Weekly Evidence Report

Health Technology Assessment Philippines

25 September - 01 October 2021

Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of September 25 to October 1, 2021. The HTA Unit reviewed a total of 13 studies for the said period.

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

The following report notes that 2 studies have not been peer-reviewed, each highlighted accordingly.

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
28 Sep 2021	WHO Global	Weekly epidemiological update on COVID-19 - 28 September 2021	*WHO Global (Situation Report)*	• Over 3.3 million new cases and over 55 000 new deaths were reported during the week of 20 – 26 September 2021, decreases of 10% as compared to the previous week for both cases and deaths • The largest decrease in new weekly cases was reported from the Eastern Mediterranean Region (17%), followed by the **Western Pacific Region** (15%). • The cumulative number of confirmed cases reported globally is now over **231 million** and the cumulative number of deaths is more than **4.7 million**. • The number of new weekly deaths reported showed a large (>15%) decline for all regions except for the European Region, (similar number of cases) and the African Region which reported a slight increase (5%). • The largest decline in weekly deaths was reported from the **Western Pacific Region**, with a 24% decline as compared to the previous week.
29 Sep 2021	WHO Western Pacific Region	COVID-19 situation report for the Western Pacific Region	*WHO WPR (External Situation Report)*	• New cases of COVID-19 were reported in 19 countries or areas in the Western Pacific Region (WPR) within the past seven days (**Philippines: 121 100**). • 9 Pacific island countries and areas have not reported a case to date: (Cook Islands, Kiribati, Micronesia (Federated States of), Nauru, Niue, Pitcairn Islands, Tokelau, Tonga and Tuvalu). • The Philippines reported all 4 variants of concern as of 29 September 2021.
30 Sep 2021	Kojima et al.	A Systematic Review of the Protective Effect of Prior SARS-CoV-2 Infection on Repeat Infection	*SAGE Publishing Journals*	• This systematic review found that the weighted average risk reduction against reinfection was 90.4% with a standard deviation of 7.7% (p-value: <0.01). Protection against SARS-CoV-2 reinfection was observed for up to 10 months. Studies had potential information, selection, and analysis biases. **The protective effect of prior SARS-CoV-2 infection on re-infection is high and similar to the protective effect of vaccination**.

Evidence on Vulnerable Population Epidemiology

30 Sep 2021	WHO Global	Update 67 - COVID-19 in children and adolescents	*WHO Global (Situation Report)*	• Children <5 represent the smallest proportion of cases among individuals 24 and below • Older adolescents and young adult represent a higher proportion of global cases • **Individuals 24 and below** represent <0.5% of the proportion of global deaths • Symptoms in children and adolescents are usually fewer and milder compared to adults • Rarely, children may develop MIS-C or PIMS-TS associated with SARS-CoV-2 • Children <10 may be less susceptible than adolescents and adults, while seroprevalence among adolescents may be similar to adults. • SARS-CoV-2 viral RNA shedding in the respiratory tract appears similar in children, adolescents and adults

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
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Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
01 Oct 2021	Chen et al.	Does hydroxychloroquine reduce mortality in patients with COVID-19? A meta-analysis with trial sequential analysis	*The International Journal of Clinical Practice*	• **Hydroxychloroquine** has shown activity against the novel coronavirus in vitro and been authorised in some national regulatory agencies to treat patients with COVID-19.1,2 However, some studies reported no effect on the intubation rate or mortality. • Meta- analysis with TSA suggests that the use of hydroxychloroquine in patients with COVID- 19 has **no benefit** in reducing overall mortality.
29 Sept 2021	Limen et al.	Janus kinase (JAK)-inhibitors and coronavirus disease 2019 (Covid-19) outcomes: a systematic review and meta-analysis	*Expert Review of Anti-Infective Therapy*	• Currently, **JAK-inhibitors** are repurposed for therapy of Covid-19 because of their ability in restraining immune response, yet their advantage is still unclear. This study sought to analyze the efficacy of JAK-inhibitors to ameliorate the outcomes of Covid-19 sufferer. • The study results showed that JAK-inhibitors corresponded with ○ **Increased recovery rate** (RR 1.17; 95%CI: 1.01-1.36) ○ **Reduction of clinical deterioration** risk (mean difference -0.96; 95%CI: -1.15, -0.77) ○ **Reduction of Covid-19 mortality** (RR 0.52; 95%CI: 0.36-0.76)

Evidence on Drugs (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
27 Sept 2021	Deng et al.	Efficacy and safety of ivermectin for the treatment of COVID-19: A systematic review and meta-analysis	*QJM: An International Journal of Medicine*	• This systematic review and meta-analysis assessed the efficacy and safety of **ivermectin** for treating COVID-19 based on peer-reviewed randomized controlled trials (RCTs) and observational studies (OSs). • Based on meta-analysis of RCTs, the use of ivermectin was **not associated** with reduction in time to viral clearance, duration of hospitalization, incidence of mortality and incidence of mechanical ventilation. Ivermectin did not significantly increase incidence of adverse events. Meta-analysis of OSs agrees with findings from RCT studies. • Based on very low to moderate quality of evidence, ivermectin was **not efficacious** at managing COVID-19.

