COVID-19 weekly update

January 7th 2022

clinical management

**Title** Integrating artificial intelligence in bedside care for covid-19 and future pandemics

BMJ|31 December 2021

The covid-19 pandemic created unprecedented challenges for both clinicians and healthcare institutions. Adapting to a rapidly emerging disease while facing staff and material shortages prompted difficult decisions on how best to allocate resources. Artificial intelligence (AI) rapidly moved to the forefront of the effort to adapt our healthcare systems to coping with covid-19. Hundreds of new models were developed, promising best solutions for all aspects of patient care from diagnostics to therapeutics and logistics. Yet only a small minority of these models were deployed, and none became widely adopted.[**1**](https://www.bmj.com/content/375/bmj-2021-068197#ref-1)[**2**](https://www.bmj.com/content/375/bmj-2021-068197#ref-2) We argue that the covid-19 pandemic exposed flaws in the technological, institutional, and ethical foundations upon which AI must build to considerably improve bedside care. If AI is to be part of a rapid response to future health crises, the challenges that it faced during the covid-19 pandemic must be carefully analysed and overcome.

Full article: [Integrating artificial intelligence in bedside care for covid-19 and future pandemics | The BMJ](https://www.bmj.com/content/375/bmj-2021-068197)

**Title** Covid-19: Positive lateral flow tests will no longer require PCR confirmation, government announces

BMJ|6 january 2022

People in England who test positive for covid-19 on a lateral flow test will soon no longer need to have a polymerase chain reaction (PCR) test to confirm the result and should immediately self-isolate, the government has announced.

The temporary suspension of the confirmatory testing, which comes into effect on 11 January, coincides with a high prevalence of covid-19 in the UK and means that the chances of a false positive from a lateral flow test are very low, the government said.

People who receive a positive lateral flow result will be asked to report their result on the government website, after which they will be contacted by contact tracers.

However, people who are eligible for the £500 Test and Trace Support Payment will still be asked to do confirmatory PCR testing. Additionally, anyone who develops covid-19 symptoms should still take a PCR test, as lateral flow tests are designed for people without symptoms.

The announcement comes amid reports of lateral flow shortages across the UK,[**1**](https://www.bmj.com/content/376/bmj.o14#ref-1) including in Northern Ireland where confirmatory PCR testing has also been suspended.[**2**](https://www.bmj.com/content/376/bmj.o14#ref-2)

Full news article: [Covid-19: Positive lateral flow tests will no longer require PCR confirmation, government announces | The BMJ](https://www.bmj.com/content/376/bmj.o14)

**Title** GP consultation rates for sequelae after acute covid-19 in patients managed in the community or hospital in the UK: population based study

BMJ| 29th December 2021

**Objectives** To describe the rates for consulting a general practitioner (GP) for sequelae after acute covid-19 in patients admitted to hospital with covid-19 and those managed in the community, and to determine how the rates change over time for patients in the community and after vaccination for covid-19.

**Design** Population based study.

**Setting** 1392 general practices in England contributing to the Clinical Practice Research Datalink Aurum database.

**Participants** 456 002 patients with a diagnosis of covid-19 between 1 August 2020 and 14 February 2021 (44.7% men; median age 61 years), admitted to hospital within two weeks of diagnosis or managed in the community, and followed-up for a maximum of 9.2 months. A negative control group included individuals without covid-19 (n=38 511) and patients with influenza before the pandemic (n=21 803).

**Main outcome measures** Comparison of rates for consulting a GP for new symptoms, diseases, prescriptions, and healthcare use in individuals admitted to hospital and those managed in the community, separately, before and after covid-19 infection, using Cox regression and negative binomial regression for healthcare use. The analysis was repeated for the negative control and influenza cohorts. In individuals in the community, outcomes were also described over time after a diagnosis of covid-19, and compared before and after vaccination for individuals who were symptomatic after covid-19 infection, using negative binomial regression.

**Results** Relative to the negative control and influenza cohorts, patients in the community (n=437 943) had significantly higher GP consultation rates for multiple sequelae, and the most common were loss of smell or taste, or both (adjusted hazard ratio 5.28, 95% confidence interval 3.89 to 7.17, P<0.001); venous thromboembolism (3.35, 2.87 to 3.91, P<0.001); lung fibrosis (2.41, 1.37 to 4.25, P=0.002), and muscle pain (1.89, 1.63 to 2.20, P<0.001); and also for healthcare use after a diagnosis of covid-19 compared with 12 months before infection. For absolute proportions, the most common outcomes ≥4 weeks after a covid-19 diagnosis in patients in the community were joint pain (2.5%), anxiety (1.2%), and prescriptions for non-steroidal anti-inflammatory drugs (1.2%). Patients admitted to hospital (n=18 059) also had significantly higher GP consultation rates for multiple sequelae, most commonly for venous thromboembolism (16.21, 11.28 to 23.31, P<0.001), nausea (4.64, 2.24 to 9.21, P<0.001), prescriptions for paracetamol (3.68, 2.86 to 4.74, P<0.001), renal failure (3.42, 2.67 to 4.38, P<0.001), and healthcare use after a covid-19 diagnosis compared with 12 months before infection. For absolute proportions, the most common outcomes ≥4 weeks after a covid-19 diagnosis in patients admitted to hospital were venous thromboembolism (3.5%), joint pain (2.7%), and breathlessness (2.8%). In patients in the community, anxiety and depression, abdominal pain, diarrhoea, general pain, nausea, chest tightness, and tinnitus persisted throughout follow-up. GP consultation rates were reduced for all symptoms, prescriptions, and healthcare use, except for neuropathic pain, cognitive impairment, strong opiates, and paracetamol use in patients in the community after the first vaccination dose for covid-19 relative to before vaccination. GP consultation rates were also reduced for ischaemic heart disease, asthma, and gastro-oesophageal disease.

**Conclusions** GP consultation rates for sequelae after acute covid-19 infection differed between patients with covid-19 who were admitted to hospital and those managed in the community. For individuals in the community, rates of some sequelae decreased over time but those for others, such as anxiety and depression, persisted. Rates of some outcomes decreased after vaccination in this group.

**Title:** Predicting death from COVID-19 using pre-existing conditions: implications for vaccination triage

BMJ OPEN RESPIRATORY RESEARCH| 22nd December 2021

**Introduction** Global shortages in the supply of SARS-CoV-2 vaccines have resulted in campaigns to first inoculate individuals at highest risk for death from COVID-19. Here, we develop a predictive model of COVID-19-related death using longitudinal clinical data from patients in metropolitan Detroit.

**Methods** All individuals included in the analysis had a laboratory-confirmed SARS-CoV-2 infection. Thirty-six pre-existing conditions with a false discovery rate p<0.05 were combined with other demographic variables to develop a parsimonious prediction model using least absolute shrinkage and selection operator regression. The model was then prospectively validated in a separate set of individuals with confirmed COVID-19.

**Results** The study population consisted of 15 502 individuals with laboratory-confirmed SARS-CoV-2. The main prediction model was developed using data from 11 635 individuals with 709 reported deaths (case fatality ratio 6.1%). The final prediction model consisted of 14 variables with 11 comorbidities. This model was then prospectively assessed among the remaining 3867 individuals (185 deaths; case fatality ratio 4.8%). When compared with using an age threshold of 65 years, the 14-variable model detected 6% more of the individuals who would die from COVID-19. However, below age 45 years and its risk equivalent, there was no benefit to using the prediction model over age alone.

**Discussion** Using a prediction model, such as the one described here, may help identify individuals who would most benefit from COVID-19 inoculation, and thereby may produce more dramatic initial drops in deaths through targeted vaccination.

Full article: [Predicting death from COVID-19 using pre-existing conditions: implications for vaccination triage | BMJ Open Respiratory Research](https://bmjopenrespres.bmj.com/content/8/1/e001016)

**Title:** Efficacy and safety of two neutralising monoclonal antibody therapies, sotrovimab and BRII-196 plus BRII-198, for adults hospitalised with COVID-19 (TICO): a randomised controlled trial

the lancet infectious disease| 23rd december 2021

Background

We aimed to assess the efficacy and safety of two neutralising monoclonal antibody therapies (sotrovimab [Vir Biotechnology and GlaxoSmithKline] and BRII-196 plus BRII-198 [Brii Biosciences]) for adults admitted to hospital for COVID-19 (hereafter referred to as hospitalised) with COVID-19.

Methods

In this multinational, double-blind, randomised, placebo-controlled, clinical trial (Therapeutics for Inpatients with COVID-19 [TICO]), adults (aged ≥18 years) hospitalised with COVID-19 at 43 hospitals in the USA, Denmark, Switzerland, and Poland were recruited. Patients were eligible if they had laboratory-confirmed SARS-CoV-2 infection and COVID-19 symptoms for up to 12 days. Using a web-based application, participants were randomly assigned (2:1:2:1), stratified by trial site pharmacy, to sotrovimab 500 mg, matching placebo for sotrovimab, BRII-196 1000 mg plus BRII-198 1000 mg, or matching placebo for BRII-196 plus BRII-198, in addition to standard of care. Each study product was administered as a single dose given intravenously over 60 min. The concurrent placebo groups were pooled for analyses. The primary outcome was time to sustained clinical recovery, defined as discharge from the hospital to home and remaining at home for 14 consecutive days, up to day 90 after randomisation. Interim futility analyses were based on two seven-category ordinal outcome scales on day 5 that measured pulmonary status and extrapulmonary complications of COVID-19. The safety outcome was a composite of death, serious adverse events, incident organ failure, and serious coinfection up to day 90 after randomisation. Efficacy and safety outcomes were assessed in the modified intention-to-treat population, defined as all patients randomly assigned to treatment who started the study infusion. This study is registered with [ClinicalTrials.gov](http://clinicaltrials.gov/), [NCT04501978](http://clinicaltrials.gov/show/NCT04501978).

