuffieldtrust.org.uk/research/health-system-recovery-from-covid-19-international-lessons-for-the-nhs)

**HEALTH INEQUALITIES**

**title:** Focusing on the Needs of People With Hearing Loss During the COVID-19 Pandemic and Beyond

jama | 3rd march 2022

After more than 2 years of the COVID-19 pandemic response, face masks remain ubiquitous in public places and are sometimes used in conjunction with plexiglass shields or other barriers to communication. In a survey of 641 people with hearing loss,1 the proportion reporting difficulty in understanding people wearing masks was 76% among those with moderate hearing loss and 95% among those with profound hearing loss.

Briefly removing a mask to facilitate conversation is often discouraged, but alternatives (such as transparent masks) are usually unavailable (even in health facilities and government offices). These policies are not specific to pandemic control and reflect a lack of awareness of the needs of people with hearing loss. March 3, 2022, is World Hearing Day, which is an opportunity to reflect on how best to address these needs and mitigate the costs and consequences of hearing loss.
<https://jamanetwork.com/journals/jama/fullarticle/2789772>

**title:** Trends in Mortality Rates Among Medicare Enrollees With Alzheimer Disease and Related Dementias Before and During the Early Phase of the COVID-19 Pandemic

JAMA NEUROLOGY | 28th FEBRUARY 2022

Question Is the COVID-19 pandemic associated with changes in mortality among older adults with Alzheimer disease and related dementias (ADRD)?

Findings In this cross-sectional study of 53 640 888 Medicare enrollees 65 years of age or older, compared with 2019, mortality was 12% higher among beneficiaries without ADRD and 26% higher among beneficiaries with ADRD in 2020. Among nursing home residents without ADRD, mortality was 24% higher, and among nursing home residents with ADRD, mortality was 33% higher.

Meaning These findings suggest that the COVID-19 pandemic was associated with increased mortality among older Medicare enrollees with ADRD, especially among beneficiaries living in nursing homes.
<https://jamanetwork.com/journals/jamaneurology/fullarticle/2789614>

**title:** Addressing Vulnerability and Dementia in the Era of COVID-19

JAMA neurology| 28th FEBRUARY 2022

The medical community was quick to recognize that dementia and other comorbidities of older age left older individuals prone to severe illness and death from COVID-19.1,2 Yet the impact of the COVID-19 pandemic has had far broader consequences to population health than can be attributed to the virus itself. The indirect effects of COVID-19, including increased adoption of telehealth, decreased access to community resources, and social isolation, carry their own health burden and disproportionately affect older adults with dementia who have consolidated social networks and increased functional dependence on communities and health systems. However, the actual impact of these changes on mortality has thus far been inadequately understood and recognized.
<https://jamanetwork.com/journals/jamaneurology/fullarticle/2789616>

**title:** Quantifying the effects of the COVID-19 pandemic on gender equality on health, social, and economic indicators: a comprehensive review of data from March, 2020, to September, 2021

the lancet | 2nd march 2022

 Background. Gender is emerging as a significant factor in the social, economic, and health effects of COVID-19. However, most existing studies have focused on its direct impact on health. Here, we aimed to explore the indirect effects of COVID-19 on gender disparities globally.

Methods. We reviewed publicly available datasets with information on indicators related to vaccine hesitancy and uptake, health care services, economic and work-related concerns, education, and safety at home and in the community. We used mixed effects regression, Gaussian process regression, and bootstrapping to synthesise all data sources. We accounted for uncertainty in the underlying data and modelling process. We then used mixed effects logistic regression to explore gender gaps globally and by region.

Findings. Between March, 2020, and September, 2021, women were more likely to report employment loss (26·0% [95% uncertainty interval 23·8–28·8, by September, 2021) than men (20·4% [18·2–22·9], by September, 2021), as well as forgoing work to care for others (ratio of women to men: 1·8 by March, 2020, and 2·4 by September, 2021). Women and girls were 1·21 times (1·20–1·21) more likely than men and boys to report dropping out of school for reasons other than school closures. Women were also 1·23 (1·22–1·23) times more likely than men to report that gender-based violence had increased during the pandemic. By September 2021, women and men did not differ significantly in vaccine hesitancy or uptake.

Interpretation. The most significant gender gaps identified in our study show intensified levels of pre-existing widespread inequalities between women and men during the COVID-19 pandemic. Political and social leaders should prioritise policies that enable and encourage women to participate in the labour force and continue their education, thereby equipping and enabling them with greater ability to overcome the barriers they face.
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00008-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2822%2900008-3/fulltext)

**title:** Assessment of Structural Barriers and Racial Group Disparities of COVID-19 Mortality With Spatial Analysis

jama | 4th march 2022

Question How do the associations between structural factors and COVID-19 mortality help explain the disproportionate outcomes experienced by different racial and ethnic groups?

Findings In this cross-sectional study of 3142 counties in 50 US states and the District of Columbia, the associations between different measures of social determinants of health and COVID-19 mortality varied across racial and ethnic groups (Black or African American, Hispanic or Latinx, and non-Hispanic White populations) and different community types (rural, suburban, and urban areas).

Meaning Findings from this study suggest the need for future research that addresses health inequity and guides policies and programs by further exploring the different dimensions and regional patterns of social determinants of health
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789619>

We

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