COVID-19 weekly update

8th October 2021

clinical management

**Title:** COVID-19 and metabolic disease: mechanisms and clinical management

The Lancet Diabetes & Endocrinology | 4th October 2021

Up to 50% of the people who have died from COVID-19 had metabolic and vascular disorders. Notably, there are many direct links between COVID-19 and the metabolic and endocrine systems. Thus, not only are patients with metabolic dysfunction (eg, obesity, hypertension, non-alcoholic fatty liver disease, and diabetes) at an increased risk of developing severe COVID-19 but also infection with SARS-CoV-2 might lead to new-onset diabetes or aggravation of pre-existing metabolic disorders.

This review provides an update on the mechanisms of how metabolic and endocrine disorders might predispose patients to develop severe COVID-19. Additionally, it updates the practical recommendations and management of patients with COVID-19 and post-pandemic. Furthermore, the authors summarise new treatment options for patients with both COVID-19 and diabetes, and highlight current challenges in clinical management.

Full paper: [COVID-19 and metabolic disease: mechanisms and clinical management](https://www.thelancet.com/action/showPdf?pii=S2213-8587%2821%2900244-8)

**Title:** National guidance for the recovery of elective surgery in children

RCPCH | modified 5th October 2021

The COVID-19 pandemic has resulted in the cessation of all but the most urgent elective children’s surgical cases during the period of peak prevalence of infection in the general population.  
  
These recommendations use the most up to date evidence to inform practice that will enable recovery of children’s elective surgery. NICE

Full detail: [National guidance for the recovery of elective surgery in children](https://www.rcpch.ac.uk/resources/national-guidance-recovery-elective-surgery-children)

**Title:** COVID-19 rapid guideline: managing COVID-19

NICE guideline [NG191] | updated 4th October 2021

This guideline covers the management of COVID-19 for children, young people and adults in all care settings. It brings together our existing recommendations on managing COVID-19, and new recommendations on therapeutics, so that healthcare staff and those planning and delivering services can find and use them more easily. We are continually monitoring the evidence and updating the guideline as new information emerges.

On 4 October, new recommendations were added on casirivimab and imdevimab. We have also updated our supporting evidence on the use of heparins with the peer reviewed REMAP-CAP trial results. This update does not change our current recommendations.

Full detail: [COVID-19 rapid guideline: managing COVID-19](https://www.nice.org.uk/guidance/ng191)

recovery

**Title:** Recommendations for the recognition, diagnosis, and management of long COVID

British Journal of General Practice | 4th October 2021

In the absence of research into therapies and care pathways for long COVID, guidance based on ‘emerging experience’ is needed. The aim of this study was to provide a rapid expert guide for GPs and long COVID clinical services.

Thirty-three clinicians representing 14 specialties reached consensus on 35 recommendations. Chiefly, GPs should consider long COVID in the presence of a wide range of presenting features (not limited to fatigue and breathlessness) and exclude differential diagnoses where appropriate. Detailed history and examination with baseline investigations should be conducted in primary care. Indications for further investigation and specific therapies (for myocarditis, postural tachycardia syndrome, mast cell disorder) include hypoxia/desaturation, chest pain, palpitations, and histamine-related symptoms. Rehabilitation should be individualised, with careful activity pacing (to avoid relapse) and multidisciplinary support.

The paper concludes that long COVID clinics should operate as part of an integrated care system, with GPs playing a key role in the multidisciplinary team. Holistic care pathways, investigation of specific complications, management of potential symptom clusters, and tailored rehabilitation are needed.

Full paper: [Recommendations for the recognition, diagnosis, and management of long COVID: a Delphi study](https://bjgp.org/content/bjgp/early/2021/10/04/BJGP.2021.0265.full.pdf)

**Title:** Coronavirus and depression in adults in Great Britain

Office for National Statistics | 1st October 2021

This dataset provides estimates of adults with depressive symptoms with breakdowns by characteristic. It includes comparisons with earlier periods throughout and before the pandemic. Analysis is based on the Opinions and Lifestyle Survey.

The data shows rates of depression in Britain are starting to fall after rising during the Covid pandemic. The Office for National Statistics estimated that 10 per cent of adults in the UK were depressed before the virus first struck. This more than doubled to a record 21 per cent last winter after two waves of the epidemic and three lockdowns, with women and young people worst affected.

Full detail: [Coronavirus and depression in adults in Great Britain](https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/coronavirusanddepressioninadultsingreatbritain)

**Title:** New Every Mind Matters campaign to improve people's mental health

Department of Health and Social Care | 5th October 2021

The general public is urged to find “what works for me” to support their mental wellbeing as the first campaign is launched by the Office for Health Improvement and Disparities (OHID).

