Weekly Evidence Report

Health Technology Assessment Philippines

20 – 26 August 2022

Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of 20 -26 August 2022. The HTA Division reviewed a total of 16 studies for the said period.

Evidence includes 3 studies on Epidemiology; 5 studies on Vaccines; 2 studies on Drugs; 2 studies on Transmission; 1 study on Equipment and Devices; 1 study on Medical and Surgical Procedures; 1 study on Traditional Medicine; 1 study on Preventive & Promotive Health; and 0 study on Other Health Technologies.

Sections

Evidence on Epidemiology

Local COVID-19 Case Tracker:

https://doh.gov.ph/2019-nCoV?gclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX_VVSGA-HmO0Pt5_CscykID7xZv4zqlXG5vm9PM2xoC27QQAvD_BwE

Date	Author/s	Title	Journal/ Article Type	Summary
21 August 2022	Joint ECDC-WHO	Joint ECDC-WHO Regional Office for Europe Weekly COVID-19 Surveillance Bulletin	*ECDC Data Set / Epidemiological update*	• In the WHO European Region in week 33/2022 there were 1 403 094 new confirmed cases of COVID-19 and 4 795 new deaths reported by national authorities. • This represents a decrease of 14.7% in the number of new cases and a decrease of 20.1% in the number of deaths compared to week 32/2022. • In week 33/2022, 21.7% of cases were in persons aged ≥65 years and 89.1% of fatal cases were in persons aged ≥65 years.
24 August 2022	WHO Global	https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---24-august-2022	*WHO Publications / Global Emergency Situational Updates*	• Globally, the number of new weekly cases decreased by 9% during the week of 15 to 21 August, 2022, as compared to previous week, with over 5,3 million new cases reported. • The number of new weekly deaths decreased by 15%, as compared to the previous week, with over 14 000 fatalities reported. As of 21 August 2022, 593 million confirmed cases and 6.4 million deaths have been reported globally.. • The WHO advised caution when interpreting the trends because fewer tests have been performed overall and fewer cases have been found due to numerous nations gradually altering their COVID-19 testing techniques.
26 August 2022	European CDC	https://covid19-country-overviews.ecdc.europa.eu/index.html	*ECDC Data Set / Epidemiological update*	• The aggregate notification rate of COVID-19 cases in the EU/EEA at the end of week 33 in 2022 (week ending August 21) decreased by 21% from the previous week as part of a 5-week decreasing trend. However, it remained high (393 per 100 000 people, 10% of the pandemic maximum). • Case rates among those 65 and older showed a similar downward trend, reaching 36% of the pandemic maximum for this metric.

Evidence on Vaccines

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

WHO COVID-19 Vaccine Tracker:
https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines

WHO SAGE Vaccine Recommendations:
https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization

Local COVID-19 Vaccine Updates: https://doh.gov.ph/vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
22 August 2022	Powell et al. 2022	Protection against symptomatic disease with the delta and omicron BA.1/B.A2 variants of SARS-CoV-2 after infection and vaccination in adolescents: national observational test-negative case control study, August 2021 to March 2022, England	*MedRxiv/ Test-negative case control*	• Background Little is known about the protection following prior infection with different SARS-CoV-2 variants, COVID-19 vaccination, and a combination of the two (hybrid immunity) in adolescents. • Findings By 31 March 2022, 63.6% of 16-17-year-olds and 48.2% of 12-15-year-olds had received ≥1 COVID-19 mRNA vaccine dose.Between 08 August 2021 and 31 March 2022, 1,161,704 SARS-CoV-2 PCR-tests were successfully linked to COVID-19 vaccination status.. • Previously infected and vaccinated adolescents had the highest protection, irrespective of primary infecting SARS-CoV-2 strain. The highest protection against omicron was observed in vaccinated adolescents with prior omicron infection, reaching 96.4% (95%CI, 84.4-99.1) at 15-24 weeks post dose two.
22 August 2022	Kamali et al., 2022	Determinants of COVID-19 vaccine acceptance in health care workers in Iran: National Survey	BMC Infectious Diseases/Cross-sectional survey	• It seems that acceptance of COVID-19 vaccination is the most effective way to tackle the COVID-19 pandemic now. Health care workers (HCWs) are one of the most important groups who are at risk for COVID-19 infection. This study aimed to assess the COVID-19 vaccine acceptance among HCWs in Iran and its determinants. • Out of the 3536 respondents, 2191 (62.1%) intended to uptake the COVID-19 vaccine. • Only about 10 percent of respondents said they did not trust any vaccine (domestic or foreign). • Willing to accept a COVID-19 vaccine was relatively high among males, doctors, and those who had a history of hospitalization due to COVID-19 infection. • Our study showed moderate acceptance of COVID-19 vaccination in the HCWs in the Islamic Republic of Iran.