Findings

Between Dec 16, 2020, and March 1, 2021, 546 patients were enrolled and randomly assigned to sotrovimab (n=184), BRII-196 plus BRII-198 (n=183), or placebo (n=179), of whom 536 received part or all of their assigned study drug (sotrovimab n=182, BRII-196 plus BRII-198 n=176, or placebo n=178; median age of 60 years [IQR 50–72], 228 [43%] patients were female and 308 [57%] were male). At this point, enrolment was halted on the basis of the interim futility analysis. At day 5, neither the sotrovimab group nor the BRII-196 plus BRII-198 group had significantly higher odds of more favourable outcomes than the placebo group on either the pulmonary scale (adjusted odds ratio sotrovimab 1·07 [95% CI 0·74–1·56]; BRII-196 plus BRII-198 0·98 [95% CI 0·67–1·43]) or the pulmonary-plus complications scale (sotrovimab 1·08 [0·74–1·58]; BRII-196 plus BRII-198 1·00 [0·68–1·46]). By day 90, sustained clinical recovery was seen in 151 (85%) patients in the placebo group compared with 160 (88%) in the sotrovimab group (adjusted rate ratio 1·12 [95% CI 0·91–1·37]) and 155 (88%) in the BRII-196 plus BRII-198 group (1·08 [0·88–1·32]). The composite safety outcome up to day 90 was met by 48 (27%) patients in the placebo group, 42 (23%) in the sotrovimab group, and 45 (26%) in the BRII-196 plus BRII-198 group. 13 (7%) patients in the placebo group, 14 (8%) in the sotrovimab group, and 15 (9%) in the BRII-196 plus BRII-198 group died up to day 90.

Interpretation

Neither sotrovimab nor BRII-196 plus BRII-198 showed efficacy for improving clinical outcomes among adults hospitalised with COVID-19.

Funding

US National Institutes of Health and Operation Warp Speed

Full article: [Efficacy and safety of two neutralising monoclonal antibody therapies, sotrovimab and BRII-196 plus BRII-198, for adults hospitalised with COVID-19 (TICO): a randomised controlled trial - The Lancet Infectious Diseases](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00751-9/fulltext)

**Title:** Humoral and cellular immune responses to two and three doses of SARS-CoV-2 vaccines in rituximab-treated patients with rheumatoid arthritis: a prospective, cohort study

the lancet rheumatology| 23rd December 2021

Background

In rituximab-treated patients with rheumatoid arthritis, humoral and cellular immune responses after two or three doses of SARS-CoV-2 vaccines are not well characterised. We aimed to address this knowledge gap.

Methods

This prospective, cohort study (Nor-vaC) was done at two hospitals in Norway. For this sub-study, we enrolled patients with rheumatoid arthritis on rituximab treatment and healthy controls who received SARS-CoV-2 vaccines according to the Norwegian national vaccination programme. Patients with insufficient serological responses to two doses (antibody to the receptor-binding domain [RBD] of the SARS-CoV-2 spike protein concentration <100 arbitrary units [AU]/mL) were allotted a third vaccine dose. Antibodies to the RBD of the SARS-CoV-2 spike protein were measured in serum 2–4 weeks after the second and third doses. Vaccine-elicited T-cell responses were assessed in vitro using blood samples taken before and 7–10 days after the second dose and 3 weeks after the third dose from a subset of patients by stimulating cryopreserved peripheral blood mononuclear cells with spike protein peptides. The main outcomes were the proportions of participants with serological responses (anti-RBD antibody concentrations of ≥70 AU/mL) and T-cell responses to spike peptides following two and three doses of SARS-CoV-2 vaccines. The study is registered at [ClinicalTrials.gov](http://clinicaltrials.gov/), [NCT04798625](http://clinicaltrials.gov/show/NCT04798625), and is ongoing.

Findings

Between Feb 9, 2021, and May 27, 2021, 90 patients were enrolled, 87 of whom donated serum and were included in our analyses (69 [79·3%] women and 18 [20·7%] men). 1114 healthy controls were included (854 [76·7%] women and 260 [23·3%] men). 49 patients were allotted a third vaccine dose. 19 (21·8%) of 87 patients, compared with 1096 (98·4%) of 1114 healthy controls, had a serological response after two doses (p<0·0001). Time since last rituximab infusion (median 267 days [IQR 222–324] in responders *vs* 107 days [80–152] in non-responders) and vaccine type (mRNA-1273 *vs* BNT162b2) were significantly associated with serological response (adjusting for age and sex). After two doses, 10 (53%) of 19 patients had CD4+ T-cell responses and 14 (74%) had CD8+ T-cell responses. A third vaccine dose induced serological responses in eight (16·3%) of 49 patients, but induced CD4+ and CD8+ T-cell responses in all patients assessed (n=12), including responses to the SARS-CoV-2 delta variant (B.1.617.2). Adverse events were reported in 32 (48%) of 67 patients and in 191 (78%) of 244 healthy controls after two doses, with the frequency not increasing after the third dose. There were no serious adverse events or deaths.

Interpretation

This study provides important insight into the divergent humoral and cellular responses to two and three doses of SARS-CoV-2 vaccines in rituximab-treated patients with rheumatoid arthritis. A third vaccine dose given 6–9 months after a rituximab infusion might not induce a serological response, but could be considered to boost the cellular immune response.

Funding

The Coalition for Epidemic Preparedness Innovations, Research Council of Norway Covid, the KG Jebsen Foundation, Oslo University Hospital, the University of Oslo, the South-Eastern Norway Regional Health Authority, Dr Trygve Gythfeldt og frues forskningsfond, the Karin Fossum Foundation, and the Research Foundation at Diakonhjemmet Hospital.

Full article: [Humoral and cellular immune responses to two and three doses of SARS-CoV-2 vaccines in rituximab-treated patients with rheumatoid arthritis: a prospective, cohort study - The Lancet Rheumatology](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(21)00394-5/fulltext)

**Title** Effectiveness of rosuvastatin plus colchicine, emtricitabine/tenofovir and combinations thereof in hospitalized patients with COVID-19: a pragmatic, open-label randomized trial

EClinicalMedicine| 1st January 2022

Background

The use of rosuvastatin plus colchicine and emtricitabine/tenofovir in hospitalized patients with SARS-CoV-2 disease (COVID-19) has not been assessed. The objective of this study was to assess the effectiveness and safety of rosuvastatin plus colchicine, emtricitabine/tenofovir, and their combined use in these patients.

Methods

This was a randomized, controlled, open-label, multicentre, parallel, pragmatic study conducted in six referral hospitals in Bogotá, Colombia. The study enrolled hospitalized patients over 18 years of age with a confirmed diagnosis of COVID-19 complicated with pneumonia, not on chronic treatment with the study medications, and with no contraindications for their use. Patients were assigned 1:1:1:1. 1) emtricitabine with tenofovir disoproxil fumarate (FTC/TDF, 200/300 mg given orally for 10 days); 2) colchicine plus rosuvastatin (COLCH+ROSU, 0.5 mg and 40 mg given orally for 14 days); 3) emtricitabine with tenofovir disoproxil plus colchicine and rosuvastatin at the same doses and for the same period of time (FTC/TDF+COLCH+ROSU); or 4) the Colombian consensus standard of care, including a corticosteroid (SOC). The primary endpoint was 28-day all-cause mortality. A modified intention-to-treat analysis was used together with a usefulness analysis to determine which could be the best treatment. The trial was registered at ClinicalTrials.gov: NCT04359095

Findings

Out of 994 candidates considered between August 2020 and March 2021, 649 (65.3%) patients agreed to participate and were enrolled in this study; among them, 633 (97.5%) were included in the analysis. The mean age was 55.4 years (SD ± 12.8 years), and 428 (68%) were men; 28-day mortality was significantly lower in the FTC/TDF+COLCH+ROSUV group than in the SOC group, 10.7% (17/159) vs. 17.4% (28/161) (hazard ratio [HR] 0.53; 95% CI 0.29 to 0.96). Mortality in the FTC/TDF group was 13.8% (22/160, HR 0.68, 95% CI 0.39 to 1.20) and 14.4% in the COLCH+ROSU group (22/153) (HR 0.78, 95% CI 0.44 to 1.36). A lower need for invasive mechanical ventilation was observed in the FTC/TDF+COLCH+ROSUV group than in the SOC group (risk difference [RD] - 0.08, 95% CI 0.11 to 0.04). Three patients presented severe adverse events, one severe diarrhoea in the COLCH+ROSU and one in the FTC/TDF+COLCH+ROSU group and one general exanthema in the FTC/TDF group.

Interpretation

The combined use of FTC/TDF+COLCH+ROSU reduces the risk of 28-day mortality and the need for invasive mechanical ventilation in hospitalized patients with pulmonary compromise from COVID-19. More randomized controlled trials are needed to compare the effectiveness and cost of treatment with this combination versus other drugs that have been shown to reduce mortality from SARS-CoV-2 infection and its usefulness in patients with chronic statin use.

Full article: [Effectiveness of rosuvastatin plus colchicine, emtricitabine/tenofovir and combinations thereof in hospitalized patients with COVID-19: a pragmatic, open-label randomized trial - EClinicalMedicine (thelancet.com)](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(21)00523-X/fulltext)

**Title:** SARS-CoV-2 Omicron VOC: investigating and managing suspected or confirmed cases

UK Health Security Agency (UKHSA) - Last updated 23 December 2021.

This guidance is for healthcare staff in primary and secondary care and provides advice on the investigation and management of patients who may be infected with the SARS-CoV-2 Omicron variant of concern (VOC) and of their contacts.

Full detail: [**SARS-CoV-2 Omicron VOC: investigating and managing suspected or confirmed cases.**](https://www.gov.uk/government/publications/sars-cov-2-omicron-voc-investigating-and-managing-suspected-or-confirmed-cases)

**Title:** Antibody testing for SARS-CoV-2: key information

Department of Health and Social Care (DHSC) – last updated 16th December 2021.

People are increasingly accessing antibody testing, either through various different surveillance studies, private providers, or directly through government-supported services. As more people access antibody tests there is an increasing chance that people approach health care professionals for advice, particularly after vaccination.

