COVID-19 weekly update

13th June 2022

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**clinical management**

**title:** Efficacy and safety of intramuscular administration of tixagevimab–cilgavimab for early outpatient treatment of COVID-19 (TACKLE): a phase 3, randomised, double-blind, placebo-controlled trial

the lancet respiratory medicine | 7th june 2022  
  
Early intramuscular administration of SARS-CoV-2-neutralising monoclonal antibody combination, tixagevimab–cilgavimab, to non-hospitalised adults with mild to moderate COVID-19 has potential to prevent disease progression. We aimed to evaluate the safety and efficacy of tixagevimab–cilgavimab in preventing progression to severe COVID-19 or death.

Methods. TACKLE is an ongoing, phase 3, randomised, double-blind, placebo-controlled study conducted at 95 sites in the USA, Latin America, Europe, and Japan. Eligible participants were non-hospitalised adults aged 18 years or older with a laboratory-confirmed SARS-CoV-2 infection (determined by RT-PCR or an antigen test) from any respiratory tract specimen collected 3 days or less before enrolment and who had not received a COVID-19 vaccination. A WHO Clinical Progression Scale score from more than 1 to less than 4 was required for inclusion and participants had to receive the study drug 7 days or less from self-reported onset of mild to moderate COVID-19 symptoms or measured fever. Participants were randomly assigned (1:1) to receive either a single tixagevimab–cilgavimab 600 mg dose (two consecutive 3 mL intramuscular injections, one each of 300 mg tixagevimab and 300 mg cilgavimab) or placebo.

…A single intramuscular tixagevimab–cilgavimab dose provided statistically and clinically significant protection against progression to severe COVID-19 or death versus placebo in unvaccinated individuals and safety was favourable. Treating mild to moderate COVID-19 earlier in the disease course with tixagevimab–cilgavimab might lead to more favourable outcomes.  
<https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00180-1/fulltext>

**title:** Baricitinib in hospitalised patients with COVID-19: A meta-analysis of randomised controlled trials

the lancet eclinical medicine | 7th June 2022  
  
To date, only dexamethasone and tocilizumab have been shown to reduce mortality in patients with COVID-19. Baricitinib is a Janus kinase 1/2 inhibitor with known anti-inflammatory and anti-viral properties. We performed a meta-analysis of RCTs assessing the role of baricitinib in hospitalised patients with COVID-19.

Methods. Electronic databases such as MEDLINE, EMBASE, and Cochrane Central were searched up until March 31, 2022, for RCTs evaluating the efficacy of baricitinib in hospitalised patients with COVID-19. The outcomes assessed were 28-day mortality, progression to invasive mechanical ventilation (IMV) or ECMO, progression to respiratory failure needing positive pressure ventilation, IMV or death, duration of hospitalisation and time to discharge. The meta-analysis was registered in the PROSPERO database (CRD42022314579).

Findings. Four studies (with 10,815 patients) were included in the analysis. Pooled analysis using random-effects model showed a statistically significant reduction in 28-day mortality (OR 0.69, 95% CI 0.50-0.94; p=0.04, I2=65%) and composite outcome of progression to severe disease needing positive pressure ventilation, IMV or death (OR 0.89, 95% CI 0.80-0.99, p= 0.03, I2=0%). There was a favorable trend towards reduced progression to IMV or ECMO (OR 0.76, 95% CI 0.58-1.01; p=0.06, I2=49%) in the baricitinib arm compared to standard therapy, even though it was not statistically significant. Statistical significance was achieved for all outcomes with fixed-effects model analysis.

Interpretation. In hospitalised patients with COVID-19, baricitinib was associated with reduced 28-day mortality although there was not a statistically significant reduction in progression to IMV or ECMO. Baricitinib used in conjunction with standard of care treatments is associated with improved mortality in hospitalised patients with COVID-19 disease.  
<https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00219-X/fulltext>

**title:** Favipiravir, camostat, and ciclesonide combination therapy in patients with moderate COVID-19 pneumonia with/without oxygen therapy: An open-label, single-center phase 3 randomized clinical trial

the lancet eclinical medicine| 3rd june 2022  
  
Background. The effectiveness of combination therapy for COVID-19 pneumonia remains unclear. We evaluated favipiravir, camostat, and ciclesonide combination therapy in patients with moderate COVID-19 pneumonia.

