COVID-19 weekly update

January 14th 2022

**clinical management**

**Title:** Atorvastatin versus placebo in patients with covid-19 in intensive care: randomized controlled trial

BMJ | 7th January 2022

**Objective** To assess the effect of statin treatment versus placebo on clinical outcomes in patients with covid-19 admitted to the intensive care unit (ICU).

**Design** INSPIRATION/INSPIRATION-S was a multicenter, randomized controlled trial with a 2×2 factorial design. Results for the anticoagulation randomization have been reported previously. Results for the double blind randomization to atorvastatin versus placebo are reported here.

**Setting** 11 hospitals in Iran.

**Participants** Adults aged ≥18 years with covid-19 admitted to the ICU.

**Intervention** Atorvastatin 20 mg orally once daily versus placebo, to be continued for 30 days from randomization irrespective of hospital discharge status.

**Main outcome measures** The primary efficacy outcome was a composite of venous or arterial thrombosis, treatment with extracorporeal membrane oxygenation, or all cause mortality within 30 days from randomization. Prespecified safety outcomes included increase in liver enzyme levels more than three times the upper limit of normal and clinically diagnosed myopathy. A clinical events committee blinded to treatment assignment adjudicated the efficacy and safety outcomes.

**Results** Of 605 patients randomized between 29 July 2020 and 4 April 2021 for statin randomization in the INSPIRATION-S trial, 343 were co-randomized to intermediate dose versus standard dose prophylactic anticoagulation with heparin based regimens, whereas 262 were randomized after completion of the anticoagulation study. 587 of the 605 participants were included in the primary analysis of INSPIRATION-S, reported here: 290 were assigned to atorvastatin and 297 to placebo (median age 57 years (interquartile range 45-68 years); 256 (44%) women). The primary outcome occurred in 95 (33%) patients assigned to atorvastatin and 108 (36%) assigned to placebo (odds ratio 0.84, 95% confidence interval 0.58 to 1.21). Death occurred in 90 (31%) patients in the atorvastatin group and 103 (35%) in the placebo group (odds ratio 0.84, 95% confidence interval 0.58 to 1.22). Rates for venous thromboembolism were 2% (n=6) in the atorvastatin group and 3% (n=9) in the placebo group (odds ratio 0.71, 95% confidence interval 0.24 to 2.06). Myopathy was not clinically diagnosed in either group. Liver enzyme levels were increased in five (2%) patients assigned to atorvastatin and six (2%) assigned to placebo (odds ratio 0.85, 95% confidence interval 0.25 to 2.81).

**Conclusions** In adults with covid-19 admitted to the ICU, atorvastatin was not associated with a significant reduction in the composite of venous or arterial thrombosis, treatment with extracorporeal membrane oxygenation, or all cause mortality compared with placebo. Treatment was, however, found to be safe. As the overall event rates were lower than expected, a clinically important treatment effect cannot be excluded.

Full article: [Atorvastatin versus placebo in patients with covid-19 in intensive care: randomized controlled trial | The BMJ](https://www.bmj.com/content/376/bmj-2021-068407)

**Title:** False-Positive Results in Rapid Antigen Tests for SARS-CoV-2

JAMA| 7th January 2022

Concerns have been raised whether rapid antigen tests for SARS-CoV-2 can result in false-positive test results[1](https://jamanetwork.com/journals/jama/fullarticle/2788067#jld210088r1),[2](https://jamanetwork.com/journals/jama/fullarticle/2788067#jld210088r2) and undermine pandemic management for COVID-19. This study investigated the incidence of false-positive results in a large sample of rapid antigen tests used to serially screen asymptomatic workers throughout Canada.

Full article: [False-Positive Results in Rapid Antigen Tests for SARS-CoV-2 | Clinical Pharmacy and Pharmacology | JAMA | JAMA Network](https://jamanetwork.com/journals/jama/fullarticle/2788067)

**Title:** Risk of serious COVID-19 outcomes among adults with asthma in Scotland: a national incident cohort study

The Lancet Respiratory Medicine| 13th January

Background

There is considerable uncertainty over whether adults with asthma should be offered booster vaccines against SARS-CoV-2 and, if so, who should be prioritised for booster vaccination. We were asked by the UK's Joint Commission on Vaccination and Immunisation to undertake an urgent analysis to identify which adults with asthma were at an increased risk of serious COVID-19 outcomes to inform deliberations on booster COVID-19 vaccines.

Findings

Between March 1, 2020, and July 27, 2021, 561 279 (12·7%) of 4 421 663 adults in Scotland had clinician-diagnosed-and-recorded-asthma. Among adults with asthma, 39 253 (7·0%) had confirmed SARS-CoV-2 infections, of whom 4828 (12·3%) were admitted to hospital for COVID-19 (among them, an estimated 600 [12·4%] might have been due to nosocomial infections). Adults with asthma were found to be at an increased risk of COVID-19 hospital admission (adjusted HR 1·27, 95% CI 1·23–1·32) compared with those without asthma. When using oral corticosteroid prescribing in the preceding 2 years as a marker for history of an asthma attack, the adjusted HR was 1·54 (95% CI 1·46–1·61) for those with three or more prescribed courses of oral corticosteroids, 1·37 (1·26–1·48) for those with two prescribed courses, 1·30 (1·23–1·37) for those with one prescribed course, and 1·15 (1·11–1·21) for those without any courses, compared with those aged 18 years or older without asthma. Adults with asthma were found to be at an increased risk of COVID-19 ICU admission or death compared with those without asthma (adjusted HR 1·13, 95 % CI 1·05–1·22). The adjusted HR was 1·44 (95% CI 1·31–1·58) for those with three or more prescribed courses of oral corticosteroids, 1·27 (1·09–1·48) for those with two prescribed courses, 1·04 (0·93–1·16) for those with one prescribed course, and 1·06 (0·97–1·17) for those without any course, compared with adults without asthma.