This guidance is intended to give healthcare professionals key information on how antibody tests should be interpreted. It is complemented by [Extended information for medical professionals and researchers on using and interpreting SARS-CoV-2 antibody tests](https://www.gov.uk/government/publications/antibody-testing-for-sars-cov-2-extended-information), which provides additional information on the antibody response to SARS-CoV-2 (the coronavirus that causes COVID-19) infection, including interpretation of atypical antibody responses and responses in special groups

Full detail: [Antibody testing for SARS-CoV-2: key information.](https://www.gov.uk/government/publications/antibody-testing-for-sars-cov-2-key-information/antibody-testing-for-sars-cov-2-information-for-general-practitioners)

**Title:** Using COVID-19 oral antivirals in practice

Specialist Pharmacy Service (SPS); 2021.  
[https://www.sps.nhs.uk/articles/using-covid-19-oral-antivirals-in-practice/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGITOrYq1JXsd1XOpI2UCd0K78iKeW2oXrkuAGKkiiGFs70GROxGF2B6vW-2FzncIgixxQuT0Y13mEAjGtbPES85JtqYjrIrPqERLTbp3Talzhx8l4-_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJBOpK2N5An64dIzz2-2F58R4eLn5PziDBK2nucbMYMPr4oAy6A3kPC1Ehmj3JkeX2zFPT82KiA4WdSmojBiCReZYjodO3CaQZA8uCxBOsQQ-2Fi-2FN9QwOeawa9rOQX14XrMVaJ0WhjBLNbNAy2550NejIClsmGjMC69DQ8R-2B8-2Fg-2B83tCn61bOA7Uoo-2FyWH6u9ju1hHpyViaHgdJgtHTe43DGhIHvsQ4bMS8P98S0c2uDPcGh)  
Section on breastfeeding added 22nd December 2021.

**Title:** Open consultation: UK SMI V58: SARS-CoV-2 serology

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/consultations/uk-smi-v58-sars-cov-2-serology/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI-2Bf-2FlW4NA-2BtxI1zwZ2AYOungIzguMt3iTSGNTCwFmA5aJqst4BS-2BjqOao95w0ktdqDGNg2YiVFQDXp1aYH6X0oKRdvo_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJNVMFiAgjNAm-2FxfvxS6KOnZ9ykajssEPdYbzYfbafBMybW-2F6SYD-2FooR-2FEXE09nrN3iWy8DFSZcXlL9IdzVyKY6-2F9Tp89Vu0th8jgrKsqHY8S-2BKXkHVpnsARLEa954Ue-2F0CXW0ArowWsoIb2yRGlrFPkTTw1JbXFIqD0-2BEWgTrfOEgjv-2ByYdwBySgk2MQMDAV8dC9YNhvrUgCokwHERMKb529-2FGITcx-2FnZQONqsQnWRa0)  
[This consultation asks for feedback on UK Standards for Microbiology Investigations (UK SMI) V 58: Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) serology. Closes at midday on 07 January 2021.]

**Title:** EMA issues advice on use of Paxlovid (PF-07321332 and ritonavir) for the treatment of COVID-19: rolling review starts in parallel

European Medicines Agency – December 17 2021.  
[https://www.ema.europa.eu/en/news/ema-issues-advice-use-paxlovid-pf-07321332-ritonavir-treatment-covid-19-rolling-review-starts](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGMaadIR0YoKmfIJofgFWb5ivLodgK-2B-2F2CjmsxGFiZ1CbSAcRuU3wKRAwkAY57chMQD-2BOIXXzfFqrVgoJ5j3zhr7Jv8xSzGos4igDy9f-2BCpTA8FFb2zr9iXXGOCMBFGyJtL9-2BCZwS97S7zPxsb0mmPA3-2BhuOqXFcoVcpMx-2F8umIm9TF8d_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJAsmbi7qm-2BI4CcUXllfZwOx-2BxbNVjYTfsy6WGdqFYsTfvMx0gjxbrmF6H6lOMPVsrC1SG5-2F4e9z1B8Mm0-2FLEHtzp5wY-2FGEYVSb-2Brx3qUwwT04QhDIavu5nnMx-2FU5-2B8GnDobjKWALdFpXLiiWBa3JrxN0PvvIyUN3N1dKFAS-2BFzzrKPvhr7UI1ZicrSZ1ydWDde5PyfJ0sraaH0i0KqpKDypr0YTKAYE4p2ZLb2P87J8p)  
[EMA’s human medicines committee (CHMP) has issued advice on the use of Paxlovid (PF-07321332 and ritonavir) for the treatment of COVID-19. The medicine, which is not yet authorised in the EU, can be used to treat adults with COVID-19 who do not require supplemental oxygen and who are at increased risk of progressing to severe disease. Paxlovid should be administered as soon as possible after diagnosis of COVID-19 and within 5 days of the start of symptoms.]

**Title:** Large-scale genomic study reveals robust activation of the immune system following advanced Inner Engineering meditation retreat.

Chandran V. *PNAS:Proceedings of the National Academy of Sciences* 2021;118(51):e2110455118.

Several studies on the impact of yoga and meditation on mental and physical health have demonstrated beneficial effects. However, the potential molecular mechanisms and critical genes involved in this beneficial outcome have yet to be comprehensively elucidated. This study identified and characterized the transcriptional program associated with advanced meditation practice, and we bioinformatically integrated various networks to identify meditation-specific core network. This core network links several immune signaling pathways, and we showed that this core transcriptional profile is dysfunctional in multiple sclerosis and severe COVID-19 infection. Very importantly, we demonstrated that the meditative practice enhanced immune function without activating inflammatory signals. Together, these results make meditation an effective behavioral intervention for treating various conditions associated with a weakened immune system.

Full article: [Large-scale genomic study reveals robust activation of the immune system following advanced Inner Engineering meditation retreat | PNAS](https://www.pnas.org/content/118/51/e2110455118)

**Title:** Investigation of SARS-CoV-2 variants: technical briefings

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/investigation-of-sars-cov-2-variants-technical-briefings/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh2fyVlRgleTsE8yPQZ4ZXowhp7l1N6y8IIzoSmXGXOiJsEvaKRJDlH4IKKwWfK0Ts2LbtdOki01pqDtpT1WDyKA-3D-3DPuC-_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJBTcG6E8PMWb3qWJjqB9uKGIGvbs9osdGxzNq1lJylZqUm-2FKSBSAuBYXCT0mWQkDzgwfEdljbujNrTMqlzB769c-2BnkoBV6r6xSI7YZdtD0ld-2F9UG1JOsVb12jVqCQOtWqn8weag9B8dB5XObdUILlDaWj-2F7a5uLf40E0q3aFxYP-2BF37ejVjmq-2B0uF-2FJzXPFfKOI7sLnViKU-2FlXjUuJHJzrBEQhC3MqBYHAnN2oMivl6V)  
[Updated 31st December 2021: Added technical briefing on Omicron and underlying data]

**Title:** Characteristics and Outcomes of Hospitalized Patients in South Africa During the COVID-19 Omicron Wave Compared With Previous Waves

JAMA| 30th December 2021

On November 24, 2021, a SARS-CoV-2 variant of concern, Omicron (B.1.1.529), was identified in South Africa as responsible for a fourth wave of COVID-19.[1](https://jamanetwork.com/journals/jama/article-abstract/2787776#jld210090r1),[2](https://jamanetwork.com/journals/jama/article-abstract/2787776#jld210090r2) The high number of spike mutations has raised concerns about its ability to evade vaccine and spread.[3](https://jamanetwork.com/journals/jama/article-abstract/2787776#jld210090r3),[4](https://jamanetwork.com/journals/jama/article-abstract/2787776#jld210090r4) We assessed hospitalized patients with a positive SARS-CoV-2 test result during the fourth wave compared with previous waves.

Full article: [Characteristics and Outcomes of Hospitalized Patients in South Africa During the COVID-19 Omicron Wave Compared With Previous Waves | Global Health | JAMA | JAMA Network](https://jamanetwork.com/journals/jama/article-abstract/2787776)

**Title:** Association of Birth During the COVID-19 Pandemic With Neurodevelopmental Status at 6 Months in Infants With and Without In Utero Exposure to Maternal SARS-CoV-2 Infection

jama pediatrics| 4th January 2022

**Question**  Is maternal SARS-CoV-2 infection during pregnancy associated with infant neurobehavioral development at age 6 months?

**Findings**  In this cohort study of 255 infants born between March and December 2020, exposure to maternal SARS-CoV-2 infection was not associated with differences on any Ages & Stages Questionnaire, 3rd Edition, subdomain at age 6 months, regardless of infection timing or severity. However, both exposed and unexposed infants born during that period had significantly lower scores on gross motor, fine motor, and personal-social subdomains compared with a historical cohort of infants born before the onset of the COVID-19 pandemic.

**Meaning**  These findings suggest that birth during the COVID-19 pandemic, but not maternal SARS-CoV-2 infection, is associated with differences in neurodevelopment at age 6 months.

[Association of Birth During the COVID-19 Pandemic With Neurodevelopmental Status at 6 Months in Infants With and Without In Utero Exposure to Maternal SARS-CoV-2 Infection | Child Development | JAMA Pediatrics | JAMA Network](https://jamanetwork.com/journals/jamapediatrics/fullarticle/2787479)

**Title:** Effect of Colchicine vs Usual Care Alone on Intubation and 28-Day Mortality in Patients Hospitalized With COVID-19

JAma network open| 29th December 2021

**Question**  Does colchicine prevent intubation and mortality in hospitalized patients with COVID-19 pneumonia?

**Findings**  In this randomized clinical trial of 1279 patients hospitalized with COVID-19, patients allocated to receive colchicine plus usual care or to usual care alone demonstrated no significant difference in the coprimary outcome of mechanical ventilation or 28-day mortality.

**Meaning**  This randomized clinical trial found that colchicine did not significantly reduce the need for mechanical ventilation or 28-day mortality in patients hospitalized with COVID-19 pneumonia.

Full article: [Effect of Colchicine vs Usual Care Alone on Intubation and 28-Day Mortality in Patients Hospitalized With COVID-19: A Randomized Clinical Trial | Critical Care Medicine | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787585)

**Title:** Association of Weight Loss Achieved Through Metabolic Surgery With Risk and Severity of COVID-19 Infection

jama surgery| 29th december 2021

**Question**  Is substantial weight loss achieved with weight loss surgery associated with improved risk and severity of COVID-19 infection in patients with obesity?