Methods. In this open-label phase 3 study, hospitalized adults who were positive for SARS-CoV-2 and had COVID-19 pneumonia were enrolled prior to official vaccination drive in Japan. Participants were randomly assigned to favipiravir monotherapy or favipiravir + camostat + ciclesonide combination therapy. The primary outcome was the length of hospitalization due to COVID-19 infection after study treatment…  
  
…Interpretation. Combination oral favipiravir, camostat and, ciclesonide therapy could decrease the length of hospitalization stays without safety concerns in patients with moderate COVID-19 pneumonia. However, lack of hard clinical primary outcome is one of the major limitations of the study.  
<https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(22)00214-0/fulltext>

**title:** Neurodevelopmental Outcomes at 1 Year in Infants of Mothers Who Tested Positive for SARS-CoV-2 During Pregnancy  
  
JAMA | 9th JUNE 2022

Question Is COVID-19 exposure in utero associated with increased risk for neurodevelopmental disorders in the first year of life?

Findings In this cohort study of 7772 infants delivered during the COVID-19 pandemic, those born to the 222 mothers with a positive SARS-CoV-2 polymerase chain reaction test during pregnancy were more likely to receive a neurodevelopmental diagnosis in the first 12 months after delivery, even after accounting for preterm delivery.   
  
Meaning These preliminary findings suggest that COVID-19 exposure may be associated with neurodevelopmental changes and highlight the need for prospective investigation of outcomes in children exposed to COVID-19 in utero.  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793178>   
  
Invited commentary: [Is It Exposure to the Pandemic or to Maternal SARS-CoV-2 Infection That Is Adversely Affecting Early Childhood Neurodevelopment?](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793181)

**title:** Three more points about Paxlovid for covid-19

BMJ| 27th may 2022  
  
…Firstly, in the UK, Paxlovid is not currently authorised for use in children…  
Secondly, the evidence for Paxlovid is based on its effects in people who were not vaccinated against SARS-CoV-2…  
Thirdly, the ritonavir element of Paxlovid has a high number of significant drug-drug interactions and the product information contains details of contraindications and warnings for drugs that are affected by Paxlovid…  
<https://www.bmj.com/content/377/bmj.o1397>

**title:** From Positive to Negative to Positive Again—The Mystery of Why COVID-19 Rebounds in Some Patients Who Take Paxlovid

jama| 8th june 2022  
  
…In recent weeks, similar cases have been reported in the medical literature and on social media, prompting the Health Alert Network of the US Centers for Disease Control and Prevention (CDC) to issue a health advisory on May 24. COVID-19 rebound in people who’ve taken nirmatrelvir/ritonavir appears to be mild and short-lived, resolving, on average, in 3 days without additional anti-COVID-19 treatment, according to the advisory.

“I would say the anecdotes are pretty consistent and pretty pronounced,” H. Clifford Lane, MD, deputy director for clinical research and special projects at the National Institute of Allergy and Infectious Diseases, said in a recent interview. “Is there something here? If there is, what is it, and what do we do about it?”  
<https://jamanetwork.com/journals/jama/fullarticle/2793357>

title: COVID-19 trajectories among 57 million adults in England: a cohort study using electronic health records  
  
the lancet digital health | 8th JUne 2022  
  
Updatable estimates of COVID-19 onset, progression, and trajectories underpin pandemic mitigation efforts. To identify and characterise disease trajectories, we aimed to define and validate ten COVID-19 phenotypes from nationwide linked electronic health records (EHR) using an extensible framework.

Methods. In this cohort study, we used eight linked National Health Service (NHS) datasets for people in England alive on Jan 23, 2020. Data on COVID-19 testing, vaccination, primary and secondary care records, and death registrations were collected until Nov 30, 2021. We defined ten COVID-19 phenotypes reflecting clinically relevant stages of disease severity and encompassing five categories: positive SARS-CoV-2 test, primary care diagnosis, hospital admission, ventilation modality (four phenotypes), and death (three phenotypes). We constructed patient trajectories illustrating transition frequency and duration between phenotypes. Analyses were stratified by pandemic waves and vaccination status.

