

Weekly Evidence Report



Health Technology Assessment Philippines

18 September - 24 September 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 18 to September 24, 2021. The HTA Unit reviewed a total of 15 studies for the said period.

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

The following report notes that 1 study have not been peer-reviewed, each highlighted accordingly.



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
21 Sep 2021	WHO Global	Weekly epidemiological update on COVID-19 - 21 September 2021	<i>WHO Global (Situation Report)</i>	<ul style="list-style-type: none"> Declining numbers of COVID-19 cases globally, with over 3.6 million cases and just under 60,000 deaths reported between 13-19 September Cumulative numbers of confirmed cases and deaths globally to nearly 228 million and over 4.6 million respectively. The Western Pacific region reported a decrease in weekly case incidence but reported an increase (7%) in the number of deaths
24 Sep 2021	CADTH	An Overview of Post-COVID-19 Condition (Long COVID)	<i>CADTH Horizon Scanning (Emerging Issues Review)</i>	<ul style="list-style-type: none"> Current estimates suggest that 21% to 23% of people suspected of having had COVID-19 may have symptoms 4 weeks after their COVID-19 infections and 14% may have symptoms 12 weeks post-infection. Among people with self-reported post-COVID-19, an estimated 40% may continue to experience symptoms for at least a year Evidence for clinical effectiveness of therapies for post-COVID-19 condition are still limited and trials are still ongoing
21 Sep 2021	WHO Western Pacific Region	COVID-19 situation report for the Western Pacific Region	<i>WHO WPR (External Situation Report)</i>	<ul style="list-style-type: none"> A total of 421 814 cases with 6 426 deaths were reported, for a cumulative 8 051 845 cases with 110 219 deaths

Evidence on Vulnerable Population Epidemiology

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

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
22 Sep 2021	Nakagama et al.	Serological Testing Reveals the Hidden COVID-19 Burden among Health Care Workers Experiencing a SARS-CoV-2 Nosocomial Outbreak	<i>Microbiology Spectrum Journal</i>	<ul style="list-style-type: none"> ● According to the results of testing health care workers from a tertiary care hospital in Japan that had experienced a COVID-19 outbreak, a surprising 42% of overlooked COVID-19 diagnoses occurred when case detection relied solely on PCR-based viral detection (SARS-CoV-2 nucleic acid amplification testing). Our results suggest that the NAAT-positive population is only the tip of the iceberg and the portion left undetected might potentially have led to silent transmissions and triggered the spread. ● 42% (27/64 cases) of COVID-19 cases were only detected through antibody seroconversion testing (chemiluminescent immunoassays and a confirmatory surrogate virus neutralization test) ● The researchers support a multitiered approach that includes testing for the immune response of the host to aid in the exhaustive case detection of COVID-19 patients with variable presentations. ● Traditional symptom-driven testing approach misses asymptomatic patients and HCWs who can possibly become a source of transmission
23 Sep 2021	Aizawa et al.	Coronavirus Disease 2019 Cluster Originating in a Primary School Teachers' Room in Japan	<i>Pediatric Infectious Disease Journal</i>	<ul style="list-style-type: none"> ● The outbreak investigation and contact tracing included 332 individuals: all 30 teachers, 211 students, the close contacts of 65 family members and 27 others. ● In the cluster, the virus spread among teachers, then from teachers to students, and then to their family members. ● To open schools safely and without interruption, adequate measures to prevent COVID-19 infection in schools should be emphasized not only for children but also for teachers and their environment.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
24 Sep 2021	Rubio-Rivas et al.	Beneficial and Harmful Outcomes of Tocilizumab in Severe COVID-19: A Systematic Review and Meta-Analysis	<i>Journal of the American College of Clinical Pharmacy</i>	<ul style="list-style-type: none"> 64 studies were included in the present study, 54 were controlled observational studies (50 retrospective and 4 prospective) and 10 were RCT. The overall results provided data from 20,616 hospitalized patients with COVID-19: 7,668 patients received TCZ in addition to standard of care (SOC) and 12,948 patients only receiving SOC TCZ prevented mortality in patients hospitalized for COVID-19. This benefit was seen to a greater extent in patients receiving concomitant CS and when TCZ administration occurred within the first 10 days after symptom onset. The pooled mortality odds ratio (OR) of patients with COVID-19 treated with TCZ was 0.73 (95% confidence interval (CI)= 0.56-0.93). The pooled OR of hospital-wide mortality (including ICU) of COVID-19 patients treated with TCZ plus corticosteroids (CS) was 0.67 (95% CI = 0.54-0.84)
24 Sep 2021		Efficacy and secondary infection risk of tocilizumab, sarilumab and anakinra in COVID-19 patients: A systematic review and meta-analysis	<i>Reviews in Medical Virology</i>	<ul style="list-style-type: none"> 33 studies, including 3073 cases and 6502 controls, were selected for meta-analysis. It was found that immunosuppressant therapy significantly decreased mortality in COVID-19 patients on overall analysis (odds ratio = 0.71, 95% confidence interval = 0.57–0.89, p = 0.004) Tocilizumab and anakinra significantly decreased mortality in patients without any increased risk of secondary infection. However, tocilizumab therapy significantly increased the risk of fungal co-infections in COVID-19 patients.

