Weekly Evidence Report

Health Technology Assessment Philippines

24 Jan 2022 to 30 Jan 2022

Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of 17 Jan to 23 Jan 2022. The HTA Unit reviewed a total of **11 studies** for the said period.

Evidence includes **4 studies** on Epidemiology; **1 study** on Transmission; **1 study** on Drugs; **3 studies** on Vaccines, **0 studies** on Equipment and Devices; **0 studies** on Medical and Surgical Procedures; **0 studies** on Traditional Medicine; and **2 studies** on Preventive & Promotive Health.

Sections

- Epidemiology
- Transmission
- Drugs
- Vaccines
- Equipment & Devices
- Medical & Surgical Procedures
- Traditional Medicine
- Preventive & Promotive Health

Evidence on Epidemiology

Local COVID-19 Tracker: https://www.doh.gov.ph/covid19tracker
Local COVID-19 Case Tracker: https://www.doh.gov.ph/covid-19/case-tracker

Date	Author/s	Title	Journal/ Article Type	Summary
25 Jan 2022	WHO Global	Weekly epidemiological update on COVID-19 - 25 January 2022	*WHO Global (Situation Report)*	• Globally, the number of new COVID-19 cases increased in the past week (17-23 January 2022) by 5%, while the number of new deaths remained similar to that reported during the previous week. • As of 23 January, over 346 million confirmed cases and over 5.5 million deaths have been reported worldwide.
			WHO Global (Situation Report) – *Regional Updates*	• A slower increase in case incidence was observed at the global level, with only half of the regions reported an increase in the number of new weekly cases, as compared to five out of six regions in the previous week. • The Eastern Mediterranean region reported the second largest increase in new cases last week (39%), followed by the South-East Asia region (36%). • New weekly deaths increased in South-East Asia Region (44%), the Eastern Mediterranean Region (15%) and the Region of the Americas (7%),while remaining approximately the same as the previous week in the other regions.
28 Jan 2022	European Centre for Disease Prevention and Control (ECDC)	Weekly COVID-19 Surveillance Report	*ECDC Data Set*	• At the end of week 3 (week ending Sunday, 23 January 2022), the overall epidemiological situation in the EU/EEA was characterised by a very high overall case notification rate that has increased rapidly in the past five weeks and an elevated but stable death rate. • B.1.1.529 (Omicron) was the dominant variant (accounting for >50% of sequenced viruses) in 17 of the 22 EU/EEA countries with adequate sequencing volume

Evidence on Vulnerable Population Epidemiology

Date	Author/s	Title	Journal/ Article Type	Summary
28 Jan 2022	Fremed, M., et al	Elevated Cardiac Biomarkers and Outcomes in Children and Adolescents with Acute COVID-19	*Cardiology in the Young - Cambridge Coronavirus Collection*	In this retrospective, single center, cohort study, we describe the cardiac involvement found in this population and report on outcomes of patients with and without elevated cardiac biomarkers. Those with MIS-C, cardiomyopathy, or complex congenital heart disease were excluded. Inclusion criteria were met by 80 patients during the initial peak of the pandemic at our institution. High-sensitivity troponin T and/or NT-proBNP were measured in 27/80 (34%) patients and abnormalities were present in 5/27 (19%), all of whom had underlying comorbidities. Advanced respiratory support was required in all patients with elevated cardiac biomarkers. Electrocardiographic abnormalities were identified in 14/38 (37%) studies. Echocardiograms were performed on 7/80 subjects, and none demonstrated left ventricular dysfunction. Larger studies to determine the true extent of cardiac involvement in children with COVID-19 would be useful to guide recommendations for standard workup and management.
28 Jan 2022	Topless R., et al.	Gout and the risk of COVID-19 diagnosis and death in the UK Biobank: a population-based study	*Lancet Rheumatology (Case-control study)*	• Gout was associated with diagnosis of COVID-19 (odds ratio [OR] 1·20, 95% CI 1·11–1·29) but not with risk of COVID-19-related death in the cohort of patients diagnosed with COVID-19 (1·20, 0·96–1·51). In the entire cohort, gout was associated with COVID-19-related death (1·29, 1·06–1·56); women with gout had an increased risk of OVID-19-related death (1·98, 1·34–2·94), whereas men with gout did not (1·16, 0·93–1·45). We found no significant differences in the risk of COVID-19-related death according to prescription of urate-lowering therapy or colchicine. When patients with gout were stratified by vaccination status, the risk of diagnosis with COVID-19 was significant in the non-vaccinated group (1·21, 1·11–1·30) but not the vaccinated group (1·09, 0·65–1·85). • Gout is a risk factor for COVID-19-related death in the UK Biobank cohort, with an increased risk in women with gout, which was driven by risk factors independent of the metabolic comorbidities of gout.