Evidence on Vaccines (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
20 August 2022	Cocchio et al., 2022	COVID-19 Vaccine Effectiveness against Omicron Variant among Underage Subjects: The Veneto Region's Experience	*Vaccines/Retrospective observational analysis*	• Even if most of the complications due to COVID-19 are observed in the elderly, in Italy the impact of COVID-19 among young people has not been negligible. • These reasons have driven policy makers to involve subjects aged 5 to 17 years in the COVID-19 vaccination campaign. However, the trade-off of vaccinating this age-group should be further investigated, especially in view of the rise of new immunologically evasive variants of concern (VOCs). • Effectiveness against serious complications due to COVID-19, as well as indirect benefits of underage vaccinations, should first be addressed. Furthermore, vaccine effectiveness should be kept monitored, as new VOCs may arise, but also new adapted vaccines may start being administered.
20 August 2022	Nanatsue et al., 2022	A case of Miller Fisher Syndrome with delayed onset peripheral facial nerve palsy after COVID-19 Vaccination: a case report	*BMC Neurology/ Case report*	• One of the most commonly used vaccines is the mRNA vaccine developed by Moderna. • Although several studies have shown this vaccine to be safe, the full extent of its side effects has not yet been known. • Miller-Fisher syndrome (MFS) is a rare condition that manifests ophthalmoplegia, ataxia, and loss of tendon reflexes. It is a subtype of Guillain–Barré syndrome and an immune-mediated disease related to serum IgG anti-GQ1b antibodies. • Several vaccines including those for COVID-19 have been reported to induce MFS. However, there have been no reports of MFS following Moderna COVID-19 vaccine administration.
22 August 2022	Vergori et al., 2022	Immunogenicity to COVID-19 mRNA vaccine third dose in people living with HIV	*Nature Communications/Prospective observational cohort study*	• In order to investigate safety and immunogenicity of SARS-CoV-2 vaccine third dose in people living with HIV (PLWH), we analyze anti-RBD, microneutralization assay and IFN-γ production in 216 PLWH on ART with advanced disease (CD4 count <200 cell/mm3 and/or previous AIDS) receiving the third dose of a mRNA vaccine (BNT162b2 or mRNA-1273) after a median of 142 days from the second dose. • Median age is 54 years, median CD4 nadir 45 cell/mm3 (20–122), 93% HIV-RNA < 50 c/mL. In 68% of PLWH at least one side-effect, generally mild, is recorded. Humoral response after the third dose was strong and higher than that achieved with the second dose (>2 log2 difference), especially when a heterologous combination with mRNA-1273 as third shot is used. • In contrast, cell-mediated immunity remain stable. Our data support usefulness of third dose in PLWH currently receiving suppressive ART who presented with severe immune dysregulation.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
22 August 2022	Madikyzy et al., 2022	Honghua extract mediated potent inhibition of COVID-19 host cell pathways	*Scientific Reports/Experimental Research*	• Honghua (*Carthami flos*) and Xihonghua (*Croci stigma*) have been used in anti-COVID-19 as Traditional Chinese Medicine, but the mechanism is unclear. • IIn this study, we applied network pharmacology by analysis of active compounds and compound-targets networks, enzyme kinetics assay, signaling pathway analysis and investigated the potential mechanisms of anti-COVID-19. • We found that both herbs act on signaling including kinases, response to inflammation and virus. • The extract of Honghua and Xihonghua exhibited nanozyme/herbzyme activity of alkaline phosphatase, with distinct fluorescence. Thus, our data suggest the great potential of Honghua in the development of anti-COVID-19 agents.
22 August 2022	Urwyler et al., 2022	Targeting thromboinflammation in COVID-19– A narrative review of the potential of C1 inhibitor to prevent disease progression	*Molecular Immunology/Narrative Review*	• Coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2 is associated with a clinical spectrum ranging from asymptomatic carriers to critically ill patients with complications including thromboembolic events, myocardial injury, multisystemic inflammatory syndromes and death. • The effect of various monoclonal antibodies, antiviral, anti-inflammatory and anticoagulation drugs have been studied, and to some extent, implemented into clinical practice. • Given the multiple-action, multiple-target nature of C1 inhibitor (C1-INH), the natural inhibitor of these cascades, this drug may be an interesting candidate to prevent disease progression and combat thromboinflammation in COVID-19. • Furthermore, we summarize the evidence of C1-INH in COVID-19 and potential benefits and pitfalls of C1-INH treatment in COVID-19.