**Findings**  In this cohort study of 11 809 patients with obesity, the rates of positive SARS-CoV-2 test results were comparable among patients in the surgical group and control group. However, previous weight loss surgery was significantly associated with a 49% lower risk of hospitalization, 63% lower risk of need for supplemental oxygen, and 60% lower risk of severe disease during a 12-month period after contracting COVID-19 infection.

**Meaning**  The findings from this study show an association between weight loss achieved with surgery and improved outcomes of COVID-19 infection, suggesting that obesity can be a modifiable risk factor for the severity of COVID-19 infection.

Full article: [Association of Weight Loss Achieved Through Metabolic Surgery With Risk and Severity of COVID-19 Infection | Bariatric Surgery | JAMA Surgery | JAMA Network](https://jamanetwork.com/journals/jamasurgery/fullarticle/2787613)

recovery

**Title:** Belief in Having Had COVID-19 Linked With Long COVID Symptoms

JAMA| 4th january 2022

People who thought they’d been infected with SARS-CoV-2 had more persistent symptoms than those whose infections were confirmed by antibody testing in a recent [study](https://jamanetwork.com/journals/jamainternmed/fullarticle/10.1001/jamainternmed.2021.6454).

Researchers analyzed survey data and serology results from 26 823 adults in France. They found no relationship between the participants’ belief about whether they’d had COVID-19 and their antibody test results from blood samples collected between May and November 2020. In fact, about half of participants who believed that they’d had COVID-19 tested negative for SARS-CoV-2 antibodies. False-negative results were unlikely to have influenced the associations substantially, according to the authors.

The survey also asked participants about more than 20 symptoms associated with long COVID, including soreness, fatigue, poor concentration, trouble breathing, and chest pain. For most of the categories, a belief in having had COVID-19 was associated with currently having a symptom that had lasted for more than 8 weeks, after adjusting for age, sex, income, educational level, self-rated health, and depressive symptoms. However, loss of smell was the only long-term symptom associated with a positive serology test after adjustments.

The results “suggest that physical symptoms persisting 10 to 12 months after the COVID-19 pandemic first wave may be associated more with the belief in having experienced COVID-19 infection than with actually being infected with the SARS-CoV-2 virus,” the authors wrote in *JAMA Internal Medicine.*

Because another disease may underlie the symptoms that some patients attribute to COVID-19, the authors advised physicians to conduct a medical examination to determine the symptoms’ cause.

Full article: [Belief in Having Had COVID-19 Linked With Long COVID Symptoms | Neurology | JAMA | JAMA Network](https://jamanetwork.com/journals/jama/fullarticle/2787741)

Infection control

**Title:** The benefits, costs and feasibility of a low incidence COVID-19 strategy

THe lancet regional health – europe| 2nd January 2022

In the summer of 2021, European governments removed most NPIs after experiencing prolonged second and third waves of the COVID-19 pandemic. Most countries failed to achieve immunization rates high enough to avoid resurgence of the virus. Public health strategies for autumn and winter 2021 have ranged from countries aiming at low incidence by re-introducing NPIs to accepting high incidence levels. However, such high incidence strategies almost certainly lead to the very consequences that they seek to avoid: restrictions that harm people and economies. At high incidence, the important pandemic containment measure ‘test-trace-isolate-support’ becomes inefficient. At that point, the spread of SARS-CoV-2 and its numerous harmful consequences can likely only be controlled through restrictions. We argue that all European countries need to pursue a low incidence strategy in a coordinated manner. Such an endeavour can only be successful if it is built on open communication and trust.

Full article: [The benefits, costs and feasibility of a low incidence COVID-19 strategy - The Lancet Regional Health – Europe](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00280-5/fulltext)

**Title:** Final efficacy analysis, interim safety analysis, and immunogenicity of a single dose of recombinant novel coronavirus vaccine (adenovirus type 5 vector) in adults 18 years and older: an international, multicentre, randomised, double-blinded, placebo-controlled phase 3 trial

THE LANCET| 23rd December 2021

Background

The Ad5-nCoV vaccine is a single-dose adenovirus type 5 (Ad5) vectored vaccine expressing the SARS-CoV-2 spike protein that was well-tolerated and immunogenic in phase 1 and 2 studies. In this study, we report results on the final efficacy and interim safety analyses of the phase 3 trial.

Methods

This double-blind, randomised, international, placebo-controlled, endpoint-case driven, phase 3, clinical trial enrolled adults aged 18 years older at study centres in Argentina, Chile, Mexico, Pakistan, and Russia. Participants were eligible for the study if they had no unstable or severe underlying medical or psychiatric conditions; had no history of a laboratory-confirmed SARS-CoV-2 infection; were not pregnant or breastfeeding; and had no previous receipt of an adenovirus-vectored, coronavirus, or SARS-CoV-2 vaccine. After informed consent was obtained, 25 mL of whole blood was withdrawn from all eligible participants who were randomised in a 1:1 ratio to receive a single intramuscular dose of 0·5 mL placebo or a 0·5 mL dose of 5 × 1010 viral particle (vp)/mL Ad5-nCoV vaccine; study staff and participants were blinded to treatment allocation. All participants were contacted weekly by email, telephone, or text message to self-report any symptoms of COVID-19 illness, and laboratory testing for SARS-CoV-2 was done for all participants with any symptoms. The primary efficacy objective evaluated Ad5-nCoV in preventing symptomatic, PCR-confirmed COVID-19 infection occurring at least 28 days after vaccination in all participants who were at least 28 days postvaccination on Jan 15, 2021. The primary safety objective evaluated the incidence of any serious adverse events or medically attended adverse events postvaccination in all participants who received a study injection. This trial is closed for enrolment and is registered with [ClinicalTrials.gov](http://clinicaltrials.gov/) ([NCT04526990](http://clinicaltrials.gov/show/NCT04526990)).

Findings

Study enrolment began on Sept 22, 2020, in Pakistan, Nov 6, 2020, in Mexico, Dec 2, 2020, in Russia and Chile, and Dec 17, 2020, in Argentina; 150 endpoint cases were reached on Jan 15, 2021, triggering the final primary efficacy analysis. One dose of Ad5-nCoV showed a 57·5% (95% CI 39·7–70·0, p=0·0026) efficacy against symptomatic, PCR-confirmed, COVID-19 infection at 28 days or more postvaccination (21 250 participants; 45 days median duration of follow-up [IQR 36–58]). In the primary safety analysis undertaken at the time of the efficacy analysis (36 717 participants), there was no significant difference in the incidence of serious adverse events (14 [0·1%] of 18 363 Ad5-nCoV recipients and 10 [0·1%] of 18 354 placebo recipients, p=0·54) or medically attended adverse events (442 [2·4%] of 18 363 Ad5-nCoV recipients and 411 [2·2%] of 18 354 placebo recipients, p=0·30) between the Ad5-nCoV or placebo groups, or any serious adverse events considered related to the study product (none in both Ad5-nCoV and placebo recipients). In the extended safety cohort, 1004 (63·5%) of 1582 of Ad5-nCoV recipients and 729 (46·4%) of 1572 placebo recipients reported a solicited systemic adverse event (p<0·0001), of which headache was the most common (699 [44%] of Ad5-nCoV recipients and 481 [30·6%] of placebo recipients; p<0·0001). 971 (61·3%) of 1584 Ad5-nCoV recipients and 314 (20·0%) of 1573 placebo recipients reported an injection-site adverse event (p<0·0001), of which pain at the injection site was the most frequent; reported by 939 (59%) Ad5-nCoV recipients and 303 (19%) placebo recipients.

Interpretation

One dose of Ad5-nCoV is efficacious and safe in healthy adults aged 18 years and older.

Funding

CanSino Biologics and the Beijing Institute of Biotechnology.

Full article: [Final efficacy analysis, interim safety analysis, and immunogenicity of a single dose of recombinant novel coronavirus vaccine (adenovirus type 5 vector) in adults 18 years and older: an international, multicentre, randomised, double-blinded, placebo-controlled phase 3 trial - The Lancet](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02753-7/fulltext)

**Title:** Effect of Covid-19 Vaccination on Transmission of Alpha and Delta Variants

NEW ENGLAND JOURNAL OF MEDICINE| 5th January 2022

**BACKGROUND**

Before the emergence of the B.1.617.2 (delta) variant of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), vaccination reduced transmission of SARS-CoV-2 from vaccinated persons who became infected, potentially by reducing viral loads. Although vaccination still lowers the risk of infection, similar viral loads in vaccinated and unvaccinated persons who are infected with the delta variant call into question the degree to which vaccination prevents transmission.

**METHODS**

We used contact-testing data from England to perform a retrospective observational cohort study involving adult contacts of SARS-CoV-2–infected adult index patients. We used multivariable Poisson regression to investigate associations between transmission and the vaccination status of index patients and contacts and to determine how these associations varied with the B.1.1.7 (alpha) and delta variants and time since the second vaccination.

**RESULTS**

Among 146,243 tested contacts of 108,498 index patients, 54,667 (37%) had positive SARS-CoV-2 polymerase-chain-reaction (PCR) tests. In vaccinated index patients who became infected with the alpha variant, two vaccinations with either BNT162b2 or ChAdOx1 nCoV-19 (also known as AZD1222), as compared with no vaccination, were independently associated with reduced PCR positivity in contacts (adjusted rate ratio with BNT162b2, 0.32; 95% confidence interval [CI], 0.21 to 0.48; and with ChAdOx1 nCoV-19, 0.48; 95% CI, 0.30 to 0.78). Vaccine-associated reductions in transmission of the delta variant were smaller than those with the alpha variant, and reductions in transmission of the delta variant after two BNT162b2 vaccinations were greater (adjusted rate ratio for the comparison with no vaccination, 0.50; 95% CI, 0.39 to 0.65) than after two ChAdOx1 vaccinations (adjusted rate ratio, 0.76; 95% CI, 0.70 to 0.82). Variation in cycle-threshold (Ct) values (indicative of viral load) in index patients explained 7 to 23% of vaccine-associated reductions in transmission of the two variants. The reductions in transmission of the delta variant declined over time after the second vaccination, reaching levels that were similar to those in unvaccinated persons by 12 weeks in index patients who had received ChAdOx1 nCoV-19 and attenuating substantially in those who had received BNT162b2. Protection in contacts also declined in the 3-month period after the second vaccination.