Interpretation

Adults with asthma who have required two or more courses of oral corticosteroids in the previous 2 years or a hospital admission for asthma before March 1, 2020, are at increased risk of both COVID-19 hospitalisation and ICU admission or death. Patients with a recent asthma attack should be considered a priority group for booster COVID-19 vaccines.

Full article: [Risk of serious COVID-19 outcomes among adults with asthma in Scotland: a national incident cohort study - The Lancet Respiratory Medicine](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00543-9/fulltext)

**Title:** The effect of maternal SARS-CoV-2 infection timing on birth outcomes: a retrospective multicentre cohort study

The Lancet Digital Health| 13th January

Background

The impact of maternal SARS-CoV-2 infection remains unclear. In this study, we evaluated the risk of maternal SARS-CoV-2 infection on birth outcomes and how this is modulated by the pregnancy trimester in which the infection occurs. We also developed models to predict gestational age at delivery for people following a SARS-CoV-2 infection during pregnancy.

Findings

Between March 5, 2020, and July 4, 2021, 73 666 pregnant people delivered, 18 335 of whom had at least one SARS-CoV-2 test during pregnancy before Feb 14, 2021. We observed 882 people infected with SARS-CoV-2 during their pregnancy (first trimester n=85; second trimester n=226; and third trimester n=571) and 19 769 people who have never tested positive for SARS-CoV-2 and received at least one negative SARS-CoV-2 test during their pregnancy. SARS-CoV-2 infection indicated an increased risk of preterm delivery (p<0·05) and stillbirth (p<0·05), accounted for primarily by first and second trimester SARS-CoV-2 infections. Gestational age at SARS-CoV-2 infection was correlated with gestational age at delivery (p<0·01) and had the greatest impact on predicting gestational age at delivery. The people in this study had mild or moderate SARS-CoV-2 infections and acute COVID-19 severity was not correlated with gestational age at delivery (p=0·31).

Interpretation

These results suggest that pregnant people would benefit from increased monitoring and enhanced prenatal care after first or second trimester SARS-CoV-2 infection, regardless of acute COVID-19 severity.

Full article: [The effect of maternal SARS-CoV-2 infection timing on birth outcomes: a retrospective multicentre cohort study - The Lancet Digital Health](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(21)00250-8/fulltext)

**recovery**

**Title:** Clearing The Backlog Caused By The Pandemic

**Health and Social Care Committee| 6th January 2022**  
This report finds that elective recovery plans are threatened by pressure on emergency care with a record number of 999 calls and waiting times in emergency departments at record levels. It concludes that tackling the wider backlog caused by the pandemic is a major and ‘unquantifiable’ challenge. It calls for a broad national health and care recovery plan to include mental health, primary care, community care, and social care as well as emergency care.

* [Report](https://committees.parliament.uk/publications/8352/documents/85020/default/)
* [Health and Social Care Committee - press release](https://committees.parliament.uk/committee/81/health-and-social-care-committee/news/160095/omicron-and-emergency-care-crisis-could-derail-plans-to-tackle-backlog-warn-mps/)
* [The King's Fund - response](https://www.kingsfund.org.uk/press/press-releases/kings-fund-responds-health-social-care-committees-report-clearing-backlog)

**Infection control**

**Title:** Covid-19 control measures and common paediatric infections

BMJ| 12th January 2022

The covid-19 pandemic upended virtually all aspects of society, not least patterns of healthcare use. In a linked paper (doi:[10.1136/bmj-2021-067519](https://www.bmj.com/lookup/doi/10.1136/bmj-2021-067519)), Kadambari and colleagues report dramatic decreases in hospital admissions due to a range of 19 childhood infections in UK children in the 16 months after the start of the covid-19 pandemic.[**1**](https://www.bmj.com/content/376/bmj.n3093#ref-1) Almost all studied infections declined, including common respiratory viruses, vaccine preventable infections, and common bacterial infections. These findings support and expand data from the United States showing major decreases in childhood respiratory viruses.[**2**](https://www.bmj.com/content/376/bmj.n3093#ref-2)

Full research article: [Indirect effects of the covid-19 pandemic on childhood infection in England: population based observational study | The BMJ](https://www.bmj.com/content/376/bmj-2021-067519)

News item: [Covid-19 control measures and common paediatric infections | The BMJ](https://www.bmj.com/content/376/bmj.n3093)

**Title:** Association of a Third Dose of BNT162b2 Vaccine With Incidence of SARS-CoV-2 Infection Among Health Care Workers in Israel

JAMA| 10th January 2022

**Question**  What is the association between immunization with a third (booster) dose of BNT162b2 vaccine (Pfizer-BioNTech) and the incidence of SARS-CoV-2 infection among immunocompetent health care workers?

**Findings**  In this cohort study of 1928 health care workers in Israel who were previously vaccinated with a 2-dose series of BNT162b2, administration of a booster dose compared with not receiving one was significantly associated with lower risk of SARS-CoV-2 infection during a median of 39 days of follow-up (adjusted hazard ratio, 0.07).

**Meaning**  Among health care workers previously vaccinated with a 2-dose series of BNT162b2, administration of a booster dose compared with not receiving one was significantly associated with a lower rate of SARS-CoV-2 infection in short-term follow-up.