The Every Mind Matters campaign empowers people to look after their mental health by directing them to free, practical tips and advice. By answering five simple questions through the Every Mind Matters platform, people can get a tailored ‘Mind Plan’, giving them personalised tips to help deal with stress and anxiety, boost their mood, sleep better and feel more in control.

New research commissioned by OHID reveals nearly half (49%) of adults in England said the COVID-19 pandemic had a negative impact on their mental wellbeing, and more than a third of all adults in England (34% or 15.1 million) said they did not know what to do to help improve their mental wellbeing.

Younger adults reported struggling the most, with 57% of 18 to 34 year olds saying their mental wellbeing was negatively impacted by the pandemic, and just under half (44%) reporting that they did not know what to do to help.

Full detail: [New Every Mind Matters campaign to improve people's mental health](https://www.gov.uk/government/news/new-every-mind-matters-campaign-to-improve-peoples-mental-health)

Infection control

**Title:** Effectiveness of mRNA BNT162b2 COVID-19 vaccine up to 6 months in a large integrated health system in the USA: a retrospective cohort study

The Lancet | 4th October 2021

Vaccine effectiveness studies have not differentiated the effect of the delta (B.1.617.2) variant and potential waning immunity in observed reductions in effectiveness against SARS-CoV-2 infections. This study aimed to evaluate overall and variant-specific effectiveness of BNT162b2 (tozinameran, Pfizer–BioNTech) against SARS-CoV-2 infections and COVID-19-related hospital admissions by time since vaccination among members of a large US health-care system.

The results provide support for high effectiveness of BNT162b2 against hospital admissions up until around 6 months after being fully vaccinated, even in the face of widespread dissemination of the delta variant. Reduction in vaccine effectiveness against SARS-CoV-2 infections over time is probably primarily due to waning immunity with time rather than the delta variant escaping vaccine protection.

Full paper: [Effectiveness of mRNA BNT162b2 COVID-19 vaccine up to 6 months in a large integrated health system in the USA: a retrospective cohort study](https://www.thelancet.com/action/showPdf?pii=S0140-6736%2821%2902183-8)

**Title:** The durability of immunity against reinfection by SARS-CoV-2: a comparative evolutionary study

The Lancet Microbe | 1st October 2021

Among the most consequential unknowns of the devastating COVID-19 pandemic are the durability of immunity and time to likely reinfection. There are limited direct data on SARS-CoV-2 long-term immune responses and reinfection. The aim of this study is to use data on the durability of immunity among evolutionarily close coronavirus relatives of SARS-CoV-2 to estimate times to reinfection by a comparative evolutionary analysis of related viruses SARS-CoV, MERS-CoV, human coronavirus (HCoV)-229E, HCoV-OC43, and HCoV-NL63.

The timeframe for reinfection is fundamental to numerous aspects of public health decision making. As the COVID-19 pandemic continues, reinfection is likely to become increasingly common. Maintaining public health measures that curb transmission—including among individuals who were previously infected with SARS-CoV-2—coupled with persistent efforts to accelerate vaccination worldwide is critical to the prevention of COVID-19 morbidity and mortality.

Full paper: [The durability of immunity against reinfection by SARS-CoV-2: a comparative evolutionary study](https://www.thelancet.com/action/showPdf?pii=S2666-5247%2821%2900219-6)

**Title:** Waning Immune Humoral Response to BNT162b2 Covid-19 Vaccine over 6 Months

New England Journal of Medicine | 6th October 2021

Despite high vaccine coverage and effectiveness, the incidence of symptomatic infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been increasing in Israel. Whether the increasing incidence of infection is due to waning immunity after the receipt of two doses of the BNT162b2 vaccine is unclear.

The authors of this study conducted a 6-month longitudinal prospective study involving vaccinated health care workers who were tested monthly for the presence of anti-spike IgG and neutralizing antibodies. Linear mixed models were used to assess the dynamics of antibody levels and to determine predictors of antibody levels at 6 months.

The study found that six months after receipt of the second dose of the BNT162b2 vaccine, humoral response was substantially decreased, especially among men, among persons 65 years of age or older, and among persons with immunosuppression.

Full paper: [Waning immune humoral response to BNT162b2 Covid-19 Vaccine over 6 months](https://www.nejm.org/doi/pdf/10.1056/NEJMoa2114583?articleTools=true)

**Title:** Waning of BNT162b2 Vaccine Protection against SARS-CoV-2 Infection in Qatar

New England Journal of Medicine | 6th October 2021

In a test-negative, case–control study involving more than 900,000 participants in Qatar, vaccine effectiveness peaked at 77.5% in the first month after the second dose. The effectiveness fell thereafter to as low as 20% in months 5 through 7 after vaccination, but protection against serious Covid-19 remained greater than 90% for at least 6 months.