**CONCLUSIONS**

Vaccination was associated with a smaller reduction in transmission of the delta variant than of the alpha variant, and the effects of vaccination decreased over time. PCR Ct values at diagnosis of the index patient only partially explained decreased transmission. (Funded by the U.K. Government Department of Health and Social Care and others.)

Full article: [Effect of Covid-19 Vaccination on Transmission of Alpha and Delta Variants | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2116597?query=featured_coronavirus)

**Title:** BNT162b2 Vaccine Booster and Mortality Due to Covid-19

NEW ENGLAND JOURNAL OF MEDCINE| 23rd December 2021

**BACKGROUND**

The emergence of the B.1.617.2 (delta) variant of severe acute respiratory syndrome coronavirus 2 and the reduced effectiveness over time of the BNT162b2 vaccine (Pfizer–BioNTech) led to a resurgence of coronavirus disease 2019 (Covid-19) cases in populations that had been vaccinated early. On July 30, 2021, the Israeli Ministry of Health approved the use of a third dose of BNT162b2 (booster) to cope with this resurgence. Evidence regarding the effectiveness of the booster in lowering mortality due to Covid-19 is still needed.

**METHODS**

We obtained data for all members of Clalit Health Services who were 50 years of age or older at the start of the study and had received two doses of BNT162b2 at least 5 months earlier. The mortality due to Covid-19 among participants who received the booster during the study period (booster group) was compared with that among participants who did not receive the booster (nonbooster group). A Cox proportional-hazards regression model with time-dependent covariates was used to estimate the association of booster status with death due to Covid-19, with adjustment for sociodemographic factors and coexisting conditions.

**RESULTS**

A total of 843,208 participants met the eligibility criteria, of whom 758,118 (90%) received the booster during the 54-day study period. Death due to Covid-19 occurred in 65 participants in the booster group (0.16 per 100,000 persons per day) and in 137 participants in the nonbooster group (2.98 per 100,000 persons per day). The adjusted hazard ratio for death due to Covid-19 in the booster group, as compared with the nonbooster group, was 0.10 (95% confidence interval, 0.07 to 0.14; P<0.001).

**CONCLUSIONS**

Participants who received a booster at least 5 months after a second dose of BNT162b2 had 90% lower mortality due to Covid-19 than participants who did not receive a booster.

Full article: [BNT162b2 Vaccine Booster and Mortality Due to Covid-19 | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2115624?query=featured_coronavirus)

**Title:** Evaluation of the BNT162b2 Covid-19 Vaccine in Children 5 to 11 Years of Age

NEW ENGLAND JOURNAL OF MEDICINE| 6th January 2022

BACKGROUND

Safe, effective vaccines against coronavirus disease 2019 (Covid-19) are urgently needed in children younger than 12 years of age.

METHODS

A phase 1, dose-finding study and an ongoing phase 2–3 randomized trial are being conducted to investigate the safety, immunogenicity, and efficacy of two doses of the BNT162b2 vaccine administered 21 days apart in children 6 months to 11 years of age. We present results for 5-to-11-year-old children. In the phase 2–3 trial, participants were randomly assigned in a 2:1 ratio to receive two doses of either the BNT162b2 vaccine at the dose level identified during the open-label phase 1 study or placebo. Immune responses 1 month after the second dose of BNT162b2 were immunologically bridged to those in 16-to-25-year-olds from the pivotal trial of two 30-μg doses of BNT162b2. Vaccine efficacy against Covid-19 at 7 days or more after the second dose was assessed.

RESULTS

During the phase 1 study, a total of 48 children 5 to 11 years of age received 10 μg, 20 μg, or 30 μg of the BNT162b2 vaccine (16 children at each dose level). On the basis of reactogenicity and immunogenicity, a dose level of 10 μg was selected for further study. In the phase 2–3 trial, a total of 2268 children were randomly assigned to receive the BNT162b2 vaccine (1517 children) or placebo (751 children). At data cutoff, the median follow-up was 2.3 months. In the 5-to-11-year-olds, as in other age groups, the BNT162b2 vaccine had a favorable safety profile. No vaccine-related serious adverse events were noted. One month after the second dose, the geometric mean ratio of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) neutralizing titers in 5-to-11-year-olds to those in 16-to-25-year-olds was 1.04 (95% confidence interval [CI], 0.93 to 1.18), a ratio meeting the prespecified immunogenicity success criterion (lower bound of two-sided 95% CI, >0.67; geometric mean ratio point estimate, ≥0.8). Covid-19 with onset 7 days or more after the second dose was reported in three recipients of the BNT162b2 vaccine and in 16 placebo recipients (vaccine efficacy, 90.7%; 95% CI, 67.7 to 98.3).

CONCLUSIONS

A Covid-19 vaccination regimen consisting of two 10-μg doses of BNT162b2 administered 21 days apart was found to be safe, immunogenic, and efficacious in children 5 to 11 years of age. (Funded by BioNTech and Pfizer; ClinicalTrials.gov number, NCT04816643. opens in new tab.)

Full article: [Evaluation of the BNT162b2 Covid-19 Vaccine in Children 5 to 11 Years of Age | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2116298)

**Title:** Protection against Covid-19 by BNT162b2 Booster across Age Groups

NEW ENGLAND JOURNAL OF MEDICINE| 23rd December 2021

**BACKGROUND**

After promising initial results from the administration of a third (booster) dose of the BNT162b2 messenger RNA vaccine (Pfizer–BioNTech) to persons 60 years of age or older, the booster campaign in Israel was gradually expanded to persons in younger age groups who had received a second dose at least 5 months earlier.

**METHODS**

We extracted data for the period from July 30 to October 10, 2021, from the Israel Ministry of Health database regarding 4,696,865 persons 16 years of age or older who had received two doses of BNT162b2 at least 5 months earlier. In the primary analysis, we compared the rates of confirmed coronavirus disease 2019 (Covid-19), severe illness, and death among those who had received a booster dose at least 12 days earlier (booster group) with the rates among those who had not received a booster (nonbooster group). In a secondary analysis, we compared the rates in the booster group with the rates among those who had received a booster 3 to 7 days earlier (early postbooster group). We used Poisson regression models to estimate rate ratios after adjusting for possible confounding factors.

**RESULTS**

The rate of confirmed infection was lower in the booster group than in the nonbooster group by a factor of approximately 10 (range across five age groups, 9.0 to 17.2) and was lower in the booster group than in the early postbooster group by a factor of 4.9 to 10.8. The adjusted rate difference ranged from 57.0 to 89.5 infections per 100,000 person-days in the primary analysis and from 34.4 to 38.3 in the secondary analysis. The rates of severe illness in the primary and secondary analyses were lower in the booster group by a factor of 17.9 (95% confidence interval [CI], 15.1 to 21.2) and 6.5 (95% CI, 5.1 to 8.2), respectively, among those 60 years of age or older and by a factor of 21.7 (95% CI, 10.6 to 44.2) and 3.7 (95% CI, 1.3 to 10.2) among those 40 to 59 years of age. The adjusted rate difference in the primary and secondary analyses was 5.4 and 1.9 cases of severe illness per 100,000 person-days among those 60 years of age or older and 0.6 and 0.1 among those 40 to 59 years of age. Among those 60 years of age or older, mortality was lower by a factor of 14.7 (95% CI, 10.0 to 21.4) in the primary analysis and 4.9 (95% CI, 3.1 to 7.9) in the secondary analysis. The adjusted rate difference in the primary and secondary analyses was 2.1 and 0.8 deaths per 100,000 person-days.

**CONCLUSIONS**

Across the age groups studied, rates of confirmed Covid-19 and severe illness were substantially lower among participants who received a booster dose of the BNT162b2 vaccine than among those who did not.

Full article: [Protection against Covid-19 by BNT162b2 Booster across Age Groups | NEJM](https://www.nejm.org/doi/full/10.1056/NEJMoa2115926)

**Title:** Feasibility of SARS-CoV-2 Surveillance Testing Among Children and Childcare Workers at German Day Care Centers

JAMA Network open| 4th january 2022

**Question**  Is continuous SARS-CoV-2 testing accepted by children, parents, and childcare workers and can it prevent viral spreading in day care centers?

**Findings**  In this nonrandomized controlled trial, surveillance testing for SARS-CoV-2 among 954 eligible individuals was well accepted by children, parents, and childcare workers if saliva sampling at home was used. Mathematical modeling based on study and literature data identified biweekly testing of at least 50% of children and childcare workers as minimal requirements to limit secondary infections.

**Meaning**  These findings suggest that SARS-CoV-2 surveillance testing is feasible and allows for continued day care attendance for children during the COVID-19 pandemic.

Full article: [Feasibility of SARS-CoV-2 Surveillance Testing Among Children and Childcare Workers at German Day Care Centers: A Nonrandomized Controlled Trial | Infectious Diseases | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787578)

**Title:** Should children be vaccinated against COVID-19 now?

Wong BLH. *Archives of Disease in Childhood* 2021;106(12):1147-8.  
[Recent authorisation of vaccines against the novel coronavirus, SARSCoV-2, raises questions about prioritising the vaccine to those who are most likely to benefit. Specific paediatric risk groups may benefit from immunisation during the early vaccine deployment stage but it may be prudent to initially recommend any vaccination for older children (eg, ≥12 years old) who appear to be more at risk of severe and fatal disease than younger children.]

Full article: [**Should children be vaccinated against COVID-19 now?**](https://adc.bmj.com/content/106/12/1147)

**Title:** Monitoring reports of the effectiveness of COVID-19 vaccination.

UK Health Security Agency (UKHSA) – last updated 16 December 2021.