Findings. Among 57 032 174 individuals included in the cohort, 13 990 423 COVID-19 events were identified in 7 244 925 individuals, equating to an infection rate of 12·7% during the study period. Of 7 244 925 individuals, 460 737 (6·4%) were admitted to hospital and 158 020 (2·2%) died. Of 460 737 individuals who were admitted to hospital, 48 847 (10·6%) were admitted to the intensive care unit (ICU), 69 090 (15·0%) received non-invasive ventilation, and 25 928 (5·6%) received invasive ventilation. Among 384 135 patients who were admitted to hospital but did not require ventilation, mortality was higher in wave 1 (23 485 [30·4%] of 77 202 patients) than wave 2 (44 220 [23·1%] of 191 528 patients), but remained unchanged for patients admitted to the ICU. Mortality was highest among patients who received ventilatory support outside of the ICU in wave 1 (2569 [50·7%] of 5063 patients). 15 486 (9·8%) of 158 020 COVID-19-related deaths occurred within 28 days of the first COVID-19 event without a COVID-19 diagnoses on the death certificate. 10 884 (6·9%) of 158 020 deaths were identified exclusively from mortality data with no previous COVID-19 phenotype recorded. We observed longer patient trajectories in wave 2 than wave 1.

Interpretation. Our analyses illustrate the wide spectrum of disease trajectories as shown by differences in incidence, survival, and clinical pathways. We have provided a modular analytical framework that can be used to monitor the impact of the pandemic and generate evidence of clinical and policy relevance using multiple EHR sources.  
[COVID-19 trajectories among 57 million adults in England: a cohort study using electronic health records - The Lancet Digital Health](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(22)00091-7/fulltext)

**title:** Neutralisation sensitivity of SARS-CoV-2 omicron subvariants to therapeutic monoclonal antibodies

the lancet infectioUs diseases| 8 june 2022  
  
…Since mutations are accumulated in the spike proteins of newly emerging SARS-CoV-2 variants, we suggest the importance of rapid evaluation of the efficiency of therapeutic monoclonal antibodies against novel SARS-CoV-2 variants.  
<https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00365-6/fulltext>

**title:** Risk of severe COVID-19 outcomes associated with immune-mediated inflammatory diseases and immune-modifying therapies: a nationwide cohort study in the OpenSAFELY platform

the lancet rheumatology| 8th june 2022  
  
Background. A rapid increase in incidence of the SARS-CoV-2 Omicron variant (sub-lineage BA.1)   
The risk of severe COVID-19 outcomes in people with immune-mediated inflammatory diseases and on immune-modifying drugs might not be fully mediated by comorbidities and might vary by factors such as ethnicity. We aimed to assess the risk of severe COVID-19 in adults with immune-mediated inflammatory diseases and in those on immune-modifying therapies…  
  
…COVID-19 deaths and hospital admissions were higher in people with immune-mediated inflammatory diseases. We saw no increased risk of adverse COVID-19 outcomes in those on most targeted immune-modifying drugs for immune-mediated inflammatory diseases compared with those on standard systemic therapy.  
<https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(22)00098-4/fulltext>

**long-term effects**

**title:** A glimpse into long COVID and symptoms

the lancet respiratory medicine| 10th june 2022  
  
Long COVID has significant implications for individuals, health-care systems, and society. Those affected might have reduced functional capacity and cognitive and physical limitations, ultimately resulting in reduced autonomy and increased dependency on caregivers and other societal supports. Hence, more comprehensive understanding of long COVID would aid policymakers and health-care systems in developing, implementing, and evaluating future policies and health resource planning reflective of the population's needs. In The Lancet Respiratory Medicine, Lixue Huang and colleagues1 addressed this topic in a longitudinal follow-up of patients after SARS-CoV-2 infection during the early phase of the COVID-19 pandemic (between January, 2020, and May, 2021). To date, this study has the longest duration of follow-up for post-COVID-19 outcomes in patients who survived hospitalisation for COVID-19. Still, many questions remain about the reported symptoms of long COVID, and the people who continue to live with it…  
[A glimpse into long COVID and symptoms - The Lancet Respiratory Medicine](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00217-X/fulltext)   
[A glimpse into long COVID and symptoms – Authors' reply - The Lancet Respiratory Medicine](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00212-0/fulltext)

**rates & variants**

**title:** Immune responses after omicron infection in triple-vaccinated Health-care workers with and without previous SARS-CoV-2 infection

the lancet infectious diseases| 9th june 2022  
  
The SARS-CoV-2 omicron variant (B.1.1.529) is less sensitive to neutralising antibody responses induced by vaccination and prior infection than previous variants.1, 2 Less is known regarding omicron-induced serological and T-cell responses after breakthrough infection of vaccinated individuals with and without prior infection.

