COVID-19 Critical Intelligence Unit

Evidence digest

17 March 2023

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

Mental health symptoms before and during COVID-19, long-term COVID-19 booster effectiveness, BA.4/BA.5 Omicron lineages and immune escape

Peer reviewed journals featured:

- Systematic reviews on:
 - o Comparing mental health symptoms before and during COVID-19 here, here, and here
 - Paediatric emergency department visits for attempted suicide, self-harm, and suicidal ideation before and during COVID-19 <u>here</u> and commentary <u>here</u>
- A narrative review on SARS-CoV-2 infection, DNA damage, cellular senescence and inflammation here and here
- Observational studies on:
 - Long-term COVID-19 booster effectiveness by infection history and clinical vulnerability and immune imprinting <u>here</u> and associated commentary <u>here</u>
 - BA.4/BA.5 Omicron lineages and immune escape here
 - o mRNA vaccines effect on anti-viral immunity and humoral autoimmunity here
 - Protective immunity against medically attended symptomatic Omicron BA.4, BA.5, and XBB reinfections in Singapore <u>here</u> and associated commentary <u>here</u>
 - The risk of venous thromboembolism in COVID-19 outpatients here
 - o Comparison of SARS-CoV-2 variants symptoms among children in Canada here
 - Severe COVID-19 outcomes by cardiovascular risk profile in England in 2020 here
 - o Omicron (B.1.1.529)-related COVID-19 sequelae in cancer patients here
 - o Ambient air pollution exposure linked to long COVID among Swedish young adults here
 - o Persistent COVID-19 symptoms in community-living older adults in Canada here
 - \circ Neonatal outcomes of maternal SARS-CoV-2 infection in the UK \underline{here}
 - The effectiveness of molnupiravir and nirmatrelvir–ritonavir (Paxlovid) in COVID-19 inpatients <u>here</u>
 - Machine learning analysis of correlates of mortality in hospitalised COVID-19 patients <u>here</u>

Letters and correspondence discussed:

- Estimated effectiveness of prior Omicron BA.1/BA.2 infection and booster vaccination against BA.5 infection <u>here</u>
- Efficacy of antivirals and bivalent mRNA vaccines against SARS-CoV-2 isolate CH.1.1 <u>here</u>



Pre-peer review articles featured:

- Early proximal tubular injury in COVID-19-related acute respiratory distress syndrome here
- IL-6 & IL-17 and hypertension and long-COVID sequelae in haemodialysis patients here
- SARS-CoV-2 infection with neurological symptoms and neuroimaging in paediatrics <u>here</u>
- Effect of dapagliflozin on COVID-19 infection and risk of hospitalisation here
- γ' Fibrinogen levels as a biomarker of COVID-19 respiratory disease severity here
- Incidence of giant cell arteritis is associated with COVID-19 prevalence here
- Utility of COVID-19 case reports as a leading indicator for hospitalisation forecasting in the US here
- Evaluating targeted COVID-19 vaccination strategies with agent-based modelling here
- Medium-term COVID-19 scenarios as a function of immune uncertainties and chronic disease here
- Characterisation of long COVID among US Medicare beneficiaries using claims data <u>here</u>
- An analysis of the causes of death from COVID-19 in France in 2020 reveals its effects <u>here</u>

Guidance and reports

• The UK Health Security Agency published an update on SARS-CoV-2 variants of concern and variants under investigation <u>here</u>

News and blogs

• Uncovering a link between COVID-19 and renal cell carcinoma 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>, and <u>variants</u> of concern, and <u>post-acute sequelae of COVID-19 (long COVID)</u>.



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