The Health Security Agency (UKHSA) is monitoring the effectiveness of the coronavirus (COVID-19) vaccines in the real world as set out in the [COVID-19 vaccine surveillance strategy](https://www.gov.uk/government/publications/covid-19-vaccine-surveillance-strategy) and has published reports on the impact of the COVID-19 vaccines on:

* symptomatic disease
* hospitalisation
* death
* infection (symptomatic or asymptomatic)

Full detail: **[Monitoring reports of the effectiveness of COVID-19 vaccination.](https://www.gov.uk/guidance/monitoring-reports-of-the-effectiveness-of-covid-19-vaccination)**

**Title:** Visiting arrangements in care homes

Department of Health and Social Care – last updated 30 December 2021

Updated to reflect resident LFD testing following visits out of the care home are required every second day for 10 days, and to add that nominated visitors should remain the same wherever possible.

Full detail: [Visiting arrangements in care homes](https://www.gov.uk/government/publications/visiting-care-homes-during-coronavirus)

**Title:** **Title:** National protocol for Spikevax (formerly COVID-19 Vaccine Moderna)

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/national-protocol-for-covid-19-vaccine-moderna/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh9coomXdHl2V9vHrCiMWmF9D7QzletbOhgncw6mtUEr0jB7KYw1rxVq55dJZa1-2BtDDDzNrLATDRpK90F5IXpxvw-3D-3DG_A6_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJMMCGV6FpC9NHvQc2KUmaLRrXylPCtX6dHWB0y4tEY602pxeKEfEwODprhwi1a3AQyMmvGnxHC-2BW8hv-2F6KNbw9Dk2vhdwofeYbIQATwZ9ge7dAx0B1CwxLXgBiHK5ipWsRVKRoSlx2EfjPraw0vHrPKQNyI7kTEq3L-2FKc26k0Ff-2BxrnPnmTdjxnNg3e4x7NZqtgnKflkVoUKHsfizijmKhnNcgG49BbWar7berj8AXyL)  
[17 December 2021: Added version 04.00a – details of changes on page 4.]

**Title:** COVID-19 vaccinations received overseas.

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-vaccinations-received-overseas/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh1nXyrXLWzcUkxzRhiLYSYdH22us-2BjAqEbzjWzyHM7KVj7-2FCGhbmVCMagl-2FDxPS2npzIV_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJFJsXROaK4-2FB4-2Byy-2FiwVaBv-2FEaUUuATw0UWpimhymXFNGZBhaUbII1pCgU6jpzlHYXGvyfHxR2jWVUkDITMJYSWXRiTmQB7JJ94byTMaKbIa1n8C-2Bqpavgmt-2BdocIgADhs6jhXdI0JUHpfp9QXg383zEyovEtteZrCFoJwiZ0hcSxBtKmpr17rXAj9Vs7JLy-2BhlOBxyfTHuIlMsdWzDEEnn3jIKtrKpoIDsjuziJ4Hdr)  
[16 December 2021: Updated guidance document.]

**Title:** COVID-19 vaccination: resources for schools and parents.

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-vaccination-resources-for-schools/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh1nXyrXLWzcUkxzRhiLYSYQudDzUcjQZ8pA0VjPYli32H5fFyQDwt9qSM3I52FrzdoSe__RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJEJ4oIHVZ5r2fFPpKT6j1tHImtLmLGavr6neirXMoqM0rUr0G4GROHw9Mk5krm74is6t22c0Hp8TnS6ME2v2pMxDLk-2Bo57-2F8bgL5tPRGj3Qx0CaMsWKeWqDb5suuU0iA-2FZLDSuhEtDBzzqdtekLoXYeV-2FKPmYtH-2BLkOm5knBzhwm8kwF1pCTUGipwpNQc5S8j9IZKDulsGV-2FTaKTBZrl87eF3uloet2NMC52jmDf-2BlkJ)  
[17 December 2021: Added version 3 of the guidance for schools and guidance for parents.]

**Title:** COVID-19: infection prevention and control (IPC)

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQhx07a4E76II-2BfwSKpMFSOP6cPF2qU2j7xzEqvmgInsXAYPgh6mxN6GjLmK5dO-2FN4k2hanaE6qAoOiK9hW8uZXng-3D-3DbvXB_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJBmrvrobWTnj530TwuVcaQK4cCHskFL18a4VH7W7nnvCX8pJ791fPGcth-2BGfyAmJrQAn9FfUarM0xTDT-2F0RhKvy-2BvVU9KMumZnlEoJNvb0pDPkADSi6CcGLf-2BF7QQxF03tD9gmOK6cPWrNBUORT9woOxj5mCxgjzVVkuuBTNXkaa3bj39vKunn6cVC0BUUvUMyHMo-2BpF-2BXn8IBFwSb79sXhpYNbkCgHemW-2FJ4xJvAQyj)  
[17 December 2021: Added UK IPC Cell consensus statement in response to the emergence of the Omicron variant of SARS-CoV-2. Added paragraph to main IPC guidance on risk assessment and use of RPE in response to Omicron variant.]

**Title:** COVID-19 vaccination: Guillain-Barré Syndrome information for healthcare professionals

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-vaccination-guillain-barre-syndrome-information-for-healthcare-professionals/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh1nXyrXLWzcUkxzRhiLYSYeRZkNxldHi6JkjHgeYx1XjQHH7F-2F85IXsrVdc6UJUmZRqZtq1ErUFJJMpR3ydWOWJUMZooOd4gKimAY1ZLVp-2B81oNRPrQhkSmRLJeIWvR-2Bkbv33_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJHskqiaAjtT-2B3Kbe239PU1lrqaA-2Bxw30d-2FbRaCb0ZqYVD8nz6Vqs0f3ovARGSk87DVn3dn0VR07-2BqusOT-2FIBBMtbgXMSzSWWF7B-2BcAqJkn2-2F6sPOqeKeovGm8m628kwLuRhAz2dsEY810hE-2FzcipiKJ6-2Bzp1Ypff1KBtEAw8IcdUSngFePF-2FeCS26-2BzcB47aNJj3rJ6W9uv1dKsDBiQIlnHjZzLSVsNlibf-2BdqfPTHrr)  
[Information for healthcare professionals on Guillain-Barré Syndrome (GBS) following coronavirus (COVID-19) vaccination.]

**Title:** Daily Insight: Oi - put that mask on!

*HSJ: Health Service Journal (Daily Insight)* 2021;:7031547.  
[The omicron variant's increased ability to infect those with two vaccine shots or less risks undermining the NHS’s covid infection prevention and control measures. With patient-to-patient infection the commonest route of covid spread in hospitals, NHS England IPC lead Mark Wilcox said the NHS would have to be more robust with those being cared for who declined to wear a mask for non-clinical reasons. 16 December.]

Full article. [Daily Insight: Oi – put that mask on! | News | Health Service Journal (hsj.co.uk)](https://www.hsj.co.uk/daily-insight/daily-insight-oi-put-that-mask-on/7031547.article)

**Title:** COVID-19 variants: genomically confirmed case numbers

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-variants-genomically-confirmed-case-numbers/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQhYth8-2FhL2jO0p3aiesG928f-2BQAPuwivDGCxFA8UEU-2B-2BzdrECqPWtX33cMqpSUX-2BUmyjlRx0-2BFkRJWSzyHaDGVxw-3D-3D-sD3_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJO5qEum-2BuOCMojWO5cAGQQt4WDBeeGvOOEmMpex7Y6w4vvdnZIOioBPXX3W0CBOVlbIFoLlqn6T5GfCixx56-2FPr1O5u0jJUnGGOOzU9KoYZuVu0B7cum8uALcfT1hZAka6Tu3Equ5v1-2FIpPmmGyhlvXHWVJbcnWCAvMrCm6jM1NG9TsDWo4d5RrTY4sggOFACD-2BwRiO7poFHWA9ZXrqT4UKfs-2Fkkaj3NIVunygFHBxyB)  
[Updated 24 December 2021]

**Title:** COVID-19: estimated administrative vaccine uptake for people aged 18 and over

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-vaccine-estimated-coverage-for-people-aged-18-and-over/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQh1nXyrXLWzcUkxzRhiLYSYabZ6SHxgSSWMXNLFO2BXsI7WFLlS-2BjgngvCsTOndLczadniL-2Fkw6A8v3Sfw2Jc0y8rDeiTU0j8p2NfvBF9v6qE-3DjxOM_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJNEWwq2Fh4B4utJf6ExjeEK3enEqSGpuwHcmW77-2BR3-2B4AlMzy6qKetk58glQ9bNT2-2Btkb-2FXf-2BnQmn6gBB6FrJ7Ohxt4IXkh80AIu9GAuQgwmr0bp1KsdNJMunr4ZXXEaImRtqudzi7qByNgtRShP1R6NSbm2MGQcM4e8roPmqty8YGqnMS261-2FP-2BqEcKNx9acPoS0paF70UUW6U7mN8MAWjKrxwim15egTXHHGyfZW-2Fu)  
[Daily number and percentage of the UK population aged 18 and over who have received a first dose, second dose or third or booster dose to date.]

**Title:** Monitoring reports of the effectiveness of COVID-19 vaccination

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/guidance/monitoring-reports-of-the-effectiveness-of-covid-19-vaccination/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGENCt5N6D7CweV9fbf3bCX5BsknSB5JHLPoOuhmWpUwrwgA8fgCSDytSwsXcw1ZnZ1so7CwNbpMpftDmuwwV4XPVF-2FxVME9f-2FRGtOf28Bp3dWXxAsx8xwtYwg3mSUTVtOw-3D-3D-mLo_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJK3lVuW7oXhLl-2Bn2o5Ebwk3oI9taJNsoGo7wJApJqobUWm9FaihwZsiZ95bT-2FUNWijb3p-2BixnhXu3So8Gs9yPqFul58HJC3tXGQaG4Hl5bM04-2B4IFAgqc5zFiOmTqldrKdoVpQgcRH7xSS3QWeDY6ZUKlKUv89OrGbA4BhhOfCDQ2XSrqarQ6C0toGJUP3di5ObTbYs3zEqw3xkktyLBo-2F2Jaykkzuk4ezJ2mpQY4p99)  
[Data on the real-world efficacy of the COVID-19 vaccines.]

workforce wellbeing

**Title:** Ventilation, ventilation, ventilation.

Trades Union Congress (TUC); 2021.