In this prospective cohort study, we analysed serological and T-cell responses following omicron infection in 56 triple-vaccinated health-care workers in Sweden with and without prior SARS-CoV-2 infection. A surrogate virus neutralisation test (sVNT) was used to assess neutralisation of SARS-CoV-2 variants. Immune responses of all participants had been regularly assessed since April, 2020, in the ongoing Swedish COMMUNITY study.3, 4 For this sub-study, participants were screened with qPCR twice a week for 4 weeks,5 with additional qPCR tests every other day for 14 days if positive. Blood samples were collected 1 week, 2 weeks, 3 weeks, 5 weeks, and 7 weeks after the first positive qPCR sample. For information on study design, demographic characteristics of the study population, and vaccination histories see appendix pp 4–5…  
<https://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099(22)00362-0.pdf>

**title:** SARS-CoV-2 Evolution and Immune Escape in Immunocompromised Patients

new england journal of medicine| 8th june 2022  
  
To understand selective pressures driving within-host SARS-CoV-2 evolution, we examined the relationship between such evolution and endogenous immune responses and exogenous antibody treatment in convenience samples obtained from five patients with B-cell deficiencies…   
<https://www.nejm.org/doi/full/10.1056/NEJMc2202861>

**infection control**

**title:** Intramuscular AZD7442 (Tixagevimab–Cilgavimab) for Prevention of Covid-19

new england journal of medicine| 9th june 2022  
  
The monoclonal-antibody combination AZD7442 is composed of tixagevimab and cilgavimab, two neutralizing antibodies against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that have an extended half-life and have been shown to have prophylactic and therapeutic effects in animal models. Pharmacokinetic data in humans indicate that AZD7442 has an extended half-life of approximately 90 days.

METHODS. In an ongoing phase 3 trial, we enrolled adults (≥18 years of age) who had an increased risk of an inadequate response to vaccination against coronavirus disease 2019 (Covid-19), an increased risk of exposure to SARS-CoV-2, or both.  
  
…A single dose of AZD7442 had efficacy for the prevention of Covid-19, without evident safety concerns.  
<https://www.nejm.org/doi/full/10.1056/NEJMoa2116620>

**title:** Reducing SARS-CoV-2 in Shared Indoor Air  
  
jama|7th june 2022  
  
…A growing list of options exists for structural interventions to prevent COVID-19 through dilution, filtration, and disinfection of shared indoor air. Air handling system upgrades, improvements, or setting changes can reduce viral particle concentrations by bringing in outdoor air to dilute potential contaminants. Using air filters with higher minimum efficiency reporting value (MERV) ratings in HVAC systems can more effectively filter respiratory particles from recirculated air. Portable and commercially available HEPA air cleaners can do the same for a single room without modifying the building’s existing air handling system. These devices can be especially useful in areas used by people at greater risk of having or acquiring COVID-19. Air disinfection methods such as upper room and in-duct UV germicidal irradiation are options for health care facilities and other settings (eg, school nurses’ offices, homeless shelter sleeping areas) where people with COVID-19 are likely to be present or where there is crowding and the health status of individuals is unknown…  
<https://jamanetwork.com/journals/jama/fullarticle/2793289>

**title:** Concordance of SARS-CoV-2 RNA in Aerosols From a Nurses Station and in Nurses and Patients During a Hospital Ward Outbreak

JAMA| 8th june 2022  
  
Question Is SARS-CoV-2 RNA found in aerosols in hospital break rooms and nurses stations during a nosocomial outbreak?