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
27 Jan 2022	UK Health Security Agency	The effect of vaccination on transmission of COVID-19 A rapid review	*Rapid review*	• There was evidence across 13 transmission studies (all observational, all variants) that fully vaccinated index cases transmitted COVID-19 to their contacts less than unvaccinated index cases, particularly for wild-type and non-Delta variants (moderate certainty on GRADE), and this reduction was substantial (e.g. >50% reduction in transmission) in many studies. • In most studies assessing both partial and full vaccination, partial vaccination was much less effective for reducing transmission from cases than full vaccination. • Evidence from the 32 viral load studies was broadly supportive of the transmission studies: 23 studies that looked at wild-type and non-Delta variants of COVID-19 (moderate certainty on GRADE) typically showed that fully vaccinated cases had higher Ct values than unvaccinated cases (suggesting a lower viral load), however, evidence was again more mixed for the Delta variant (low certainty on GRADE), as while most of the 16 studies suggested only a small (or no) difference in Ct values between fully vaccinated and unvaccinated cases, some studies suggested Ct values were higher in fully vaccinated cases, and 1 study suggested lower Ct values in fully vaccinated cases.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
27 Jan 2022	UK NICE	COVID-19 rapid guideline: managing COVID-19 - Updated recommendation on neutralising monoclonal antibody (sotrovimab, or combination casirivimab plus imdevimab)	*UK NICE COVID-19 rapid guideline*	• There is evidence that neutralising monoclonal antibodies (sotrovimab, and the combination of casirivimab and imdevimab) reduce the combined outcome of hospitalisation or death, and clinical progression to severe disease, in people who are not in hospital with COVID-19 but are thought to be at high risk of progression to severe disease. • In vitro research data on the efficacy of sotrovimab, and the combination of casirivimab and imdevimab against the new Omicron (B.1.1.529) variant, suggests that neutralising monoclonal antibodies have varying biological efficacy against Omicron. The results suggest this may also be the case with future emerging SARS-CoV-2 variants. The panel agreed that more research into this area is needed to guide treatment and made a research recommendation to address this gap in the published evidence.

Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
24 Jan 2022	Abu-Raddad, L., et al	Effectiveness of BNT162b2 and mRNA-1273 COVID-19 boosters against SARS-CoV-2 Omicron (B.1.1.529) infection in Qatar	*medRxiv (Retrospective study)*	In a population of 2,232,224 vaccinated persons with at least two doses, two matched, retrospective cohort studies were implemented to investigate effectiveness of booster vaccination against symptomatic SARS-CoV-2 infection and against COVID-19 hospitalization and death, up to January 9, 2022. Association of booster status with infection was estimated using Cox proportional-hazards regression models. For BNT162b2, cumulative symptomatic infection incidence was 2.9% (95% CI: 2.8-3.1%) in the booster-dose cohort and 5.5% (95% CI: 5.3-5.7%) in the primary-series cohort, after 49 days of follow-up. Adjusted hazard ratio for symptomatic infection was 0.50 (95% CI: 0.47-0.53). Booster effectiveness relative to primary series was 50.1% (95% CI: 47.3-52.8%). For mRNA-1273, cumulative symptomatic infection incidence was 1.9% (95% CI: 1.7-2.2%) in the booster-dose cohort and 3.5% (95% CI: 3.2-3.9%) in the primary-series cohort, after 35 days of follow-up. The adjusted hazard ratio for symptomatic infection was 0.49 (95% CI: 0.43-0.57). Booster effectiveness relative to primary series was 50.8% (95% CI: 43.4-57.3%). There were fewer cases of severe COVID-19 in booster-dose cohorts than in primary-series cohorts, but cases of severe COVID-19 were rare in all cohorts.

NYT Coronavirus Vaccine Tracker:
https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html

Bloomberg Vaccine Tracker:
https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/

London School of Hygiene and Tropical Medicine Vaccine Trial Mapper and Tracker:
https://vac-lshtm.shinyapps.io/ncov_vaccine_landscape/

ACIP Files:
https://drive.google.com/drive/u/0/folders/1v-jd66qIIxnUkfzXWKqiD0mkVvqy_VvJ?pli=1