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
20 August 2022	Jang et al., 2022	The difference in strategies for prevention of COVID-19 transmission in hospitals: A nationwide survey results in the Republic of Korea	*Elsevier Public Health Emergency Collection/ Nationwide survey*	• Hospital infection control measures against coronavirus disease 2019 (COVID-19) are often based on expert discretion due to the lack of detailed guidelines. • Thirteen key issues related to COVID-19 transmission prevention within medical institutions were selected via discussion among infectious diseases specialists, and related critical questions were subsequently obtained following a review of national-level guidelines in government databases. • Individual hospitals in South Korea are currently relying on experience to frame relevant guidelines and responded differently to some infection control issues on hospital settings during the COVID-19 pandemic.
22 August 2022	Sarkar et al., 2022	How do contaminated environment influence the transmission dynamics of COVID-19 pandemic?	*Elsevier Public Health Emergency/ Mathematical modeling study*	• The COVID-19 pandemic exudes public health and socio-economic burden globally. • Mathematical modeling plays a significant role to comprehend the transmission dynamics and controlling factors of rapid spread of the disease. • Researchers focus on the human-to-human transmission of the virus but the SARS-CoV-2 virus also contaminates the environment. In this study we proposed a nonlinear mathematical model for the COVID-19 pandemic to analyze the transmission dynamics of the disease in India. • Researchers focus on the human-to-human transmission of the virus but the SARS-CoV-2 virus also contaminates the environment. In this study we proposed a nonlinear mathematical model for the COVID-19 pandemic to analyze the transmission dynamics of the disease in India. • Analytical study of the proposed COVID-19 model, including feasibility of critical points and their stability reveals that the infection-free steady state is stable if the basic reproduction number is less than unity otherwise the system shows significant outbreak.

Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
22 August 2022	Tseng et al., 2022	Curbing COVID-19 progression and mortality with traditional chinese medicine among hospitalized patients with COVID-19: A propensity score-matched analysis	*Elsevier Public Health Emergency/ Propensity score-matched analysis*	• Viral- and host-targeted traditional Chinese medicine (TCM) formulae NRICM101 and NRICM102 were administered to hospitalized patients with COVID-19 during the mid-2021 outbreak in Taiwan. • We report the outcomes by measuring the risks of intubation or admission to intensive care unit (ICU) for patients requiring no oxygen support, and death for those requiring oxygen therapy. • NRICM101 and NRICM102 were significantly associated with a lower risk of intubation/ICU admission or death among patients with mild-to-severe COVID-19. • This study provides real-world evidence of adopting broad-spectrum oral therapeutics and shortening the gap between outbreak and effective response. It offers a new vision in our preparation for future pandemics.

Evidence on Equipment and Devices

Date	Author/s	Title	Journal/ Article Type	Summary
22 August	Varela et al., 2022	Effectiveness and adherence to closed face shields in the prevention of COVID-19 transmission: a non-inferiority randomized controlled trial in a middle income setting (COVPROSHIELD)	*BMC Trials/ Non-inferiority Randomized Controlled Trial*	• The use of respiratory devices can mitigate the spread of diseases such as COVID-19 in community settings. • We aimed to determine the effectiveness of closed face shields with surgical face masks to prevent SARS-CoV-2 transmission in working adults during the COVID-19 pandemic in Bogotá, Colombia. • A total of 316 participants were randomized, 160 participants were assigned to the intervention group and 156 to the active control group. In total, 141 (88.1%) participants in the intervention group and 142 (91.0%) in the active control group completed the follow-up. • The use of closed face shields and surgical face masks was non-inferior to the surgical face mask alone in the prevention of SARS-CoV-2 infection in highly exposed groups. • Settings with highly active viral transmission and conditions such as poor ventilation, crowding, and high mobility due to occupation may benefit from the combined use of masks and closed face shields to mitigate SARS-CoV-2 transmission.

Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
22 August 2022	Raszeja-Wyszomirska et al., 2022	SARS-CoV-2 vaccination in liver transplant recipients: factors affecting immune response and refusal to vaccine	*Elsevier Public Health Emergency/ Prospective observational cohort study*	• The effectiveness of SARS-CoV-2 vaccination in liver transplant (LT) recipients varies between reports. • Among 300 consecutive LT recipients, 75% were vaccinated. The humoralresponse was assessed by the quantitative determination of antitrimeric spike protein-specific IgG antibodies to SARS-CoV-2. Thirty-four vaccinated patients with prior SARS-CoV-2 infection were analyzed separately. • Among 192 LT recipients vaccinated without past natural infection, 69% developed the immune response (median time of 125 days after the second dose). • Older age, worse kidney function, and dual immunosuppression negatively affected the humoral response. • LT recipients with prior COVID-19 presented with a robust immune response (100%). • The lower immune response in the vaccinated LT recipients than in the general population justifies administering the third dose of the vaccine.

Evidence on Preventive & Promotive Health

Evidence on Screening

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Evidence on Personal Measures

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Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
22 August 2022	Rush et al., 2022	Virtual Care Prior to and During COVID-19: Cross-sectional Survey of Rural and Urban Adults	*JMIR Formative Research/ Cross-sectional Survey*	• To reduce person-to-person contact, the COVID-19 pandemic has driven a massive shift to virtual care. • This study was a cross-sectional online survey exploring virtual care among rural and urban adults in summer 2021 using a combination of fixed and open-ended response options. • The increased demand for and use of virtual care may reflect increased availability and a lack of alternatives due to limited in-person services during the COVID-19 pandemic, so a balance between virtual care and in-person care is important to consider postpandemic. Further, ensuring availability of high-speed internet and education to support patients will be important for providing accessible and effective virtual care, especially for rural residents. •

Evidence on Other Health Technologies

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