Weekly Evidence Report

Health Technology Assessment Philippines

21 Feb 2022 to 27 Feb 2022

Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of 14 Feb to 20 Feb 2022. The HTA Unit reviewed a total of **10 studies** for the said period.

Evidence includes **2 studies** on Epidemiology; **2 study** on Transmission; **2 studies** 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 **1 studies** 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
22 Feb 2022	WHO Global	Weekly epidemiological update on COVID-19 - 22 February 2022	WHO Global (Situation Report)	• Globally, during the week of 14 to 20 February 2022, the number of new COVID-19 cases and deaths decreased by 21% and 8% respectively, compared to the previous week. • Across the six WHO regions, over 12 million new cases and over 67 000 new deaths were reported. • As of 20 February 2022, over 422 million confirmed cases and over 5.8 million deaths have been reported globally.
			WHO Global (Situation Report – *Regional Updates)*	• At the regional level, the Western Pacific Region reported a 29% increase in the number of new weekly cases,while all other regions reported decreases: the Eastern Mediterranean Region (-34%), the Region of the Americas (-29%), the European Region (-26%), the African Region (-22%) and the South-East Asia Region (-17%). • The number of new weekly deaths increased in the Western Pacific (+21%) and African (+20%) Regions and decreased in the South-East Asia (-37%), the Regions of Americas (-9%), the European Region (-5%) and the Eastern Mediterranean Region (-4%)).
			WHO Global (Situation Report – *SARS-CoV-2 variants of interest and variants of concern)*	• Available evidence on the phenotypic impacts of VOCs is reported in previous editions of the COVID-19 Weekly Epidemiological Update. Since the last update on 8 February 2022, there have been several new publications on the phenotypic characteristics of VOCs, including Omicron. Some of these studies have not been peer-reviewed and the findings must therefore be interpreted with due consideration of this limitation.

Evidence on Epidemiology (continued)

Date	Author/s	Title	Journal/ Article Type	Summary
25 Feb 2022	European Centre for Disease Prevention and Control (ECDC)	Country overview report: week 7 2022	*ECDC Data Set / Weekly report*	• At the end of week 7 2022 (week ending Sunday, 20 February), the overall epidemiological situation in the EU/EEA was characterised by a high but sharply decreasing overall case notification rate. Only three countries reported an increase compared with the previous week, of which only one is forecast to continue increasing for the next two weeks. • The overall COVID-19 case notification rate for the EU/EEA was 2 265 per 100 000 population (3 036 the previous week).

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
25 Feb 2022	Dinoi A., et al.	A review on measurements of SARS-CoV-2 genetic material in air in outdoor and indoor environments: Implication for airborne transmission	*Science of the Total Environment / Systematic Review*	• Five studies out of the eight available (62.5%) reported negative results with SARS-CoV-2 concentrations lower than the detection limit (LOD). • Of the three studies reporting positive samples, one (Setti et al., 2020) does not report concentrations, the other two (Liu et al., 2020; Kayalar et al., 2021) quantifies concentrations of viral copies in air. • It was concluded that these samples presented undetectable or very low concentrations (<3 copies m−3) with the exclusion of the crowded sites in which traces of SARS-CoV-2 were observed up to 11 copies m−3. • These concentrations appear to be lower than those found in indoor in the same study (i.e. 1–42 copies m−3 with a positivity rate of 67%).
25 Feb 2022	El-Qushayri A., et al.	Does dengue and COVID-19 co-infection have worse outcomes? A systematic review of current evidence	*Reviews in Medical Virology / Systematic Review*	• Out of 89 cases identified with dengue and COVID-19 co-infection, 17 patients passed away, with a prevalence of 19.1%. • In addition, the mortality rates were higher among males than females, with a prevalence of 10.1% and 9%, respectively. • Seven cases needed ICU admission, assuming a prevalence of 7.8%. • The results indicated the high mortality rate among these patients (19.1%), based on cumulative evidence from relevant studies. This rate is remarkably higher than the estimated global rates for dengue and COVID-19 patients (1.3% and 2.04%, respectively). • COVID-19 and dengue co-infection had worse outcomes regarding mortality rates, ICU admission, and prolonged hospital stay. Thus, wise-decision management approaches should be adequately offered to these patients to enhance their outcomes.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
21 Feb 2022	Monsel A., et al.	Treatment of COVID-19-associated ARDS with mesenchymal stromal cells: a multicenter randomized double-blind trial	*BMC Critical Care / Randomized Clinical Trial*	• Among the 107 patients screened for eligibility from April 6, 2020, to October 29, 2020, 45 were enrolled, randomized and analyzed. PaO2/FiO2 changes between D0 and D7 did not differ significantly between the UC-MSCs and placebo groups (medians [IQR] 54.3 [– 15.5 to 93.3] vs 25.3 [– 33.3 to 104.6], respectively. • ANCOVA estimated treatment effect 7.4, 95% CI – 44.7 to 59.7; P = 0.77). • Six (28.6%) of the 21 UC-MSCs recipients and six of 24 (25%) placebo-group patients experienced serious adverse events, none of which were related to UC-MSCs treatment.
22 Feb 2022	Wang Z., et al.	Potentially effective drugs for the treatment of COVID-19 or MIS-C in children: a systematic review	*European journal of Pediatrics / Systematic Review and Meta-analysis*	• In terms of remdesivir, there was no controlled study to prove its efficacy and safety in treating children and adolescents with COVID-19. • A systematic review and network meta-analysis of adult patients based on randomized controlled trials showed that patients treated with remdesivir for 5 days had a higher rate of clinical improvement compared with placebo (OR=1.68 (95% CI 1.18–12.40)). • For glucocorticoids, the meta-analysis results showed no statistically significant difference in the improvement of mortality and mechanical ventilation rate between the intervention and control group. • The current evidence in the included studies is insignificant and of low quality, which does not adequately demonstrate the effectiveness and safety of using remdesivir, glucocorticoids, and IVIG in treating children and adolescents with COVID-19 or MIS-C. • Therefore, it is recommended to conduct high-quality randomized controlled trials to provide substantial evidence for the development of guidelines.

Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
21 Feb 2022	Feikin D., et al.	Duration of effectiveness of vaccines against SARS-CoV-2 infection and COVID-19 disease: results of a systematic review and meta-regression	*The Lancet / Systematic Review and Meta-Regression*	• On average, vaccine efficacy or effectiveness against SARS-CoV-2 infection decreased from 1 month to 6 months after full vaccination by 21% among people of all ages and 20.7% among older people (at least 50 years old). • For symptomatic COVID-19 disease, vaccine efficacy or effectiveness decreased by 24.9%) in people of all ages and 32% in older people. • For severe COVID-19 disease, vaccine efficacy or effectiveness decreased by 10% in people of all ages and 9.5% in older people. • 81% vaccine efficacy or effectiveness estimates against severe disease remained greater than 70% over time.
23 Feb 2022	Qaderi K., et al.	Cutaneous adverse reactions of COVID-19 vaccines: a systematic review	*Dermatologic Therapy / Systematic Review*	• The results showed that the most common injection site reactions and delayed large local reactions, arising from all vaccine types, were redness/ erythema (39%), followed by: itchiness (28%), urticarial rash (17%) on the neck, upper limbs, and trunk, morbilliform eruptions (6.5%), Pityriasis rosea (3%), and swelling, burning, etc. • Most patients showed cutaneous reactions after the first dose of vaccination while others had very rare adverse dermatological reactions after first and second doses. Most adverse reactions were reported after mRNA-based vaccines. • The cutaneous side effects of the COVID-19 vaccines appear to be more common in women (84% of reported cutaneous reaction after COVID vaccination), and diverse age groups. Most patients were middle-aged.

Evidence on Vaccines (continued)

Date	Author/s	Title	Journal/ Article Type	Summary
23 Feb 2022	Janssen Y., et al.	Phase I interim results of a phase I/II study of the IgG-Fc fusion COVID-19 subunit vaccine, AKS-452	*Elsevier: Vaccine / Clinical Trial*	• The study aimed to to evaluate safety and immunogenicity parameters of AKS-452 emulsified in Montanide™ ISA 720 • Trial participants included healthy adults between the ages 18 and 65 years of age that were COVID-19 seronegative and confirmed never to have contracted COVID-19 via questionnaire • The overall safety assessment of AKS-452 in this 60-subject phase I clinical study showed limited side-effects in which no SAEs were attributable to vaccine dosing, and only a few mild AEs were associated with dosing that were comparable to or less than those of other registered COVID-19 vaccines. • The pre-mentioned manufacturing capacity is extremely significant and far surpasses the production throughput and costs of the other viral-based, nucleic acid-based, and full-length recombinant SP subunit-based vaccines • The potency (including strong neutralization against the alpha and delta variants), manufacturability, stability at easily achievable temperatures, and mechanism-of-action of the AKS-452 Fc-fusion protein formulated with adjuvant, therefore, offer an opportunity to immunize billions of people globally to maintain high levels of neutralizing anti-SP/RBD Ab titers throughout the population, regardless of COVID-19 status.

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 Preventive & Promotive Health

Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
22 Feb 2022	Hannemann J., et al.	The impact of the COVID-19 pandemic on the mental health of medical staff considering the interplay of pandemic burden and psychosocial resources-A rapid systematic review	*PLOS ONE: Public Health Implication of a Changing Climate / Systematic Review*	• Most studies (n = 41) applied a cross-sectional design. • Their results suggest that there are several statistically significant pandemic risk factors for mental health problems in HCWs such as high risk and fear of infection, while resilience, active and emotion-focused coping strategies as well as social support can be considered beneficial when protecting different aspects of mental health in HCWs during the COVID-19 pandemic. • Evidence for patterns of interaction between outcomes were found in the context of coping style when facing specific pandemic stressors.

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
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Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
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