Every workplace risk assessment should include aerosol transmission, and outline what steps are being taken to improve ventilation where necessary. Ventilation being one of the most effective ways to mitigate risk, but it’s the one employers are least likely to be paying attention to.

Full detail: [https://www.tuc.org.uk/blogs/ventilation-ventilation-ventilation](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGLIbRR5As9O1lzv-2BeFkLQNKmkqLovq0Vz1ZK-2B3dNiphnvAhCCrbNxmzTjuBrNf29wAqOOoPs-2Fno4A9-2BpWcKcduk-3DIgLt_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILa6kRNr5Q629w8ai9HEFKdgu39KGRNuue0uXhvujfSTq30lp7kplLpshw2glDRjqkcAY-2Bwl6Xbn3FLSpQxOSHpu-2Fdza04aZwWOadkqskOKurTXSzqODFK0sldv-2FmkKiSFM-2F3y8ZbwNXO99LUZb7qzE3tLmIZYm1zJ9yggd-2BTlclbc3wycIOo3Va6ne1XtwiacAYd0CsdbEw3A4qcjI0Sqvsh5D1flj-2Bj9izwlgkQZMDc3wN0T4t-2BR5gaTgdt9HnlBtj-2BB36w0pfZ4-2FBWkStBtKBngG8l779CTTWs0ZwmE9axkRHbVZW2ZHnqlt8vTX0ZK)

**Title:** Exploring medical students’ perceptions of the challenges and benefits of volunteering in the intensive care unit during the COVID-19 pandemic: a qualitative study

BMJ Open| 24th December 2021

**Objectives** In March 2020, the WHO declared SARS-CoV-2 a pandemic. Hospitals across the world faced staff, bed and supply shortages, with some European hospitals calling on medical students to fill the staffing gaps. This study aimed to document the impact of volunteering during the COVID-19 pandemic on students’ professional development, resilience and future perceived career choices.

**Design** This is a retrospective, qualitative study of student reflections, using purposive sampling.

The Royal College of Surgeons in Ireland (RCSI) University of Medicine and Health Sciences recruited 26 medical student volunteers to assist in pronation and supination of ventilated patients affected by SARS-CoV-2. These students were invited to complete an anonymous survey based on their experiences as volunteers. Thematic analysis was performed on these written reflections.

**Results** The results showed that volunteering during the COVID-19 pandemic developed key skills from RCSI’s medical curriculum, significantly fostered medical students’ resilience and guided their career choices. Major areas of development included communication, teamwork, compassion and altruism, which are not easily developed through the formal curriculum. A further area that was highlighted was the importance of evidence-based health in a pandemic. Finally, our respondents were early stage medical students with limited clinical exposure. Some found the experience difficult to cope with and therefore supports should be established for students volunteering in such a crisis.

**Conclusion** These results suggest that clinical exposure is an important driver in developing students’ resilience and that volunteering during a pandemic has multiple benefits to students’ professional development and professional identity formation.

Full article: [Exploring medical students’ perceptions of the challenges and benefits of volunteering in the intensive care unit during the COVID-19 pandemic: a qualitative study | BMJ Open](https://bmjopen.bmj.com/content/11/12/e055001)

Health management

**Title:** What Does COVID-19 look like in your area?

UK Health Security Agency (UKHSA); 2021.  
[https://ukhsa.blog.gov.uk/2021/12/16/what-does-covid-19-look-like-in-your-area/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=VjzNJpbUNXpwGm7Dj-2Bch92ysuMQWS4bYnsNbHgQxY3XFi0eFYrTXxxX1L0ftv6m4xjGsew7ARUNXMwxkPaDKdC8ukM6zO7w2rKABVsyim4cq7Nt1tFvSoD75PqjYrrZvuo2O_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJHonGfkcR3nmQutW6f51kkyCjui9h-2BbsPOz84qmg7w9XH4LcbSa7sHJPNZqUVwklQI13HRrAP7DAHanRyMiOclaDlCfVf8GRJSEBaaqUe55evaz-2Bq6MEb5XKCyKDQgrvyOg-2F3zdDhhSJRNGDQ93ZIjlF9JWOaB2OJeYp6lrW5huTRu67DyuujdZaTEYV9S6ocw3mTi8nVS2317E5scIRXjz7RkpiIj055wuzir7FeBXH)  
[Every day at 4pm the latest coronavirus data - setting out daily cases, testing and vaccination levels, as well as deaths and hospitalisations - is published on the COVID-19 Dashboard. In addition to reporting UK and national data, the Dashboard publishes statistics at a regional, local authority and small area (Middle Super Output Area (MSOA)) level within England.]

**Title:** COVID-19: reported SARS-CoV-2 deaths in England

UK Health Security Agency (UKHSA); 2021.  
[https://www.gov.uk/government/publications/covid-19-reported-sars-cov-2-deaths-in-england/](http://comm.knowledgeshare.nhs.uk/ls/click?upn=YnEWmuYbtE6gkNOaYoAaGIIVlcP0qBUvgQvXAqcIMI8S44omqPjnq7Vc12kJxKQhbyTulivZA0xLyTBpZPWsi0dIcra8tlttr9LDPGPJ8HzUbkeLvJm6WBkgzgYy-2F-2BCp-2BGi7GJj3abptwkhvB3I8oQ-3D-3DGSUJ_RL1JExwc8cKmCy5bELgKVa8D9r4HITdF-2BpCEXyu5SoWRBLfnRpm2WCJTckV0IEILBEfpCLqyvnNsMZ-2BenYrP2q-2B5XB-2BOTbvwqdwvMb8VzsNXPSaAKnVDtV4eZgq4soi6VatG65ztW0eT82w86KYoJP9jUOwBC31cr4bTUncLQdMN1Ldbhur9sC4Cf661aJ7JuvdbEqLLpTgoWLnFLGZNgnVDRgwXQtNuApPJ1i4W-2FdrCjqyyyQdFz3GAd7OZMBQrtk8xSj7xWLWtaey4leow-2F0TGAytDgcioEoUg4uzSbdpbx9R3TMxwvOWyBOEi6vOfE18iDeSfRwzmdISOteO3uB4-2BgEWsYI3BsDjXRZDBjqbIeecs9Jiwz-2BFZ-2FEccoBwY)  
[Monthly report presenting the latest data on COVID-19 mortality in England in people with laboratory-confirmed SARS-CoV-2.]

**Title:** Who funded the research behind the Oxford–AstraZeneca COVID-19 vaccine?

BMJ Global Health|22 December 2021

**Objectives** The Oxford–AstraZeneca COVID-19 vaccine (ChAdOx1 nCoV-19, Vaxzevira or Covishield) builds on two decades of research and development (R&D) into chimpanzee adenovirus-vectored vaccine (ChAdOx) technology at the University of Oxford. This study aimed to approximate the funding for the R&D of ChAdOx and the Oxford–AstraZeneca vaccine and to assess the transparency of funding reporting mechanisms.

**Methods** We conducted a scoping review and publication history analysis of the principal investigators to reconstruct R&D funding the ChAdOx technology. We matched award numbers with publicly accessible grant databases. We filed freedom of information (FOI) requests to the University of Oxford for the disclosure of all grants for ChAdOx R&D.

**Results** We identified 100 peer-reviewed articles relevant to ChAdOx technology published between January 2002 and October 2020, extracting 577 mentions of funding bodies from acknowledgements. Government funders from overseas (including the European Union) were mentioned 158 times (27.4%), the UK government 147 (25.5%) and charitable funders 138 (23.9%). Grant award numbers were identified for 215 (37.3%) mentions; amounts were publicly available for 121 (21.0%). Based on the FOIs, until December 2019, the biggest funders of ChAdOx R&D were the European Commission (34.0%), Wellcome Trust (20.4%) and Coalition for Epidemic Preparedness Innovations (17.5%). Since January 2020, the UK government contributed 95.5% of funding identified. The total identified R&D funding was £104 226 076 reported in the FOIs and £228 466 771 reconstructed from the literature search.

**Conclusion** Our study approximates that public and charitable financing accounted for 97%–99% of identifiable funding for the ChAdOx vaccine technology research at the University of Oxford underlying the Oxford–AstraZeneca vaccine until autumn 2020. We encountered a lack of transparency in research funding reporting.

Full article: [Who funded the research behind the Oxford–AstraZeneca COVID-19 vaccine? | BMJ Global Health](https://gh.bmj.com/content/6/12/e007321)

**Title:** Preferences for Alternative Care Modalities Among French Adults With Chronic Illness

JAMA Network open 29th december

**Question**  What is an ideal balance between alternative care modalities implemented during the COVID-19 pandemic and traditional care in the postpandemic care model?

**Findings**  This survey study of 1529 chronically ill adults found that patients would choose alternative care (ie, teleconsultations, symptom-checkers, and remote monitoring) over the traditional care equivalent for 22% to 52% of their future needs. The study identified 67 care activities, patient characteristics, and characteristics of alternative care modalities for which patients considered it appropriate to replace traditional with alternative care.

**Meaning**  Alternative care modalities implemented during the pandemic could be used to deliver nearly half of patients’ postpandemic care.

Full article: [Preferences for Alternative Care Modalities Among French Adults With Chronic Illness | Geriatrics | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787586)

other

**Title:** Assessment of Regional Variability in COVID-19 Outcomes Among Patients With Cancer in the United States

JAma network open| 4th January 2022

**Question**  To what extent are spatiotemporal trends in the COVID-19 pandemic in the United States associated with outcomes for patients with cancer infected with SARS-CoV-2?

**Findings**  This cohort study of 4749 patients with cancer and COVID-19 found no significant differences in outcomes across the 9 US census divisions. Overall, outcomes significantly improved between March and December 2020, and treatment at cancer centers in less densely populated counties was associated with better outcomes.