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

Date	Author/s	Title	Journal/ Article Type	Summary
29 Sep 2021	Eyre et al.	The impact of SARS-CoV-2 vaccination on Alpha & Delta variant transmission	*medRxiv preprint from IVAC*	• This retrospective observational cohort study uses multivariable logistic regression to investigate the impact of index case and contact vaccination on transmission, and how this varies with Alpha and Delta variants. • Two BNT162b2 doses reduced Delta transmission (aOR=0.35[0.26-0.48]), more than ChAdOx1 (aOR=0.64[0.57-0.72]; heterogeneity p<0.001). • **Transmission reductions declined over time** since second vaccination, for Delta reaching similar levels to unvaccinated individuals by 12 weeks for ChAdOx1 and attenuating substantially for BNT162b2.

Evidence on Vaccines (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
27 Sep 2021	Glatman-Freedman et al.	Effectiveness of BNT162b2 Vaccine in Adolescents during Outbreak of SARS-CoV-2 Delta Variant Infection, Israel, 2021	*CDC - Emerging Infectious Diseases*	• In Israel, the BNT162b2 vaccine against severe acute respiratory syndrome coronavirus 2 was approved for use in adolescents in June 2021, shortly before an outbreak of B.1.617.2 (Delta) variant–dominant infection. • This retrospective cohort study evaluated short-term vaccine effectiveness against SARS-CoV-2 infections among **Israeli adolescents 12-15 y/o** with no history of past infection. • After administration of the second vaccine dose, crude VE against laboratory-confirmed SARS-CoV-2 infection was 55.3% (95% CI 41.3%–66.0%) in the first week, 87.1% (95% CI 81.0%–91.2%) in the second week, 91.2% (87.4%–93.8%) in the third week, and 88.2% (95% CI 85.0%–90.7%) in the fourth week.
30 Sep 2021	Falsaperla et al.	COVID-19 vaccination in pregnant and lactating women: a systematic review	*Expert Review of Vaccines*	• All the randomized clinical trials that have been conducted for the study of the COVID-19 vaccines have not included pregnant and lactating women for deep evaluation of their safety and effectiveness. • **No adjunctive risk** has been assessed both for the mother and the newborn, although this finding is partial and needs to be further evaluated. Reactogenicity across lactating and pregnant women **does not seem to differ from general population**. • Abortion rate does not differ from non-vaccinated pregnant women studied before the COVID-19 pandemic.

Evidence on Equipment & Devices

Date	Author/s	Title	Journal/ Article Type	Summary
30 Sep 2021	Boet et al.	Efficacy and safety of hyperbaric oxygen treatment in SARS-COV-2 (COVID-19) pneumonia: a systematic review	*Diving and Hyperbaric Medicine*	• There is a strong pathophysiological rationale suggesting that **hyperbaric oxygen treatment (HBOT)**, a low-risk and non-invasive treatment, may be beneficial for COVID-19 patients. This systematic review aimed to explore the potential effectiveness and safety of HBOT for treating patients with COVID-19. • Of the 26 assessed patients, intubation and mechanical ventilation were not required for 24, and 23 patients survived. No serious adverse events of HBOT in COVID-19 patients were reported. • Limited and weak evidence from non-randomised studies including one propensity-matched cohort study suggests **HBOT is safe and may be a promising intervention** to optimise treatment and outcomes in hypoxemic COVID-19 patients.

Evidence on Medical & Surgical Procedures

Medical Procedure (Diagnostic)

Date	Author/s	Title	Journal/ Article Type	Summary
28 Sept 2021	Wang et al.	Evaluation of the diagnostic accuracy of COVID-19 antigen tests A systematic review and meta-analysis	*Journal of the Chinese Medical Association*	• The advantages of antigen tests, such as low cost and rapid turnaround, may allow for the rapid identification of larger numbers of infectious persons. This meta-analysis aimed to evaluate the diagnostic accuracy of antigen tests for SARS-CoV-2. • Antigen tests have **moderate sensitivity and high specificity** for the detection of SARS-CoV-2. Antigen tests might have a higher sensitivity in detecting SARS-CoV-2 within 7 days after symptom onset. Based on findings, antigen testing might be an effective method for identifying contagious individuals to block SARS-CoV-2 transmission.

Evidence on Traditional Medicine

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

Evidence on Screening

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Evidence on Personal Measures

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Evidence on Preventive & Promotive Health (cont.)

Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
25 Sept 2021	Veys et al.	The effect of hand hygiene promotion programs during epidemics and pandemics of respiratory droplet-transmissible infections on health outcomes: a rapid systematic review	*BMC Public Health*	• This rapid systematic review aims to summarize the **effectiveness of community-based hand hygiene promotion programs** on infection transmission, health outcomes and behavioral outcomes during epidemic periods in the context of respiratory droplet-transmissible diseases. It also included laboratory-confirmed health outcomes for epidemic-prone disease during interepidemic periods. • The data suggest that proactive hand hygiene promotion interventions, i.e. regardless of the identification of infected cases, can i**mprove health outcomes** upon implementation of such a program, in contrast to reactive interventions in which the program is implemented after (household) index cases are identified.