Findings In this cohort study, SARS-CoV-2 genome sequences in air samples collected at a nurses station were identified in all particle sizes and were identical to human samples from a nosocomial outbreak. Detection of aerosol-borne SARS-CoV-2 was statistically less frequent on units under surveillance (7 of 210 samples) than without surveillance (24 of 300 samples).

Meaning These findings suggest that nosocomial infection may result from aerosol-borne SARS-CoV-2 introduced by employees and patients into common hospital areas; surveillance may help reduce the introduction of SARS-CoV-2 into aerosols.  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793153>

**title:** COVID-19: PATIENTS WITHOUT RESPIRATORY SYMPTOMS NO LONGER HAVE TO WEAR A FACE MASK IN GP SURGERIES

BMJ| 13th june 2022

Patients who enter general practices in England no longer have to wear a face mask unless they have respiratory symptoms, NHS England and NHS Improvement says. But the updated guidance also underlines the importance of local risk assessments and says that increased measures can be used when deemed necessary.

A letter sent to clinical commissioning groups and trusts set out the changes to infection prevention and control measures following updates from the UK Health Security Agency.1 It said that health and care staff should continue to wear face masks as part of personal protective equipment when working with patients with suspected or confirmed covid-19, including untriaged patients in primary care and emergency departments.

It said that universal masking should be applied when there is a known or suspected cluster of SARS-CoV-2, for example during an outbreak or if new variants of concern emerge. Health and care staff working in non-clinical areas such as offices and social settings do not need to wear masks unless it is their personal preference or if there are specific problems raised by a risk assessment…  
[Covid-19: Patients without respiratory symptoms no longer have to wear a face mask in GP surgeries | The BMJ](https://www.bmj.com/content/377/bmj.o1445)

**title:** Protection and Waning of Natural and Hybrid Immunity to SARS-CoV-2

new england journal of medicine| 9th june 2022  
  
…Among persons who had been previously infected with SARS-CoV-2 (regardless of whether they had received any dose of vaccine or whether they had received one dose before or after infection), protection against reinfection decreased as the time increased since the last immunity-conferring event; however, this protection was higher than that conferred after the same time had elapsed since receipt of a second dose of vaccine among previously uninfected persons. A single dose of vaccine after infection reinforced protection against reinfection.  
<https://www.nejm.org/doi/full/10.1056/NEJMoa2118946>

**title:** Efficacy and Safety of the RBD-Dimer–Based Covid-19 Vaccine ZF2001 in Adults

new england journal of medicine| 2nd june 2022  
  
…In a large cohort of adults, the ZF2001 vaccine was shown to be safe and effective against symptomatic and severe-to-critical Covid-19 for at least 6 months after full vaccination.  
<https://www.nejm.org/doi/full/10.1056/NEJMoa2202261>

**title:** Safety and immunogenicity of the ChAdOx1 nCoV-19 (AZD1222) vaccine in children aged 6–17 years: a preliminary report of COV006, a phase 2 single-blind, randomised, controlled trial  
  
the lancet | 11th june2022  
  
…ChAdOx1 nCoV-19 is well tolerated and immunogenic in children aged 6–17 years, inducing concentrations of antibody that are similar to those associated with high efficacy in phase 3 studies in adults. No safety concerns were raised in this trial.  
<https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00770-X/fulltext>

**title:** Safety and immunogenicity of the FINLAY-FR-1A vaccine in COVID-19 convalescent participants: an open-label phase 2a and double-blind, randomised, placebo-controlled, phase 2b, seamless, clinical trial  
  
the lancet respiratory medicine | 9th june 2022  
  
……A single dose of the FINLAY-FR-1A vaccine against SARS-CoV-2 strengthened the pre-existing natural immunity, with excellent safety profile.  
<https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00100-X/fulltext>

**title:** Effect of priming interval on reactogenicity, peak immunological response, and waning after homologous and heterologous COVID-19 vaccine schedules: exploratory analyses of Com-COV, a randomised control trial  
  
the lancet respiratory medicine | 8th june 2022  
  
..These data support flexibility in priming interval in all studied COVID-19 vaccine schedules. Longer priming intervals might result in lower reactogenicity in schedules with BNT162b2 as a second dose and higher humoral immunogenicity in homologous schedules, but overall lower T-cell responses across all schedules. Future vaccines using these novel platforms might benefit from schedules with long intervals.   
<https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00163-1/fulltext>

**title:** Risk of myocarditis and pericarditis after the COVID-19 mRNA vaccination in the USA: a cohort study in claims databases  
  
the lancet | 11th june 2022  
  
Several passive surveillance systems reported increased risks of myocarditis or pericarditis, or both, after COVID-19 mRNA vaccination, especially in young men. We used active surveillance from large health-care databases to quantify and enable the direct comparison of the risk of myocarditis or pericarditis, or both, after mRNA-1273 (Moderna) and BNT162b2 (Pfizer–BioNTech) vaccinations.