Evidence on Vaccines (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
25 Jan 2022	Tsz Tsun Lai, F., et al.	Carditis After COVID-19 Vaccination With a Messenger RNA Vaccine and an Inactivated Virus Vaccine	*Annals of Internal Medicine (Case-control study)*	A total of 160 case patients and 1533 control participants were included. Incidence of carditis per 100 000 doses of CoronaVac and BNT162b2 administered was estimated to be 0.31 (95% CI, 0.13 to 0.66) and 0.57 (CI, 0.36 to 0.90), respectively. Multivariable analyses showed that recipients of the BNT162b2 vaccine had higher odds of carditis (adjusted odds ratio [OR], 3.57 [CI, 1.93 to 6.60]) than unvaccinated persons. Stratified by sex, the OR was 4.68 (CI, 2.25 to 9.71) for males and 2.22 (CI, 0.57 to 8.69) for females receiving the BNT162b2 vaccine. The ORs for adults and adolescents receiving the BNT162b2 vaccine were 2.41 (CI, 1.18 to 4.90) and 13.79 (CI, 2.86 to 110.38), respectively. Subanalysis showed an OR of 9.29 (CI, 3.94 to 21.91) for myocarditis and 1.06 (CI, 0.35 to 3.22) for pericarditis associated with BNT162b2. The risk was mainly seen after the second dose of BNT162b2 rather than the first. No association between CoronaVac and carditis with a magnitude similar to that for BNT162b2 was seen.
27 Jan 2022	Corrao, G., et al	Persistence of protection against SARS-CoV-2 clinical outcomes up to 9 months since vaccine completion: a retrospective observational analysis in Lombardy, Italy	*Lancet (Observational analysis)*	In this retrospective observational analysis using the vaccination campaign integrated platform of the Italian region of Lombardy, 5 351 085 individuals aged 12 years or older who received complete vaccination from Jan 17 to July 31, 2021, were followed up from 14 days after vaccine completion until Oct 20, 2021. Changes over time in outcome rates (ie, SARS-CoV-2 infection and severe illness among vaccinated individuals) were analysed with age-period-cohort models. Trends in vaccine effectiveness (ie, outcomes comparison in vaccinated and unvaccinated individuals) were also measured.

Evidence on Vaccines (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
27 Jan 2022	Corrao, G., et al	Persistence of protection against SARS-CoV-2 clinical outcomes up to 9 months since vaccine completion: a retrospective observational analysis in Lombardy, Italy	*Lancet (Observational analysis)*	<cont.> Overall, 14 140 infections and 2450 severe illnesses were documented, corresponding to incidence rates of 6·7 (95% CI 6·6–6·8) and 1·2 (1·1–1·2) cases per 10 000 person-months, respectively. From the first to the ninth month since vaccine completion, rates increased from 4·6 to 10·2 infections, and from 1·0 to 1·7 severe illnesses every 10 000 person-months. These figures correspond to relative reduction of vaccine effectiveness of 54·9% (95% CI 48·3–60·6) for infection and of 40·0% (16·2–57·0) for severe illness. The increasing infection rate was greater for individuals aged 60 years or older who received adenovirus-vectored vaccines (from 4·0 to 23·5 cases every 10 000 person-months). The increasing severe illness rates were similar for individuals receiving mRNA-based vaccines (from 1·1 to 1·5 every 10 000 person-months) and adenovirus-vectored vaccines (from 0·5 to 0·9 every 10 000 person-months).

Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
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Evidence on Equipment & Devices

Date	Author/s	Title	Journal/ Article Type	Summary
-	-	-	-	-

Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
-	-	-	-	-

Evidence on Preventive & Promotive Health

Evidence on Screening/Surveillance

Date	Author/s	Title	Journal/ Article Type	Summary
30 Jan 2022	Ahmed, W., et al	Limit of Detection for Rapid Antigen Testing of the SARS-CoV-2 Omicron Variant	*medRxiv (in-vitro quantitation)*	The limit of detection (LoD) for the Omicron variant was determined compared with the WA1 strain used for LoD studies described in the Instructions for Use for all Emergency Use Authorization (EUA)-approved antigen tests. Using live virus (to avoid artifactual findings potentially obtained with gamma-irradiated or heat-killed virus) quantified by plaque forming units (PFU),the analytical sensitivity of three antigen tests widely used in the United States: the Abbott Binax Now, the AccessBio CareStart , and LumiraDx antigen tests was examined. The 95% detection threshold (LoD) for antigen tests was found to be at least as good for Omicron as for the WA1 strain. Furthermore, the relationship of genome copies to plaque forming units for Omicron and WA1 overlap. Therefore, the LoD equivalency also applies if the quantitative comparator is genome copies determined from live virus preparations. Taken together, data support the continued ability of the antigen tests examined to detect the Omicron variant.

Evidence on Preventive & Promotive Health (cont.)

Evidence on Personal Measures

Date	Author/s	Title	Journal/ Article Type	Summary
26 Jan 2022	Pope, Z., et al	Inactivation of Replication-Competent SARS-CoV-2 on Common Surfaces by Disinfectants	*Infection Control & Hospital Epidemiology*	This experimental laboratory-based study evaluated two disinfectants' efficacy against replication-competent severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) on three surfaces. Disinfectants were efficacious at eliminating the presence, viability, and subsequent replication of SARS-CoV-2 on all surfaces. Although SARS-CoV-2 likely spreads primarily via airborne transmission, layered mitigation should include high-touch surface disinfection.

Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
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