# Weekly Evidence Report

Health Technology Assessment Philippines

08 July to 14 July 2022

## Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Division reviewed for the period of 08 July to 14 July 2022. The HTA Division reviewed a total of **8 studies** for the said period.

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

## Sections

## 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 |
|---|---|---|---|---|
| 13 July 2022 | WHO Global | Weekly epidemiological update on COVID-19 - 13 July 2022 | *WHO Global (Global overview)* | • Globally, the number of weekly cases has increased for the fifth consecutive week, after a declining trend since the last peak in March 2022.<br>• During the week of 4 to 10 July 2022, over 5.7 million new cases were reported, a 6% increase as compared to the previous week.<br>• As of 10 July 2022, just under 553 million confirmed cases and over 6.3 million deaths have been reported globally. |
| | | | *WHO Global (Special Focus: Update on SARS-CoV-2 variants of interest and variants of concern)* | • The Omicron VOC remains the dominant variant circulating globally, accounting for 84% of sequences reported in the past 30 days.<br>• Approximately 15% of sequences reported to GISAID in the last 30 days have not yet been assigned a PANGO lineage but majority are presumed to be Omicron.<br>• Globally, the Omicron lineages BA.2 and BA.2.12.1 show declining trends, while BA.4 and BA.5 show increasing trends. |
| | | | *WHO Global (WHO Regional overview: Southeast Asia Region)* | • The South-East Asia Region has been reporting an increasing trend in cases since early June, with over 164 000 new cases reported, a 5%increase as compared to the previous week.<br>• The highest numbers of new cases were reported from India (120 222 new cases; 8.7 new cases per 100 000; +7%), Indonesia (17 388 new cases; 6.4 new cases per 100 000; +29%), and Thailand (14 938 new cases; 21.4 new cases per 100 000; -6%). |

## Evidence on Drugs

| Date | Author/s | Title | Journal/ Article Type | Summary |
|---|---|---|---|---|
| 08 July 2022 | ACTIV-3/Therapeutics for Inpatients with COVID-19 (TICO) Study Group. | Tixagevimab–cilgavimab for treatment of patients hospitalised with COVID-19: a randomised, double-blind, phase 3 trial | *The Lancet - Respiratory Medicine*<br><br>*Randomized Control Trial* | • Tixagevimab–cilgavimab is a neutralising monoclonal antibody combination hypothesised to improve outcomes for patients hospitalised with COVID-19.<br>• The estimated cumulative incidence of sustained recovery was 89% for tixagevimab–cilgavimab and 86% for placebo group participants at day 90 in the full cohort (recovery rate ratio [RRR] 1·08 [95% CI 0·97–1·20]; p=0·21). Results were similar in the seronegative subgroup (RRR 1·14 [0·97–1·34]; p=0·13).<br>• Mortality was lower in the tixagevimab–cilgavimab group (61 [9%]) versus placebo group (86 [12%]; hazard ratio [HR] 0·70 [95% CI 0·50–0·97]; p=0·032).<br>• The composite safety outcome occurred in 178 (25%) tixagevimab–cilgavimab and 212 (30%) placebo group participants (HR 0·83 [0·68–1·01]; p=0·059).<br>• Serious adverse events occurred in 34 (5%) participants in the tixagevimab–cilgavimab group and 38 (5%) in the placebo group.<br>• Among patients hospitalised with COVID-19 receiving remdesivir and other standard care, tixagevimab–cilgavimab did not improve the primary outcome of time to sustained recovery but was safe and mortality was lower. |

## Evidence on Vaccines

| Date | Author/s | Title | Journal/ Article Type | Summary |
|---|---|---|---|---|
| 08 July 2922 | Mello., et al. | Effectiveness of vaccination mandates in improving uptake of COVID-19 vaccines in the USA | *eBioMedicine Part of THE LANCET Discovery Science*<br><br>*Narrative* | • COVID-19 vaccines have shown higher effectiveness in preventing infection with some variants than others, but their great value in preventing severe illness and death is clear. Mandates can play a role in promoting uptake of these vaccines.<br>  ○ Abundant evidence shows that school-entry mandates have been highly effective in improving uptake of childhood vaccines.<br>  ○ Current evidence regarding the safety of COVID-19 vaccines in adults is sufficient to support mandates |

## Evidence on Vaccines (continued)

| Date | Author/s | Title | Journal/ Article Type | Summary |
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| | | | | *Continuation...*<br>○ The effectiveness of adult COVID-19 vaccination mandates in increasing vaccination uptake might be lower than the very high effectiveness of school-entry mandates observed for other vaccinations in the past.<br>○ Vaccine requirements will probably be most effective when enforced by employers and educational institutions.<br>○ Consideration of school-entry mandates should follow review of real-world safety data and full licensure of the vaccines for children, which could come as soon as the start of the 2022–23 school year.<br>● Active surveillance for adverse events following immunisation and clear, sophisticated communication of findings to the public are essential for effective vaccination policies, including mandates. Imposing mandates does not remove the need for effective messaging to overcome vaccine hesitancy.<br>● Giving appropriate emphasis to the major headline of the accreting vaccine safety studies—the vaccines are indeed safe—can create more fertile soil for vaccination mandates to take root. |
| 12 July 2922 | Saxena., et al. | Breakthrough SARS-CoV-2 infections, morbidity, and seroreactivity following initial COVID-19 vaccination series and additional dose in patients with SLE in New York City | *The Lancet - Rheumatology*<br><br>*Cohort Study* | ● Patients with systemic lupus erythematosus (SLE) are at high risk of severe disease from COVID-19, due to inherent immune perturbations and frequent use of immunosuppressants.These medications also affect clinical and serological responses to vaccination against SARS-CoV-2, with higher rates of breakthrough hospitalisations and attenuated seroreactivity in patients with immunosuppressed rheumatic disease after the initial vaccination series compared with controls. |