Methods. We conducted a retrospective cohort study, examining the primary outcome of myocarditis or pericarditis, or both, identified using the International Classification of Diseases diagnosis codes, occurring 1–7 days post-vaccination, evaluated in COVID-19 mRNA vaccinees aged 18–64 years using health plan claims databases in the USA…  
  
…An increased risk of myocarditis or pericarditis was observed after COVID-19 mRNA vaccination and was highest in men aged 18–25 years after a second dose of the vaccine. However, the incidence was rare. These results do not indicate a statistically significant risk difference between mRNA-1273 and BNT162b2, but it should not be ruled out that a difference might exist. Our study results, along with the benefit–risk profile, continue to support vaccination using either of the two mRNA vaccines.  
<https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00791-7/fulltext>

**title:** Change in covid-19 risk over time following vaccination with CoronaVac: test negative case-control study  
  
BMJ | 13th June 2022  
  
Objective To estimate the change in odds of covid-19 over time following primary series completion of the inactivated whole virus vaccine CoronaVac (Sinovac Biotech) in São Paulo State, Brazil.

Design Test negative case-control study.

…Conclusions Significant increases in the risk of moderate and severe covid-19 outcomes occurred three months after primary vaccination with CoronaVac among people aged 65 and older. These findings provide supportive evidence for the implementation of vaccine boosters in these populations who received this inactivated vaccine. Studies of waning should include analyses designed to uncover common biases.  
<https://www.bmj.com/content/377/bmj-2022-070102>

**title:** Durability of Protection Against Symptomatic COVID-19 Among Participants of the mRNA-1273 SARS-CoV-2 Vaccine Trial  
  
jama | 8th june 2022  
  
Evaluating the durability of protection afforded by COVID-19 vaccines is a public health priority, with the results needed to inform policies around booster vaccinations as well as those around nonpharmaceutical interventions. We considered the mRNA-1273 P301 cohort study, which is an ongoing phase 3, randomized, placebo-controlled trial of 30 415 US adults to evaluate the efficacy and safety of the mRNA-1273 SARS-CoV-2 (Moderna) vaccine.1,2 The vaccine efficacy (VE) against symptomatic COVID-19 was estimated at 94.1% at interim analysis and at 93.2% at completion of the blinded phase.1,2 Comparison of these 2 estimates would suggest a slight waning of VE. However, this comparison is not sensitive enough to detect the true degree of waning, because the VE estimate was obtained under the assumption that VE is constant during the period of analysis and thus represents a mean of the time-varying vaccine effect over a broad study period, weighted by when the event occurs, rather than the VE at the end of the study period.  
  
…Because of the crossover of placebo recipients to the vaccine arm, the phase 3 trials provide placebo-controlled efficacy data for less than 7 months after dose 1.3,6 Indeed, few cases of COVID-19 occurred after 6 months in our study, making it difficult to precisely estimate the degree of waning at the end of the blinded follow-up. Observational studies can provide information about the longer-term benefits of vaccines.  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793157>

**title:** Analysis of Postvaccination Breakthrough COVID-19 Infections Among Adults With HIV in the United States  
  
JAMA | 7th june 2022  
  
Question Are the rate and risk of COVID-19 breakthrough infections higher among vaccinated people with vs without HIV in the United States through December 31, 2021?

Findings In this cohort study of 113 994 patients, risk of breakthrough infection was low overall (3.8%) but 28% higher in people with vs without HIV. The breakthrough rate was also higher in people with vs without HIV (55 cases per 1000 person-years vs 43 cases per 1000 person-years).