**Meaning**  These findings suggest that understanding the heterogeneity in COVID-19 outcomes between cancer centers could guide resource allocation and help the oncology community improve COVID-19 outcomes for this patient population.

Full article: [Assessment of Regional Variability in COVID-19 Outcomes Among Patients With Cancer in the United States | Oncology | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787579)

**Title:** Trends in Self-reported Forgone Medical Care Among Medicare Beneficiaries During the COVID-19 Pandemic

JAma Health forum| 30th december 2021

**Question**  How did forgone medical care among Medicare beneficiaries change during the COVID-19 pandemic?

**Findings**  In this cross-sectional survey study of 23 058 Medicare beneficiaries using 3 waves of data collection during the COVID-19 pandemic (Summer 2020, Fall 2020, and Winter 2021), patient-reported forgone medical care decreased over time, but the largest decrease was observed in Summer 2020. Most of the forgone medical care was associated with physician-driven factors, and forgone medical care was more common among those who reported mental health problems.

**Meaning**  The study results suggest that Medicare beneficiaries experienced limited care access during the initial stage of the COVID-19 pandemic but have improved care access over time.

Full article: [JAMA Health Forum – Health Policy, Health Care Reform, Health Affairs | JAMA Health Forum | JAMA Network](https://jamanetwork.com/journals/jama-health-forum/fullarticle/2787661)

**Title:** Initial impacts of the COVID-19 pandemic on sexual and reproductive health service use and unmet need in Britain: findings from a quasi-representative survey (Natsal-COVID)

The lancet public health| January 2022

Background

The COVID-19 pandemic has affected sexual and reproductive health (SRH) service use and unmet need, but the impact is unknown. We aimed to determine the proportion of participants reporting sexual risk behaviours, SRH service use and unmet need, and to assess remote sexually transmitted infection (STI) testing service use after the first national lockdown in Britain.

Methods

We used data from the National Surveys of Sexual Attitudes and Lifestyles (Natsal)-COVID cross-sectional, quasi-representative web survey (Natsal-COVID Wave 1). Adults aged 18–59 years who resided in England, Scotland, or Wales completed the survey between July 29 and Aug 10, 2020, which included questions about the approximate 4-month period after announcement of the initial lockdown in Britain (March 23, 2020). Quota-based sampling and weighting were used to achieve a quasi-representative population sample. Participants aged 45–59 years were excluded from services analysis due to low rates of SRH service use. Among individuals aged 18–44 years, we estimated reported SRH service use and inability to access, and calculated age-adjusted odds ratios (aORs) among sexually experienced individuals (those reporting any sexual partner in their lifetime) and sexually active individuals (those reporting any sexual partner in the past year). Unweighted denominators and weighted estimates are presented hereafter.

Findings

6654 individuals had complete interviews and were included in the analysis. Among 3758 participants aged 18–44 years, 82·0% reported being sexually experienced, and 73·7% reported being sexually active. 20·8% of sexually experienced participants aged 18–44 years reported using SRH services in the 4-month period. Overall, 9·7% of 3108 participants (9·5% of men; 9·9% of women) reported being unable to use a service they needed, although of the participants who reported trying but not being able to use a SRH service at least once, 76·4% of participants also reported an instance of successful use. 5·9% of 1221 sexually active men and 3·6% of 1560 sexually active women reported use of STI-related services and 14·8% of 1728 sexually experienced women reported use of contraceptive services, with SRH service use highest among individuals aged 18–24 years. Sexually active participants reporting condomless sex with new partners since lockdown were much more likely to report using STI-related services than those who did not report condomless sex (aOR 23·8 [95% CI 11·6–48·9]) for men, 10·5 [3·9–28·2] for women) and, among men, were also more likely to have an unsuccessful attempt at STI-service use (aOR 13·3 [5·3–32·9]). Among 106 individuals who reported using STI testing services, 64·4% accessed services remotely (telephone, video, or online). Among 2581 women aged 25–59 years, 2·4% reported cervical screening compared with an estimated 6% in a comparable 4-month period before the pandemic.

Interpretation

Many people accessed SRH care during the initial lockdown; however, young people and those reporting sexual risk behaviours reported difficulties in accessing services and thus such services might need to address a backlog of need.

Funding

Wellcome Trust, The Economic and Social Research Council, The National Institute for Health Research, Medical Research Council/Chief Scientist Office and Public Health Sciences Unit, and UCL Coronavirus Response Fund.

Full article: [Initial impacts of the COVID-19 pandemic on sexual and reproductive health service use and unmet need in Britain: findings from a quasi-representative survey (Natsal-COVID) - The Lancet Public Health](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(21)00253-X/fulltext)

**Title:** Quality of facility-based maternal and newborn care around the time of childbirth during the COVID-19 pandemic: online survey investigating maternal perspectives in 12 countries of the WHO European Region

The lancet regional health – europe| 24th December 2021

Background

Multi-country studies assessing the quality of maternal and newborn care (QMNC) during the COVID-19 pandemic, as defined by WHO Standards, are lacking.

Methods

Women who gave birth in 12 countries of the WHO European Region from March 1, 2020 - March 15, 2021 answered an online questionnaire, including 40 WHO Standard-based Quality Measures.

Findings

21,027 mothers were included in the analysis. Among those who experienced labour (N=18,063), 41·8% (26·1%- 63·5%) experienced difficulties in accessing antenatal care, 62% (12·6%-99·0%) were not allowed a companion of choice, 31·1% (16·5%-56·9%) received inadequate breastfeeding support, 34·4% (5·2%-64·8%) reported that health workers were not always using protective personal equipment, and 31·8% (17·8%-53·1%) rated the health workers’ number as “insufficient”. Episiotomy was performed in 20·1% (6·1%-66·0%) of spontaneous vaginal births and fundal pressure applied in 41·2% (11·5% -100%) of instrumental vaginal births. In addition, 23·9% women felt they were not treated with dignity (12·8%-59·8%), 12·5% (7·0%-23·4%) suffered abuse, and 2·4% (0·1%-26·2%) made informal payments. Most findings were significantly worse among women with prelabour caesarean birth (N=2,964). Multivariate analyses confirmed significant differences among countries, with Croatia, Romania, Serbia showing significant lower QMNC Indexes and Luxemburg showing a significantly higher QMNC Index than the total sample. Younger women and those with operative births also reported significantly lower QMNC Indexes.

Interpretation

Mothers reports revealed large inequities in QMNC across countries of the WHO European Region. Quality improvement initiatives to reduce these inequities and promote evidence-based, patient-centred respectful care for all mothers and newborns during the COVID-19 pandemic and beyond are urgently needed.

Funding

The study was financially supported by the Institute for Maternal and Child Health IRCCS Burlo Garofolo, Trieste, Italy.

Study registration

ClinicalTrials.gov Identifier: NCT04847336

Full article: [Quality of facility-based maternal and newborn care around the time of childbirth during the COVID-19 pandemic: online survey investigating maternal perspectives in 12 countries of the WHO European Region - The Lancet Regional Health – Europe](https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(21)00254-4/fulltext)

**Title:** A Population-Based Analysis of Diabetes-Related Care Measures, Foot Complications, and Amputation During the COVID-19 Pandemic in Ontario, Canada

JAMA OPEN NETWORK| 5th January 2022

**Question**  Were disruptions in diabetes-related care during the COVID-19 pandemic associated with a higher rate of foot complications and amputation in Ontario, Canada?

**Findings**  In this cohort study of more than 1.4 million adults with diabetes, care measures, foot complications, and leg amputation during the first 2 waves of the COVID-19 pandemic were lower than prepandemic levels. There were no consistent differences in demographic characteristics and comorbidities among patients undergoing leg amputation during the pandemic compared with those who underwent amputation in 2019 to 2020.

**Meaning**  In this study, despite limited ambulatory in-person assessment by physicians, hospital avoidance, and restrictions to scheduled hospital-based procedures, excess leg amputations were not observed among people living with diabetes during the first 11 months of the COVID-19 pandemic.

Full article: [A Population-Based Analysis of Diabetes-Related Care Measures, Foot Complications, and Amputation During the COVID-19 Pandemic in Ontario, Canada | Orthopedics | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787627)

**Title:** Association Between Homeschooling and Adolescent Sleep Duration and Health During COVID-19 Pandemic High School Closures

JAMA open Network| 5th january 2022

**Question**  Were sleep gains among adolescents during COVID-19 pandemic high school closures associated with better health-related characteristics?

**Findings**  In this survey study of 8972 adolescents from Swiss high schools, during the COVID-19 lockdown, participants slept significantly longer and had better health-related quality of life and less caffeine and alcohol use than before the pandemic. Longer sleep duration was significantly associated with better health-related characteristics, although this was offset by an association of depressive symptoms with worse health-related characteristics and increased caffeine consumption.

**Meaning**  In this study, sleep gains were associated with better health-related characteristics among youths, but depressive symptoms were associated with a worsening of the same health-related characteristics.

Full article: [Association Between Homeschooling and Adolescent Sleep Duration and Health During COVID-19 Pandemic High School Closures | Adolescent Medicine | JAMA Network Open | JAMA Network](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787630)

**Title:** Hip Fracture Surgery Volumes Among Individuals 65 Years and Older During the COVID-19 Pandemic

JAMa| 30th december 2021

Hip fractures in individuals 65 years or older are common (>250 000 per year in the US) and consequential (1-year mortality rate, 12%-37%).[1](https://jamanetwork.com/journals/jama/fullarticle/2787777#jld210086r1) Prior studies of orthopedic trauma (ie, fractures) in the general population documented a decline at the beginning of the COVID-19 pandemic in March-April 2020,[2](https://jamanetwork.com/journals/jama/fullarticle/2787777#jld210086r2) followed by a return to baseline by summer 2020 once shelter-in-place orders were lifted.[3](https://jamanetwork.com/journals/jama/fullarticle/2787777#jld210086r3) We assessed hip fracture surgery volumes among older individuals during the pandemic.

[Hip Fracture Surgery Volumes Among Individuals 65 Years and Older During the COVID-19 Pandemic | Geriatrics | JAMA | JAMA Network](https://jamanetwork.com/journals/jama/fullarticle/2787777)

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