COVID-19 Critical Intelligence Unit

Evidence digest

13 January 2023

The evidence digest collates recently released reports and evidence – provision of these links does not imply endorsement nor recommendation.

COVID-19 vaccinations in pregnancy and haematological malignancy patients, surgery after COVID-19, risk assessment of XBB.1.5

Peer reviewed journals featured

- Meta-analyses and systematic reviews on:
 - Neonatal outcomes of COVID-19 vaccination in pregnancy <u>here</u>
 - Immunogenicity and risks following SARS-CoV-2 vaccination and booster in hematologic malignancy patients <u>here</u>
- Randomised controlled trials on:
 - Molnupiravir plus usual care versus usual care alone as early treatment for adults with COVID-19 at increased risk of adverse outcomes here and associated commentary here
 - Efficacy of combined visual-olfactory training for patients with COVID-19 resultant olfactory loss here and associated commentary here
 - Long-term outcomes in critically ill patients with COVID-19 (REMAP-CAP trial) <u>here</u> and associated editorial <u>here</u>
 - o Favipiravir in hospitalised patients (PIONEER trial) here and associated commentary here
 - o VV116 versus nirmatrelvir-ritonavir for oral treatment of COVID-19 here
 - Anti-SARS-CoV-2 antibody containing plasma improves outcome in patients with hematologic or solid cancer and severe COVID-19 here
- Observational studies on:
 - B and T-cell immune responses after booster dose of COVID-19 mRNA-vaccine in people with multiple sclerosis using different disease-modifying therapies <u>here</u>
 - Association of time to surgery after COVID-19 infection with risk of postoperative cardiovascular morbidity here
 - Complications following elective major noncardiac surgery among patients with prior SARS-CoV-2 infection here
 - Association of COVID-19 vaccination with breakthrough infections and complications in patients with cancer here
 - Association of SARS-CoV-2 spike protein antibody vaccine response with infection severity in patients with cancer here and associated editorial here
 - o Symptoms of pandemic-associated traumatic stress among mothers in the US here



- Association of COVID-19 vaccination rates of staff and COVID-19 illness and death among residents and staff in US nursing homes here
- Sociodemographic comparison of children with high-risk medical conditions referred versus identified through screening plus outreach for COVID-19 therapeutics <u>here</u>
- Analysis of rituximab use, timing and SARS-CoV-2 vaccination, and COVID-19 hospitalisation or death in patients with multiple sclerosis <u>here</u>
- o Child mortality in England during the first 2 years of the COVID-19 pandemic here
- Complications, adverse events, high costs, and disparities in multisystem inflammatory syndrome in children vs COVID-19 here and associated commentary here
- Risks and burdens of incident dyslipidaemia in long COVID <u>here</u> and commentary <u>here</u>
- o Comparison of rapid antigen tests between Delta and Omicron variants of SARS-CoV-2 here
- Direct and indirect effects of the COVID-19 pandemic on mortality in Switzerland <u>here</u>
- Early estimates of bivalent mRNA vaccine in preventing COVID-19 associated emergency department hospitalisations among immunocompetent adults <u>here</u> and adults ≥ 65 years <u>here</u>
- Effectiveness of COVID-19 vaccines in adolescents and children <u>here</u> and associated editorial <u>here</u>
- Commentary on:
 - o Ecology of SARS-CoV-2 in the post-pandemic era here
 - The impact of ending 'zero COVID' in China here
 - o Science and truth during the COVID-19 pandemic here

Letters and correspondence discussed

- Travel times to facilities offering oral medication therapy for COVID-19 here
- Omicron BQ.1 and BQ.1.1 escape neutralisation by breakthrough infection here
- Efficacy of antiviral agents against Omicron subvariants BQ.1.1 and XBB here
- Neutralisation against BA.2.75.2, BQ.1.1, and XBB from mRNA bivalent booster here

Pre-peer review articles featured

- Delta and Omicron transmission and vaccine impact in Australian educational settings here
- Effectiveness of COVID-19 vaccination in a regional population in Australia here
- Enhanced transmissibility of XBB.1.5 related to strong ACE2 binding and antibody evasion here
- Increased interleukin-6 is associated with long COVID: a systematic review here
- Left ventricular function and myopericarditis after mRNA COVID-19 vaccination here
- Anti-coagulation therapy reduced mortality in COVID-19 patients with high cardiovascular risk here
- Effectiveness of the bivalent mRNA vaccine in preventing severe COVID-19 outcomes <u>here</u>
- Bivalent mRNA vaccine improves antibody-mediated neutralisation of many Omicron variants here
- Effectiveness of infection and vaccines against BA.4/BA.5 and XBB in Singapore here
- Prior infection- and/or vaccine-induced protection against Omicron BA.1, BA.2 and BA.4/BA.5related hospitalisations in older adults here
- Humoral responses against BQ.1.1 after breakthrough infection and mRNA vaccination here
- Clinical characteristics and outcomes from Omicron subvariants and XBB recombinant variant here
- Poor neutralising antibody responses against Omicron BQ.1.1 and XBB here
- Sotrovimab and COVID-19-related hospitalisations or deaths among U.S. veterans here



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- Impact of congenital heart disease on paediatric patients hospitalised for COVID-19 infection here
- Modelling of Omicron variant outbreaks after easing zero-COVID strategy in China here

Guidance and reports

- World Health Organization published:
 - o XBB.1.5 rapid risk assessment, 11 January 2023 here
 - Technical Advisory Group on Virus Evolution on the COVID-19 situation in China here
 - Weekly epidemiological update on COVID-19 <u>here</u>
- European Centre for Disease Prevention and Control on the XBB.1.5 sub-lineage <u>here</u>
- TGA COVID-19 vaccine safety report here

News and blogs

- Coronavirus variant XBB.1.5 rises in the United States is it a global threat? here
- UK deaths from all causes 3.1% above average during the pandemic <u>here</u>
- Combined COVID-19 and flu test authorised for point-of-care use here
- COVID drug Paxlovid was hailed as a game-changer. What happened? here
- Nirmatrelvir associated with lower risk of long COVID <u>here</u>
- China stops counting cases as models predict a million or more deaths here
- Doctors are asked to help track variants among people arriving from China here
- NHS is struggling to treat more patients than before pandemic despite more staff and funding here

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Living Evidence Tables

Living Evidence tables are up-to-date summaries of emerging evidence. Tables are available on SARS-CoV-2 <u>vaccines</u>, <u>variants</u> of concern, and <u>post-acute seguelae of COVID-19 (long COVID)</u>.