Meaning The higher rate and risk of infection in people with HIV observed in this study suggests comprehensive inclusion of this population in recommendations for additional primary doses in immunocompromised groups.  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793102>

**title:** Does the World Still Need New Covid-19 Vaccines?  
  
new england journal of medicine | 2nd june 2022  
  
Although there was a global shortage of Covid-19 vaccines in 2021, by mid 2022, the vaccine supply will no longer be a limiting factor in efforts to provide more equitable coverage. As of April 19, 2022, approximately 11.5 billion Covid-19 vaccine doses have been administered globally.1 Scaling up manufacturing capacity for currently available vaccines at the speed promised by vaccine producers through the COVAX (Covid-19 Vaccines Global Access) program and beyond should secure the coverage target projected by the World Health Organization (WHO) for 70% of the world population by mid 2022.2 So why do we still need new Covid-19 vaccines?  
<https://www.nejm.org/doi/full/10.1056/NEJMe2204695>

**recovery**

**title:** Covid-19: Unusable PPE worth £4bn will be burned, says spending watchdog

BMJ| 10th june 2022  
  
The parliamentary watchdog on public spending has accused the Department of Health and Social Care for England of wasting £4bn of taxpayers’ money on unusable personal protective equipment in the first year of the covid-19 pandemic and of planning to burn much of it to “generate power.”1

The House of Commons Public Accounts Committee made the claim in its report on the Department of Health and Social Care’s accounts for 2020-21, the first year of the pandemic.

The report paints a damning picture of the fallout from the government’s rush to compete with the rest of the world to procure PPE, bypassing the usual due diligence in its race to secure supplies. Of £12bn spent on PPE, £4bn was spent on items that failed to meet NHS standards and have remained unused, the report said.

The committee claimed that the department now faces the costs of getting rid of millions of unusable items and has appointed two commercial waste companies to dispose of 15 000 pallets a month through a combination of burning and recycling. The costs and environmental effects are “unclear” the report noted…  
  
The committee said the department lost 75% of the £12bn spent on PPE to inflated prices and kit that did not meet requirements, including the £4bn worth that will not be used in the NHS and will have to be disposed of.

“The story of PPE purchasing is perhaps the most shameful episode in the UK government response to the pandemic,” said Meg Hillier, the committee’s chair. “At the start of the pandemic health service and social service staff were left to risk their own and their families’ lives due to the lack of basic PPE…  
[Covid-19: Unusable PPE worth £4bn will be burned, says spending watchdog | The BMJ](https://www.bmj.com/content/377/bmj.o1435)

**title:** Prioritising COVID-19 over everything: the unintended harm

the lancet diabetes & endocrinology| 8th june 2022  
  
At the beginning of the COVID-19 pandemic, it was clear that existing recommendations for   
During the past 2 and a half years, countries worldwide saw disruptions in their health-care services as they redirected their efforts and resources to manage the COVID-19 pandemic. At the same time, many people with underlying conditions limited their interactions with others unless necessary, which also resulted in a decreased use of some health-care services. In the UK, the NHS reported 31 million fewer outpatient attendances between April, 2020, and February, 2022, compared with the previous 2 years. Many people with diabetes, at an increased risk of severe COVID-19 outcomes, found their routine care services drastically reduced. As the world slowly emerges from the pandemic, we ask what are the unintended consequences of these actions?  
<https://www.thelancet.com/journals/landia/article/PIIS2213-8587(21)00147-9/fulltext>

**title:** Perceptions and Use of Telehealth Among Mental Health, Primary, and Specialty Care Clinicians During the COVID-19 Pandemic

jama| 8th june 2022  
  
Question Are clinician perceptions of telehealth quality associated with use?

Findings In this survey study of 866 mental health (MH), primary care (PC), and specialty care (SC) clinicians, MH clinicians rated the quality of video care the highest and were more likely to prefer video over phone when providing care for patients remotely; PC and SC clinicians were more likely to endorse challenges of video care. Findings aligned with utilization rates, with MH clinicians conducting significantly more video visits than PC and SC clinicians.