Full article: [Association of a Third Dose of BNT162b2 Vaccine With Incidence of SARS-CoV-2 Infection Among Health Care Workers in Israel | Global Health | JAMA | JAMA Network](https://jamanetwork.com/journals/jama/article-abstract/2788104)

**Title:** Effectiveness of BNT162b2 Vaccine against Critical Covid-19 in Adolescents

NEJM| 12th January 2022

**BACKGROUND**

The increasing incidence of pediatric hospitalizations associated with coronavirus disease 2019 (Covid-19) caused by the B.1.617.2 (delta) variant of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the United States has offered an opportunity to assess the real-world effectiveness of the BNT162b2 messenger RNA vaccine in adolescents between 12 and 18 years of age.

**RESULTS**

A total of 445 case patients and 777 controls were enrolled. Overall, 17 case patients (4%) and 282 controls (36%) had been fully vaccinated. Of the case patients, 180 (40%) were admitted to the ICU, and 127 (29%) required life support; only 2 patients in the ICU had been fully vaccinated. The overall effectiveness of the BNT162b2 vaccine against hospitalization for Covid-19 was 94% (95% confidence interval [CI], 90 to 96); the effectiveness was 95% (95% CI, 91 to 97) among test-negative controls and 94% (95% CI, 89 to 96) among syndrome-negative controls. The effectiveness was 98% against ICU admission and 98% against Covid-19 resulting in the receipt of life support. All 7 deaths occurred in patients who were unvaccinated.

**CONCLUSIONS**

Among hospitalized adolescent patients, two doses of the BNT162b2 vaccine were highly effective against Covid-19–related hospitalization and ICU admission or the receipt of life support. (Funded by the Centers for Disease Control and Prevention.)

Full article: [Effectiveness of BNT162b2 Vaccine against Critical Covid-19 in Adolescents | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2117995?query=featured_coronavirus)

**Title:** Duration of Protection against Mild and Severe Disease by Covid-19 Vaccines

NEJM| 12th January 2022

**BACKGROUND:** Vaccines against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus that causes coronavirus disease 2019 (Covid-19), have been used since December 2020 in the United Kingdom. Real-world data have shown the vaccines to be highly effective against Covid-19 and related severe disease and death. Vaccine effectiveness may wane over time since the receipt of the second dose of the ChAdOx1-S (ChAdOx1 nCoV-19) and BNT162b2 vaccines.

**METHODS:** We used a test-negative case–control design to estimate vaccine effectiveness against symptomatic Covid-19 and related hospitalization and death in England. Effectiveness of the ChAdOx1-S and BNT162b2 vaccines was assessed according to participant age and status with regard to coexisting conditions and over time since receipt of the second vaccine dose to investigate waning of effectiveness separately for the B.1.1.7 (alpha) and B.1.617.2 (delta) variants.

**RESULTS:** Vaccine effectiveness against symptomatic Covid-19 with the delta variant peaked in the early weeks after receipt of the second dose and then decreased by 20 weeks to 44.3% (95% confidence interval [CI], 43.2 to 45.4) with the ChAdOx1-S vaccine and to 66.3% (95% CI, 65.7 to 66.9) with the BNT162b2 vaccine. Waning of vaccine effectiveness was greater in persons 65 years of age or older than in those 40 to 64 years of age. At 20 weeks or more after vaccination, vaccine effectiveness decreased less against both hospitalization, to 80.0% (95% CI, 76.8 to 82.7) with the ChAdOx1-S vaccine and 91.7% (95% CI, 90.2 to 93.0) with the BNT162b2 vaccine, and death, to 84.8% (95% CI, 76.2 to 90.3) and 91.9% (95% CI, 88.5 to 94.3), respectively. Greater waning in vaccine effectiveness against hospitalization was observed in persons 65 years of age or older in a clinically extremely vulnerable group and in persons 40 to 64 years of age with underlying medical conditions than in healthy adults.

**CONCLUSIONS:** We observed limited waning in vaccine effectiveness against Covid-19–related hospitalization and death at 20 weeks or more after vaccination with two doses of the ChAdOx1-S or BNT162b2 vaccine. Waning was greater in older adults and in those in a clinical risk group.

Full article: [Duration of Protection against Mild and Severe Disease by Covid-19 Vaccines | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2115481?query=featured_coronavirus)

**Title:** Effectiveness of Covid-19 Vaccines over a 9-Month Period in North Carolina

NEJM| 12th January 2022

**BACKGROUND:** The duration of protection afforded by coronavirus disease 2019 (Covid-19) vaccines in the United States is unclear. Whether the increase in postvaccination infections during the summer of 2021 was caused by declining immunity over time, the emergence of the B.1.617.2 (delta) variant, or both is unknown.

**METHODS:** We extracted data regarding Covid-19–related vaccination and outcomes during a 9-month period (December 11, 2020, to September 8, 2021) for approximately 10.6 million North Carolina residents by linking data from the North Carolina Covid-19 Surveillance System and the Covid-19 Vaccine Management System. We used a Cox regression model to estimate the effectiveness of the BNT162b2 (Pfizer–BioNTech), mRNA-1273 (Moderna), and Ad26.COV2.S (Johnson & Johnson–Janssen) vaccines in reducing the current risks of Covid-19, hospitalization, and death, as a function of time elapsed since vaccination.