Full paper: [Waning of BNT162b2 Vaccine protection against SARS-CoV-2 infection in Qatar](https://www.nejm.org/doi/pdf/10.1056/NEJMoa2114114?articleTools=true)

**Title:** New film launched urging public to get flu and COVID-19 vaccines

Department of Health and Social Care | 8th October 2021

Those eligible for the free flu vaccine and COVID-19 booster jab are being urged to book their appointments as soon as possible in a new film campaign. The new film explains why it is more important than ever for people to get their winter vaccines as soon as possible this autumn, as both viruses have the potential to cause serious illness and hospitalisation.

The campaign is launched as new research suggests that adults in England are severely underestimating the combined threat of COVID-19 and flu this winter.

Full detail: [New film launched urging public to get flu and COVID-19 vaccines](https://www.gov.uk/government/news/new-film-launched-urging-public-to-get-flu-and-covid-19-vaccines)

See also: [Flu jab vital this winter along with Covid vaccine](https://www.bbc.co.uk/news/health-58836218?at_medium=RSS&at_campaign=KARANGA)

**Title:** Transmissibility of COVID-19 Among Vaccinated Individuals

SPOR Evidence Alliance | October 2021

This rapid review examines transmissibility of COVID-19 by individuals who have been vaccinated but who still catch the virus. Researchers do not yet fully understand “asymptomatic” infection, and are looking to understand whether vaccinated people who catch COVID-19 are less infectious than unvaccinated people with the virus.

The studies reviewed for this report suggest that being either partly or fully vaccinated reduces both the chance of asymptomatic infection and of infecting others.

Full detail: [Transmissibility of COVID-19 Among Vaccinated Individuals: A rapid literature review](https://sporevidencealliance.ca/wp-content/uploads/2021/10/Transmissibility-of-COVID-Vaccinated-Individuals_Final-Report_2021.09.24.pdf)

**Title:** COVID not showing signs of dropping

Zoe Covid Study | 30th September 2021

According to ZOE COVID Study incidence figures, in total there are currently 58,126 new daily symptomatic cases of COVID in the UK on average, based on PCR and LFT test data - an increase of 22% from 45,081 new daily cases last week.

In the fully vaccinated population, it’s estimated there are currently 14,352 new daily symptomatic cases in the UK. Cases in this group have slightly increased from 13,118 cases last week.

In terms of prevalence, on average 1 in 93 people in the UK currently have symptomatic COVID.

Full detail: [COVID not showing signs of dropping](https://covid.joinzoe.com/post/covid-not-showing-signs-of-dropping)

**Title:** Willingness of children and adolescents to have a COVID-19 vaccination: Results of a large whole schools survey in England

EClinicalMedicine | 27th September 2021

Vaccine hesitancy has affected COVID-19 adult vaccination programs in many countries. Data on hesitancy amongst child and adolescent populations is largely confined to parent opinion. This study investigated the characteristics of vaccine hesitant children and adolescents using results from a large, school-based self-report survey of the willingness to have a COVID-19 vaccination in students aged 9 –18 years in England.

If government vaccination strategies move towards vaccinating younger school-aged students, efforts to increase vaccination uptake may be necessary. Compared with students who would opt-in, those who were vaccine hesitant had greater indicators of social deprivation and felt a lack of community cohesion by not feeling a sense of belonging at their school. There were indications that those students who would opt-out had higher levels of marginalisation and mistrust.

If programmes are rolled out, focus on hesitant younger students will be important, targeting more marginalised and deprived young people with information from trusted sources utilising social media; improving access to vaccination centres with provision both in and outside school; and addressing fears and worries about the effects of the vaccine.

The main limitation of this study is that the participant group may not be wholly representative of England or the UK, which may bias population-level estimates of willingness to be vaccinated.

Full paper: [Willingness of children and adolescents to have a COVID-19 vaccination: Results of a large whole schools survey in England](https://www.thelancet.com/action/showPdf?pii=S2589-5370%2821%2900424-7)

**Title:** Covid-19 booster vaccines frequently asked questions

House of Commons Library | 29th September 2021

This Commons Library briefing addresses commonly asked questions about the roll-out of the Covid-19 booster vaccine.

Full briefing: [Covid-19 booster vaccines frequently asked questions](https://researchbriefings.files.parliament.uk/documents/CBP-9332/CBP-9332.pdf)

other

**Title:** The legacy of maternal SARS-CoV-2 infection on the immunology of the neonate

Nature | Kings College London | 6th October 2021

Research from King’s suggests COVID-19 infection in the mother alters the immune system of the baby in utero.

Although there have been many studies into COVID-19, and even studies into the effect of SARS-CoV-2 infection on pregnant mothers, relatively few studies have looked at what impact maternal COVID-19 infection may have on the developing fetus.