Meaning These findings suggest that specialty-specific differences in clinician perceptions of telehealth were associated with actual use.   
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793101>

**public health & health inequalities**

**title:** Covid-19 vaccine in prison: a not-to-be-missed opportunity to promote access to vaccination in adolescents

BMJ | 10th june 2022  
  
Covid-19 vaccination campaigns for adolescents have been taking place in many countries for some months.12 The WHO Strategic Advisory Group of Experts on immunisation have called for vaccine prioritisation within countries to take into account the needs of those groups that, due to underlying social, ethnic, geographic, or biomedical factors, are at greater risk of getting infected or suffering most severe consequences from covid-19.3 Since the risk of transmission of SARS-CoV-2 is considerably higher in prisons and detention facilities than elsewhere, adolescents who are detained in juvenile institutions should be prioritised for vaccination.4

Detained adolescents often come from marginalised groups of society with a considerable burden of ill health rooted in poverty and discrimination, and with limited access to healthcare.5 The benefits of vaccinating adolescents in juvenile institutions include the direct benefits to their health and the indirect benefit of reducing onward transmission of SARS-CoV-2 within the prison community, including among prison staff, and in the community they belong. Furthermore, the implementation of the covid-19 vaccine in juvenile institutions is essential to upholding the principle of equity of care and to guarantee the right to health for those deprived of liberty, leaving no one behind…  
<https://www.bmj.com/content/377/bmj.o1439>

**title:** Perceptions of COVID-19 Vaccine Incentives Among Adolescents and Young Adults

jama | 8th june 2022  
  
…In the context of the UK Government shift towards living with COVID-19,7 and the delivery of third   
Question What do US adolescents and young adults know and think about COVID-19 vaccine incentives?

Findings In this qualitative study of 1125 adolescent and young adult respondents, youth awareness of COVID-19 vaccine incentives was high, and their opinions were generally favorable. However, more than a quarter of youth expressed concerns about incentives, including but not limited to their effectiveness, ethical use, fairness, and impact on vaccine motivations and confidence.

Meaning These findings suggest that more research is needed to understand the incidence, characteristics, and effectiveness of COVID-19 vaccine incentives targeted to children and young adults. Policymakers considering interim implementation of incentive programs should consider youths’ perspectives on these public health measures.  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793151>

**title:** Racial and ethnic differences in COVID-19 outcomes: a call to action

the lancet rheumatology | 8th june 2022  
  
…Vaccine hesitancy continues to limit global efforts in combatting the COVID-19 pandemic.   
  
The COVID-19 pandemic has demanded a huge effort to identify the risks associated with poor outcomes. The focus has been particularly relevant in patients with immune-mediated inflammatory diseases and those on therapies that suppress the immune system. Small early observational studies looked worrisome, but as data from larger studies became available a consistent picture became evident. Demographic risk factors such as age and comorbidity are really the salient factors, with some risk from underlying disease and a few specific therapeutic agents, such as rituximab.

Now that we are 2 years into the pandemic, the initial frenzy to generate data has receded, and we need to make sure that we are asking the right questions and designing studies appropriately to answer those questions. It is against this backdrop that the OPENSafely initiative has examined the question of the risk of poor outcomes in patients with immune-mediated inflammatory disease and those on immune-modifying therapy.1 In The Lancet Rheumatology, Brian MacKenna and colleagues linked primary care data from the UK National Health Service with hospital prescription data for patients with immune-mediated inflammatory diseases…  
<https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(22)00135-7/fulltext>

**international perspectives**

**title:** Culturally relevant COVID-19 vaccine acceptance strategies in sub-Saharan Africa

the lancet global health |9th june 2022  
  
In sub-Saharan Africa, the reasons for low rates of COVID-19 vaccination and unwillingness to accept the vaccine vary, so country-specific solutions are needed.1 Public health action that is humane, culturally relevant, and recognises the contribution of historical, structural, and other system dynamics has been called for.2 To meet these objectives, countries should frame their individual remedial strategies on the basis of approaches that WHO and the Lancet Commission on the future of health in sub-Saharan Africa advocate for generating positive health behaviours.3, 4 Central concepts of proven value that are relevant to COVID-19 vaccination uptake include innovation and task shifting away from conventionally relied upon forms of health informatics and engagement to promote health literacy and achieve health equity through action..  
[Culturally relevant COVID-19 vaccine acceptance strategies in sub-Saharan Africa - The Lancet Global Health](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00251-0/fulltext)

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