**RESULTS:** For the two-dose regimens of messenger RNA (mRNA) vaccines BNT162b2 (30 μg per dose) and mRNA-1273 (100 μg per dose), vaccine effectiveness against Covid-19 was 94.5% (95% confidence interval [CI], 94.1 to 94.9) and 95.9% (95% CI, 95.5 to 96.2), respectively, at 2 months after the first dose and decreased to 66.6% (95% CI, 65.2 to 67.8) and 80.3% (95% CI, 79.3 to 81.2), respectively, at 7 months. Among early recipients of BNT162b2 and mRNA-1273, effectiveness decreased by approximately 15 and 10 percentage points, respectively, from mid-June to mid-July, when the delta variant became dominant. For the one-dose regimen of Ad26.COV2.S (5×1010 viral particles), effectiveness against Covid-19 was 74.8% (95% CI, 72.5 to 76.9) at 1 month and decreased to 59.4% (95% CI, 57.2 to 61.5) at 5 months. All three vaccines maintained better effectiveness in preventing hospitalization and death than in preventing infection over time, although the two mRNA vaccines provided higher levels of protection than Ad26.COV2.S.

**CONCLUSIONS:** All three Covid-19 vaccines had durable effectiveness in reducing the risks of hospitalization and death. Waning protection against infection over time was due to both declining immunity and the emergence of the delta variant.

Full article: [Effectiveness of Covid-19 Vaccines over a 9-Month Period in North Carolina | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2117128?query=featured_coronavirus)

**Title:** Covid-19 Vaccine Effectiveness in New York State

NEJM| 13th January 2022

**BACKGROUND:** Population-based data from the United States on the effectiveness of the three coronavirus disease 2019 (Covid-19) vaccines currently authorized by the Food and Drug Administration are limited. Whether declines in effectiveness are due to waning immunity, the B.1.617.2 (delta) variant of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), or other causes is unknown.

**METHODS:** We used data for 8,690,825 adults in New York State to assess the effectiveness of the BNT162b2, mRNA-1273, and Ad26.COV2.S vaccines against laboratory-confirmed Covid-19 and hospitalization with Covid-19 (i.e., Covid-19 diagnosed at or after admission). We compared cohorts defined according to vaccine product received, age, and month of full vaccination with age-specific unvaccinated cohorts by linking statewide testing, hospital, and vaccine registry databases. We assessed vaccine effectiveness against Covid-19 from May 1 through September 3, 2021, and against hospitalization with Covid-19 from May 1 through August 31, 2021.

**RESULTS:** There were 150,865 cases of Covid-19 and 14,477 hospitalizations with Covid-19. During the week of May 1, 2021, when the delta variant made up 1.8% of the circulating variants, the median vaccine effectiveness against Covid-19 was 91.3% (range, 84.1 to 97.0) for BNT162b2, 96.9% (range, 93.7 to 98.0) for mRNA-1273, and 86.6% (range, 77.8 to 89.7) for Ad26.COV2.S. Subsequently, effectiveness declined contemporaneously in all cohorts, from a median of 93.4% (range, 77.8 to 98.0) during the week of May 1 to a nadir of 73.5% (range, 13.8 to 90.0) around July 10, when the prevalence of the delta variant was 85.3%. By the week of August 28, when the prevalence of the delta variant was 99.6%, the effectiveness was 74.2% (range, 63.4 to 86.8). Effectiveness against hospitalization with Covid-19 among adults 18 to 64 years of age remained almost exclusively greater than 86%, with no apparent time trend. Effectiveness declined from May through August among persons 65 years of age or older who had received BNT162b2 (from 94.8 to 88.6%) or mRNA-1273 (from 97.1 to 93.7%). The effectiveness of Ad26.COV2.S was lower than that of the other vaccines, with no trend observed over time (range, 80.0 to 90.6%).

**CONCLUSIONS:** The effectiveness of the three vaccines against Covid-19 declined after the delta variant became predominant. The effectiveness against hospitalization remained high, with modest declines limited to BNT162b2 and mRNA-1273 recipients 65 years of age or older.

Full article: [Covid-19 Vaccine Effectiveness in New York State | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2116063)

**Title:** Comparative Effectiveness of BNT162b2 and mRNA-1273 Vaccines in U.S. Veterans

NEJM| 13th January 2022

**BACKGROUND:** The messenger RNA (mRNA)–based vaccines BNT162b2 and mRNA-1273 are more than 90% effective against coronavirus disease 2019 (Covid-19). However, their comparative effectiveness for a range of outcomes across diverse populations is unknown.

**METHODS:** We emulated a target trial using the electronic health records of U.S. veterans who received a first dose of the BNT162b2 or mRNA-1273 vaccine between January 4 and May 14, 2021, during a period marked by predominance of the SARS-CoV-2 B.1.1.7 (alpha) variant. We matched recipients of each vaccine in a 1:1 ratio according to their risk factors. Outcomes included documented severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, symptomatic Covid-19, hospitalization for Covid-19, admission to an intensive care unit (ICU) for Covid-19, and death from Covid-19. We estimated risks using the Kaplan–Meier estimator. To assess the influence of the B.1.617.2 (delta) variant, we emulated a second target trial that involved veterans vaccinated between July 1 and September 20, 2021.