This study, looked at the immune system of babies born to mothers exposed to SARS-CoV-2 at different stages of pregnancy.

It found that, perhaps unsurprisingly, babies born to mothers with recent or ongoing infection had enhanced levels of circulating mediators as well as increased percentages of cells known to be involved in rapid response to infection. Notably, the ability of immune cells to make mediators was enhanced even in babies born to mothers who had COVID-19 earlier in pregnancy. This suggests that infection in the mother has altered the immune system of the baby.

They also found that the mother did pass antibodies against SARS-CoV-2 to their baby through the placenta – known as the transfer of passive immunity. This was particularly evident if the infection was earlier in pregnancy.

Full paper: [The legacy of maternal SARS-CoV-2 infection on the immunology of the neonate](https://www.nature.com/articles/s41590-021-01049-2.pdf)

See also: [Exposure to SARS-CoV-2 during pregnancy impacts the developing immune system of the fetus](https://www.kcl.ac.uk/news/exposure-to-sars-cov-2-during-pregnancy-impacts-the-developing-immune-system-of-the-fetus) | Kings College London

**Title:** Effect of COVID-19 pandemic lockdowns on planned cancer surgery for 15 tumour types in 61 countries

The Lancet Oncology | 5th October 2021

Surgery is the main modality of cure for solid cancers and was prioritised to continue during COVID-19 outbreaks. This study aimed to identify immediate areas for system strengthening by comparing the delivery of elective cancer surgery during the COVID-19 pandemic in periods of lockdown versus light restriction.

Cancer surgery systems worldwide were fragile to lockdowns, with one in seven patients who were in regions with full lockdowns not undergoing planned surgery and experiencing longer preoperative delays. Although short-term oncological outcomes were not compromised in those selected for surgery, delays and non-operations might lead to long-term reductions in survival. During current and future periods of societal restriction, the resilience of elective surgery systems requires strengthening, which might include protected elective surgical pathways and long-term investment in surge capacity for acute care during public health emergencies to protect elective staff and services.

Full paper: [Effect of COVID-19 pandemic lockdowns on planned cancer surgery for 15 tumour types in 61 countries: an international, prospective, cohort study](https://www.thelancet.com/action/showPdf?pii=S1470-2045%2821%2900493-9)

**Title:** DEATHS INVOLVING COVID-19 BY SELF-REPORTED DISABILITY STATUS DURING THE FIRST TWO WAVES OF THE COVID-19 PANDEMIC IN ENGLAND

The Lancet Public Health | 6th October 2021

People with learning disabilities are at substantially increased risk of COVID-19 mortality, but evidence on risks of COVID-19 mortality for disabled people more generally is limited. The authors of this study aimed to use population-level data to estimate the association between self-reported disability and death involving COVID-19 during the first two waves of the COVID-19 pandemic in England.

Full paper: [Deaths involving COVID-19 by self-reported disability status during the first two waves of the COVID-19 pandemic in England: a retrospective, population-based cohort study](https://www.thelancet.com/action/showPdf?pii=S2468-2667%2821%2900206-1)

**Title:** Youth Mental Health and Covid-19

ESRC Centre for Society and Mental Health | Emerging Minds | The Policy Institute | 8th October 2021

This policy briefing has been jointly produced by the ESRC Centre for Society and Mental Health, Emerging Minds, and The Policy Institute, following the delivery of a policy lab in early 2021. During the policy lab, a range of challenges affecting UK children and young people in the short- and long-term were identified and reflected upon. Three key themes emerged:

1. The pandemic has had multiple impacts on education and daily life – particularly the impacts of social isolation, academic pressures, and transitions to online learning. Readapting to the school environment may also bring further challenges.
2. There has been severe disruption to support services – while children and young people experience these mental health challenges, there has been limited access to effective and diverse types of support.
3. There are wider impacts of loss, trauma and financial security – children and young people have been affected by the challenges and losses that their families, communities, and wider society has experienced throughout the pandemic.

Potential solutions to the above challenges were discussed, producing recommended actions focused on three different settings: schools, mental health services, and the wider policy and practice environment.

Recommendations range from review of and investment in digital education tools, equipping school staff to normalise conversations about mental health, increased flexibility in modes of learning, and open access to mental health resources for young people. There is also a call for reforms to the benefit system and universal credit, and an exploration the feasibility of implementing a guaranteed income scheme.

Full briefing: [Youth Mental Health and Covid-19: 2021 Policy Lab Briefing Note](https://www.kcl.ac.uk/csmh/assets/youth-mental-health-and-covid-19-2021-policy-lab-briefing-note.pdf)

Press release: [New policy briefing calls for action to mitigate the impacts of the pandemic on the mental health of young people](https://www.kcl.ac.uk/news/briefing-calls-for-action-on-youth-mental-health-and-covid-19)

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