## Evidence on Vaccines (continued)

| Date | Author/s | Title | Journal/ Article Type | Summary |
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| | | | | *Continuation...*<br>• This study represents the first report of the clinical efficacy of the initial vaccination series and an additional dose against COVID-19, inclusive of the omicron BA.1 wave in New York City, and the first known longitudinal documentation of antibody responses to vaccination against COVID-19 in a cohort of patients with SLE.<br>• Patients with SLE showed an overall improvement in serological response after an additional dose of COVID-19 vaccine compared with that observed following the initial vaccination series. However, five patients had lower antibody titres at time point than at time point, possibly due to variable timing of the serological evaluation at time point relative to vaccination, which might have been shorter.<br>• Of note, SARS-CoV-2 spike antibody titre was not associated with breakthrough SARS-CoV-2 infection, potentially indicating the known immune evasion of the omicron variant or a plateau effect beyond a particular antibody titre.<br>• Given the correlation between anti-SARS-CoV-2 spike protein antibody titres and antigen-specific production of interferon-γ (representing T-cell responses), it is assumed that the additional dose accentuates both responses, providing the benefit against severe disease reported. |
| 13 July 2022 | Nordström, et al. | Effectiveness of a fourth dose of mRNA COVID-19 vaccine against all-cause mortality in long-term care facility residents and in the oldest old: A nationwide, retrospective cohort study in Sweden | *The Lancet Regional Health - Europe*<br><br>*Retrospective Cohort Study* | • The results of this study suggest that as compared with a third dose, a fourth dose of an mRNA COVID-19 vaccine cut the short-term risk of death from all causes by about 40% in LTCF residents, and by more than 70% in the oldest old living at home during a period when the Omicron variant of SARS-CoV-2 was dominating.After two months, the protection appeared to begin declining slightly. |

## Evidence on Vaccines (continued)

| Date | Author/s | Title | Journal/ Article Type | Summary |
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| | | | | *Continuation...*<br>• Findings indicate that promoting a high uptake of the fourth dose may help prevent premature mortality in frail older individuals, and that timely administration of the doses is important.<br>• This nationwide study suggests that a fourth dose of an mRNA COVID-19 vaccine reduces premature mortality from all causes among residents in LTCFs and in the oldest old, as compared with a third dose.<br>• Accordingly, promoting a high uptake of the fourth dose in the oldest and frailest people may help prevent premature deaths, even after the emergence of the Omicron variant for which disease severity appears reduced as compared to the earlier variants. |

**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**

**WHO Landscape of observational studies on the effectiveness of COVID-19 vaccination:**
**https://www.who.int/publications/m/item/draft-landscape-of-observational-study-designs-on-the-effectiveness-of-covid-19-vaccination**

## Evidence on Medical and Surgical Procedures

| Date | Author/s | Title | Journal/ Article Type | Summary |
|---|---|---|---|---|
| 08 July 2022 | Masiá., et al. | Robust long-term immunity to SARS-CoV-2 in patients recovered from severe COVID-19 after interleukin-6 blockade | *eBioMedicine Part of THE LANCET Discovery Science*<br><br>*Prospective, longitudinal cohort study* | • Prospective, longitudinal cohort study conducted in patients hospitalized for severe or critical COVID-19 with laboratory confirmed SARS-CoV-2 infection.<br>• IL-6 blockade in patients with severe COVID-19 does not have deleterious effects on long-term immunity to SARS-CoV-2. The magnitude of both antibody and T-cell responses was stronger than the observed in non-anti-cytokine-treated patients with no increase in the risk of reinfections. |
| 09 July 2022 | Yao, et al. | Safety and efficacy of mesenchymal stem cells in severe/critical patients with COVID-19: A systematic review and meta-analysis | *eClinicalMedicine Part of THE LANCET Discovery Science*<br><br>*Systematic review and meta-analysis* | • Compared to placebo or standard care, MSCs provide significant benefit in the treatment of patients with severe/critical COVID-19, in terms of in-hospital mortality rate (odds ratio: 0.52, 95% CI 0.32-0.84), with very low heterogeneity (P=0.998 [Q test], I2=0.0%) and less AEs.<br>• No significant difference was found in mortality rate due to the different disease categories or MSC doses. Furthermore, no publication bias was found.<br>• The present study demonstrates that MSCs are highly likely to reduce mortality and are safe to use for patients with severe or critical COVID-19, regardless of whether 1-3 doses are applied. However, due to the small sample size of the included studies, further high-quality, large-scale trials are needed to confirm this statement in the future. |
| 11 July 2022 | Wilheim, et al. | Limited neutralisation of the SARS-CoV-2 Omicron subvariants BA.1 and BA.2 by convalescent and vaccine serum and monoclonal antibodies | *eBioMedicine Part of THE LANCET Discovery Science*<br><br>*In vitro study* | • Both SARS-CoV-2 Omicron subvariants BA.1 and BA.2 escape antibody-mediated neutralisation elicited by vaccination, previous infection with SARS-CoV-2, and monoclonal antibodies.<br>• Waning immunity renders the majority of tested sera obtained three months after booster vaccination negative in BA.1 and BA.2 neutralisation.<br>• Omicron subvariant specific resistance to the monoclonal antibodies casirivimab/imdevimab and sotrovimab emphasizes the importance of genotype-surveillance and guided application. |

**Note.** Studies that have not been peer-reviewed are highlighted in red.

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## Evidence on Transmission

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

| Date | Author/s | Title | Journal/ Article Type | Summary |
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## Evidence on Traditional Medicine

| Date | Author/s | Title | Journal/ Article Type | Summary |
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## Evidence on Preventive & Promotive Health

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