**RESULTS:** Each vaccine group included 219,842 persons. Over 24 weeks of follow-up in a period marked by alpha-variant predominance, the estimated risk of documented infection was 5.75 events per 1000 persons (95% confidence interval [CI], 5.39 to 6.23) in the BNT162b2 group and 4.52 events per 1000 persons (95% CI, 4.17 to 4.84) in the mRNA-1273 group. The excess number of events per 1000 persons for BNT162b2 as compared with mRNA-1273 was 1.23 (95% CI, 0.72 to 1.81) for documented infection, 0.44 (95% CI, 0.25 to 0.70) for symptomatic Covid-19, 0.55 (95% CI, 0.36 to 0.83) for hospitalization for Covid-19, 0.10 (95% CI, 0.00 to 0.26) for ICU admission for Covid-19, and 0.02 (95% CI, −0.06 to 0.12) for death from Covid-19. The corresponding excess risk (BNT162b2 vs. mRNA-1273) of documented infection over 12 weeks of follow-up in a period marked by delta-variant predominance was 6.54 events per 1000 persons (95% CI, −2.58 to 11.82).

**CONCLUSIONS:** The 24-week risk of Covid-19 outcomes was low after vaccination with mRNA-1273 or BNT162b2, although risks were lower with mRNA-1273 than with BNT162b2. This pattern was consistent across periods marked by alpha- and delta-variant predominance. (Funded by the Department of Veterans Affairs and others.)

Full article: [Comparative Effectiveness of BNT162b2 and mRNA-1273 Vaccines in U.S. Veterans | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2115463)

**Title:** Quarantine and testing strategies to ameliorate transmission due to travel during the COVID-19 pandemic: a modelling study

The Lancet Regional Health Europe| 10th January 2022

Background

Numerous countries have imposed strict travel restrictions during the COVID-19 pandemic, contributing to a large socioeconomic burden. The long quarantines that have been applied to contacts of cases may be excessive for travel policy.

Methods

We developed an approach to evaluate imminent countrywide COVID-19 infections after 0–14-day quarantine and testing. We identified the minimum travel quarantine duration such that the infection rate within the destination country did not increase compared to a travel ban, defining this minimum quarantine as “sufficient.”

Findings

We present a generalised analytical framework and a specific case study of the epidemic situation on November 21, 2021, for application to 26 European countries. For most origin-destination country pairs, a three-day or shorter quarantine with RT-PCR or antigen testing on exit suffices. Adaptation to the European Union traffic-light risk stratification provided a simplified policy tool. Our analytical approach provides guidance for travel policy during all phases of pandemic diseases.

Interpretation

For nearly half of origin-destination country pairs analysed, travel can be permitted in the absence of quarantine and testing. For the majority of pairs requiring controls, a short quarantine with testing could be as effective as a complete travel ban. The estimated travel quarantine durations are substantially shorter than those specified for traced contacts.

Funding

EasyJet (JPT and APG), the Elihu endowment (JPT), the Burnett and Stender families’ endowment (APG), the Notsew Orm Sands Foundation (JPT and APG), the National Institutes of Health (MCF), Canadian Institutes of Health Research (SMM) and Natural Sciences and Engineering Research Council of Canada EIDM-MfPH (SMM).

Full article: [Quarantine and testing strategies to ameliorate transmission due to travel during the COVID-19 pandemic: a modelling study - The Lancet Regional Health – Europe](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00290-8/fulltext)

**Title:** Frequently asked questions: Demonstrating Covid-19 and vaccination status

House of Commons Library| 30th December 2021

In this briefing, we set out responses to FAQs about demonstrating Covid status (otherwise called Covid status certification or vaccine passports) and use of the NHS Covid Pass in England.

Full information: [Frequently asked questions: Demonstrating Covid-19 and vaccination status - House of Commons Library (parliament.uk)](https://commonslibrary.parliament.uk/research-briefings/cbp-9375/)

**Title:** Covid-19: Peak of viral shedding is later with omicron variant, Japanese data suggest

BMJ| 13th January 2022

Patients with the omicron variant of covid-19 shed virus for longer after symptoms emerge, show data from Japan, potentially jeopardising hopes that the period of isolation for people testing positive could be shortened.

Preliminary data from the National Institute of Infectious Diseases—which conducts disease surveillance in Japan—suggest that the amount of viral RNA is highest three to six days after diagnosis or symptom onset.[**1**](https://www.bmj.com/content/376/bmj.o89#ref-1)

Full article: [Covid-19: Peak of viral shedding is later with omicron variant, Japanese data suggest | The BMJ](https://www.bmj.com/content/376/bmj.o89)

**Title:** Covid-19: Omicron drives weekly record high in global infections

BMJ| 11th January 2022

The number of new covid-19 infections recorded worldwide from 27 December 2021 to 2 January 2022 increased by 71% from the previous week, says the World Health Organization’s weekly epidemiological report.

Some 9.5 million new cases of the disease were recorded—the highest number to date and a sharp reversal of the steady decline in weekly cases that the world has seen since October 2021. Weekly infections rose by 65% in Europe, by 78% in Southeast Asia, and by 100% in the Americas.

Maria Van Kerkhove, covid-19 technical lead for WHO’s Health Emergencies Programme, said that the global spike in infections was being driven by the omicron variant, which had been detected everywhere where good genetic sequencing was available. Omicron’s mutations have made it better at adhering to human cells and escaping immunity from infection and vaccination.

The surge is also the result of a decrease in social distancing, mask wearing, and avoiding crowds. “All of those factors allow viruses to spread, whether it’s omicron or something else,” Kerkhove told a press conference on 8 January

Full article: [Covid-19: Omicron drives weekly record high in global infections | The BMJ](https://www.bmj.com/content/376/bmj.o66)

**Title:** Fourth dose of COVID-19 vaccines in Israel

The Lancet Respiratory Medicine| 11th January 2022

On Jan 2, 2022, Israel's prime minister Naftali Bennett announced that the country would offer a fourth dose of the COVID-19 vaccine to health-care workers and people older than 60 years. A fourth dose has already been approved for Israelis in immunocompromised groups. Israel has recently seen a surge in SARS-CoV-2 infections. Hospitalisations are also increasing, though overall numbers remain low.

Full news article: [Fourth dose of COVID-19 vaccines in Israel - The Lancet Respiratory Medicine](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00010-8/fulltext)

**Title:** Covid-19: Fourth vaccine doses—who needs them and why?

BMJ| 7th January 2022

Most countries offering a fourth vaccine are prioritising people who are immunocompromised. This is the case in the UK and the US.[**1**](https://www.bmj.com/content/376/bmj.o30#ref-1)[**2**](https://www.bmj.com/content/376/bmj.o30#ref-2) The rationale for these policies is supported by a range of evidence, including from the UK based Octave (Observational Cohort Trial T Cells Antibodies and Vaccine Efficacy in SARS-CoV-2) study, which found that four in 10 people who were clinically vulnerable generated lower concentrations of antibodies than healthy recipients after two doses of a covid-19 vaccine.[**3**](https://www.bmj.com/content/376/bmj.o30#ref-3) The follow-up Octave Duo study, data from which have not yet been published, has been looking at the effect of three doses.[**4**](https://www.bmj.com/content/376/bmj.o30#ref-4)

Full article: [Covid-19: Fourth vaccine doses—who needs them and why? | The BMJ](https://www.bmj.com/content/376/bmj.o30)

**Title:** **Title:** Covid-19: Vaccination during pregnancy is safe, finds large US study

BMJ| 7th January 2022

A US study of 46 079 pregnancies has found that vaccination against covid-19 was safe and did not increase the risk of preterm birth or small for gestational age babies.[**1**](https://www.bmj.com/content/376/bmj.o27#ref-1)

News article: [Covid-19: Vaccination during pregnancy is safe, finds large US study | The BMJ](https://www.bmj.com/content/376/bmj.o27)

Link to research: [Receipt of COVID-19 Vaccine During Pregnancy and Preterm or Small-for-Gestational-Age at Birth - Eight Integrated Health Care Organizations, United States, December 15, 2020-July 22, 2021 - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/34990445/)

**workforce wellbeing**

**Title:** One in five doctors feels overwhelmed daily by covid and winter pressures, RCP reports

BMJ| 12th January 2022

Over two thirds of doctors (69%) have felt overwhelmed at work at least once in the past three weeks as rising covid cases and winter illnesses heap pressure on healthcare services, a survey by the Royal College of Physicians (RCP) has found.[**1**](https://www.bmj.com/content/376/bmj.o86#ref-1)

Of 1218 doctors who responded to the poll, a fifth (20.5%) said that they had felt overwhelmed almost every day during those three weeks. Some 21.5% had done so once or twice a week, and 27.5% had felt overwhelmed once or twice. The survey was conducted from 8 to 11 January 2022.

The college said that the results were probably due to high levels of staff absence which, although slightly improved since last month, were still putting “immense pressure” on exhausted and demoralised staff working under “extreme pressure.”

Full article: [One in five doctors feels overwhelmed daily by covid and winter pressures, RCP reports | The BMJ](https://www.bmj.com/content/376/bmj.o86)

**Title:** Covid-19: Complaints must be viewed in context of huge staff shortages, say defence bodies

BMJ| 10th January 2022

Complaints against doctors that arise in the current climate must be viewed in the “extraordinary” context of huge numbers of staff being absent because of covid-19, medical defence experts have said.

Full article: [Covid-19: Complaints must be viewed in context of huge staff shortages, say defence bodies | The BMJ](https://www.bmj.com/content/376/bmj.o53)

**Title:** Covid-19: Shorten isolation periods to relieve NHS pressures, say leaders

BMJ| 7th January 2022

Redeploying medical students and trainees is one of the steps that are needed immediately to relieve pressure on the NHS as hospitals struggle to deal with staff absences, the organisation that represents trusts has said.

The NHS Confederation has also called for the self-isolation period for people infected with covid-19 to be shortened to five days, in line with the US and France, if the evidence shows this poses no risk to patients. In a statement calling for urgent action, it argued that this would “significantly help to reduce the level of staff absence over the rest of the winter.”

It also said that clinical leaders and regulators must recognise the “exceptional circumstances” staff are working in, including the “explicit acknowledgment” that clinical tasks may need to be allocated in ways which would not normally be recognised as best practice.

Full article: [Covid-19: Shorten isolation periods to relieve NHS pressures, say leaders | The BMJ](https://www.bmj.com/content/376/bmj.o38)

**Title:** Persistent hesitancy for SARS-CoV-2 vaccines among healthcare workers in the United Kingdom: analysis of longitudinal data from the UK-REACH cohort study

The Lancet Regional Health Europe| 4th January 2022

Healthcare workers (HCWs) in the United Kingdom (UK) have been prioritised in the SARS-CoV-2 vaccination agenda, including the ongoing booster programme.

[1](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00285-4/fulltext#bib0001)

 We previously reported that 23% of 11,584 HCWs who completed the baseline UK-REACH (UK Research study into Ethnicity And Covid-19 outcomes in Healthcare workers) cohort study questionnaire

[2](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00285-4/fulltext#bib0002)

 were hesitant about receiving a SARS-CoV-2 vaccine between 4th December 2020 and 28th February 2021. Vaccine hesitancy was more likely amongst certain ethnic minority groups and was associated with lower trust in employing healthcare organisations and in vaccines themselves. HCWs who were hesitant also reported concerns about vaccine safety and side effects, especially given the speed of vaccine development and roll-out, and expressed a desire to delay vaccination until more people had been vaccinated. As the vaccine programme progresses these concerns may lessen,

[3](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00285-4/fulltext#bib0003)

 however, the latest NHS England data show that around 15% of HCWs in some areas remain unvaccinated.[4](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00285-4/fulltext#bib0004)

Full article: [Persistent hesitancy for SARS-CoV-2 vaccines among healthcare workers in the United Kingdom: analysis of longitudinal data from the UK-REACH cohort study - The Lancet Regional Health – Europe](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00285-4/fulltext)

**Title:** Extending Free PPE To The Health And Care Sector: Government Response To Public Consultation

Department of Health and Social Care | 13th January 2022

The government hosted a public consultation from 1 October to 31 October 2021 on whether to extend the central, free provision of all items of Covid-19 PPE provided to the health and care sector for a further year. Overall, the consultation responses showed that the overwhelming majority of health and care providers are strongly in favour of the option to extend the provision of free PPE. The government has decided to extend free PPE to health and care sectors by up to one year to March 2023 or until the infection prevention and control guidance on PPE usage for Covid-19 is either withdrawn or significantly amended (whichever is sooner).

* [Consultation response](https://www.gov.uk/government/consultations/extending-free-ppe-to-the-health-and-care-sector/outcome/extending-free-ppe-to-the-health-and-care-sector-government-response-to-public-consultation)
* [More detail](https://www.gov.uk/government/consultations/extending-free-ppe-to-the-health-and-care-sector)

**Health management**

**Title:** Covid-19: This is a gamble and not a plan

BMJ| 13th January 2022

*The BMJ* this week is filled with frontline reports of a health service at breaking point as omicron continues to batter the NHS.

Quality of care has fallen to below-acceptable thresholds for many. So far, at least 24 of England’s 137 NHS trusts have declared critical incidents, but there is good reason to believe the effect on care goes far beyond this, and many hospitals are struggling under the radar (doi:[10.1136/bmj.o60](https://www.bmj.com/lookup/doi/10.1136/bmj.o60)).[**1**](https://www.bmj.com/content/376/bmj.o71#ref-1) The BMA warns that a dramatic slowdown in the provision of non-urgent care is causing “untold suffering” to the record nearly six million patients on waiting lists (doi:[10.1136/bmj.o45](https://www.bmj.com/lookup/doi/10.1136/bmj.o45)).[**2**](https://www.bmj.com/content/376/bmj.o71#ref-2) The army has been called in to help London hospitals (doi:[10.1136/bmj.o47](https://www.bmj.com/lookup/doi/10.1136/bmj.o47)),[**3**](https://www.bmj.com/content/376/bmj.o71#ref-3) and people are being asked to find lifts to emergency departments because ambulances are taking so long to arrive. As Hugh Alderwick puts it, “Millions of patients and staff are already feeling the negative effects of a healthcare system struggling to cope with the unbearable demands placed on it” (doi:[10.1136/bmj.o51](https://www.bmj.com/lookup/doi/10.1136/bmj.o51)).[**4**](https://www.bmj.com/content/376/bmj.o71#ref-4)

Full article: [Covid-19: This is a gamble and not a plan | The BMJ](https://www.bmj.com/content/376/bmj.o71)

**Title:** Covid-19: Many hospitals “are not declaring critical incidents” despite severe pressures

BMJ| 11th January 2022

The number of official critical incidents declared by NHS hospital trusts is likely to massively underestimate the real severity of the situation in NHS acute care, a senior leader has told *The BMJ*.

Last week at least 24 of England’s 137 NHS trusts officially declared critical incidents, many of which were driven by staff absences because of covid-19. But while declaring a critical incident is the formal mechanism for signalling that priority services at the organisation may be under threat,[**1**](https://www.bmj.com/content/376/bmj.o60#ref-1) other trusts have opted not to declare one despite struggling with similar levels of patient demand and staff absences.

Full article: [Covid-19: Many hospitals “are not declaring critical incidents” despite severe pressures | The BMJ](https://www.bmj.com/content/376/bmj.o60)

**Title:** Covid-19: Omicron is “battering” the NHS and causing “untold suffering” for patients, say doctors

BMJ| 10th January 2022

The government must provide a “thorough plan,” with funding to match, to tackle the NHS backlog, as nearly two thirds of doctors report the spread of omicron has caused a dramatic slowdown in the provision of non-urgent care, the BMA has said.

Millions of patients are being left in “untold suffering,” the association has warned. A survey of 5732 doctors found that 97% were concerned about the NHS’s ability to deliver urgent and acute care to non-covid patients, while 98% were concerned about the NHS’s ability to reduce delays and waiting lists.

The survey also found that fewer than half of doctors said they could always access lateral flow tests when needed (46% of 5889). More than one in five (21% of 5910) reported having to self-isolate within the past two weeks and nine in 10 (89% of 5933) said their clinical colleagues had to take sick leave or self-isolate over the same period.

Full article: [Covid-19: Omicron is “battering” the NHS and causing “untold suffering” for patients, say doctors | The BMJ](https://www.bmj.com/content/376/bmj.o45)

**Title:** COVID-19 and the global acceleration of digital psychiatry

The Lancet Psychiatry| 1st January 2022

One of the most remarkable impacts of COVID-19 on psychiatry is that it has accelerated the digital progression in mental health service delivery. Digital psychiatry has been discussed for some time, particularly in high-income settings.1, 2 But COVID-19 has precipitated the adoption of digital tools in psychiatry throughout much of the world, including in low-income and middle-income countries (LMICs), with teleconferencing becoming a norm and new digital solutions emerging. From early 2020 onwards, lockdowns across the globe meant that outpatient mental health services could no longer continue as usual; however, because of the ubiquity of digital technologies, it was a relatively simple step to shift from in-person visits to teleconferencing and video consultations.3 This shift not only decreased the risk of SARS-CoV-2 transmission, but also allowed continued access to services.

Full article: [COVID-19 and the global acceleration of digital psychiatry - The Lancet Psychiatry](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(21)00474-0/fulltext)

**other**

**Title:** Sixty seconds on . . . lockdown injuries

BMJ| 7th January 2022

Data from NHS Digital on the number of people in England admitted to hospital with injuries sustained in 2020-21 have been analysed by PA News Media. They found popular lockdown hobbies were associated with thousands of accidents.

Full article: [Sixty seconds on . . . lockdown injuries | The BMJ](https://www.bmj.com/content/376/bmj.o32)

**Title:** Mortality among Care Home Residents in England during the first and second waves of the COVID-19 pandemic: an observational study of 4.3 million adults over the age of 65

The Lancet Regional Health Europe| 8th January 2022

Background

Residents in care homes have been severely impacted by COVID-19. We describe trends in the mortality risk among residents of care homes compared to private homes.

Findings

We included 4,340,648 people aged 65 years or older on the 1st of February 2019, 2.2% of whom were classified as residing in a care or nursing home. Age-standardised mortality risks were approximately 10 times higher among care home residents compared to those in private housing in February 2019: comparative mortality figure (CMF) = 10.59 (95%CI = 9.51, 11.81) among women, and 10.87 (9.93, 11.90) among men. By April 2020 these relative differences had increased to more than 17 times with CMFs of 17.57 (16.43, 18.79) among women and 18.17 (17.22, 19.17) among men. CMFs did not increase during the second wave, despite a rise in the absolute age-standardised COVID-19 mortality risks.

Interpretation

COVID-19 has had a disproportionate impact on the mortality of care home residents in England compared to older residents of private homes, but only in the first wave. This may be explained by a degree of acquired immunity, improved protective measures or changes in the underlying frailty of the populations. The care home population should be prioritised for measures aimed at controlling COVID-19.

Full article: [Mortality among Care Home Residents in England during the first and second waves of the COVID-19 pandemic: an observational study of 4.3 million adults over the age of 65 - The Lancet Regional Health – Europe](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00281-7/fulltext)

**Title:** Caring In Covid

National Care Forum (NCF)| 13th January 2022

To help record and highlight the response of the not-for-profit sector, this collection of stories from NCF members describes care, communities and leadership during the Covid-19 pandemic.

* [Document](https://www.nationalcareforum.org.uk/wp-content/uploads/2020/12/Caring-in-COVID-2020.pdf)
* [More detail](https://www.nationalcareforum.org.uk/draft/national-care-forum-launch-caring-in-covid-ebook/)

**Title:** Looking Back To Look Forwards: What Can We Learn From Data On The Impacts Of Covid-19 On Councils In 2020–21?

lnstitute for Fiscal Studies| 11th January 2022

The Covid-19 pandemic has led to substantial increases in councils’ expenditure and falls in their locally generated revenue, especially from sales, fees and charges (SFCs) and commercial activity. This briefing examines impacts for English councils using outturns data for 2020–21, compares these with expectations based on ex ante and rapidly available indicators, and considers the implications for both councils’ current financial resilience and how the financial impacts of future extreme adverse shocks should be monitored.

* [Briefing](https://ifs.org.uk/uploads/BN337-Data-impacts-on-councils.pdf)
* [Press release](https://ifs.org.uk/publications/15899)

**Title:** FE-learning and the virtual transformation of histopathology teaching during COVID-19: its impact on student learning experience and outcome

BMC Medical Education| 7th January

**Background:**Medical and pathology education has gone through an immense transformation from traditional face-to-face teaching mode to virtual mode during the COVID-19 pandemic. This study evaluated the effectiveness of online histopathology teaching in medical education during the 2020 COVID-19 pandemic in Griffith University, Australia.

**Methods:**Second-year medical students (n = 150) who had previously completed one year of face-to-face histopathology teaching, completed an online questionnaire rating their learning experiences before and during the COVID-19 pandemic after the completion of their histology and pathology practical sessions. The students' histopathology assessment results were then compared to the histopathology results of a prior second-year cohort to determine if the switch to online histopathology teaching had an impact on students' learning outcome.

**Results:**A thematic analysis of the qualitative comments strongly indicated that online histopathology teaching was instrumental, more comfortable to engage in and better structured compared to face-to-face teaching. Compared to the previous year's practical assessment, individual performance was not significantly different (p = 0.30) and compared to the prior cohort completing the same curriculum the mean overall mark was significantly improved from 65.36% ± 13.12% to 75.83% ± 14.84% (p < 0.05) during the COVID-19 impacted online teaching period.

**Conclusions:**The transformation of teaching methods during the 2020 COVID-19 pandemic improved student engagement without any adverse effects on student learning outcomes in histology and pathology education.

Full reference: [FE-learning and the virtual transformation of histopathology teaching during COVID-19: its impact on student learning experience and outcome - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/34996435/)

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.

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