Evidence on Drugs (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
23 Sep 2021	Siemieniuk et al.	Antibody and cellular therapies for treatment of covid-19: a living systematic review and network meta-analysis	<i>The British Medical Journal (Living Systematic Review)</i>	<ul style="list-style-type: none"> As of September 24, 2021, 47 trials evaluating antibody and cellular treatments for covid-19 have been identified In patients with non-severe covid-19, asirivimab-imdevimab probably reduces hospitalisation; bamlanivimab-etesevimab, bamlanivimab, and sotrovimab may reduce hospitalisation. Patients with non-severe disease randomised to antiviral monoclonal antibodies had lower risk of hospitalisation than those who received placebo: casirivimab-imdevimab (odds ratio (OR) 0.29 (95% CI 0.17 to 0.47); risk difference (RD) -4.2%; moderate certainty), bamlanivimab (OR 0.24 (0.06 to 0.86); RD -4.1%; low certainty), bamlanivimab-etesevimab (OR 0.31 (0.11 to 0.81); RD -3.8%; low certainty), and sotrovimab (OR 0.17 (0.04 to 0.57); RD -4.8%; low certainty)
20 Sep 2021		Heparin-induced Thrombocytopenia in Patients with Coronavirus Disease 2019: Systematic Review and Meta-analysis	<i>Blood Advances Journal</i>	<ul style="list-style-type: none"> A meta-analysis of 7 studies including 5,849 patients revealed the pooled incidence of HIT in COVID-19 of 0.8% (95% confidence interval [CI], 0.2-3.2%; I² = 89%). The estimated incidences were 1.2% (95%CI, 0.3-3.9%; I² = 65%) versus 0.1% (95%CI, 0.0-0.4%; I² = 0%) in therapeutic versus prophylactic heparin subgroups, respectively. The pooled incidences of HIT were higher in critically ill COVID-19 patients (2.2%, 95%CI, 0.6-8.3%; I² = 72.5%) compared to non-critically ill patients (0.1%, 95%CI, 0.0-0.4%; I² = 0%) The incidence of HIT in COVID-19 patients was comparable to non-COVID-19 medical patients, with higher incidences with therapeutic anticoagulation and in critically ill patients

Evidence on Drugs (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
20 Sep 2021	Limen et al.	Janus kinase (JAK)-inhibitors and coronavirus disease 2019 (Covid-19) outcomes: a systematic review and meta-analysis	<i>Expert Review of Anti-infective Therapy Journal</i>	<ul style="list-style-type: none"> • 14 studies with 4,363 Covid-19 patients contained in the meta-analysis • JAK-inhibitors corresponded with increased recovery rate (RR 1.17; 95%CI: 1.01 – 1.36, p=0.040, I2 = 91%, random-effect modelling); shortened time to recovery (mean difference -0.96; 95%CI: -1.15, -0.77, p<0.00001, I2 = 28%, random-effect modelling); reduction of clinical deterioration risk (RR 0.66; 95%CI: 0.48 – 0.89, p=0.008, I2 = 57%, random-effect modelling); and reduction of COVID-19 mortality (RR 0.52; 95%CI: 0.36 – 0.76, p=0.0006, I2 = 33%, random-effect modelling). • This study propose that JAK-inhibitors perhaps provide advantageous effects on Covid-19 outcomes. JAK-inhibitors may be given during 1 – 2 weeks of disease to optimize its beneficial effects in halting the exaggerated immune response.

Evidence on Vaccines

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-jd66qllxnUkfzXWKqiD0mkVvqy_VvJ?pli=1

Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
21 Sep 2021	Liu et al.	Coronavirus disease 2019 vaccine for children in China: when to start? Mandatory or voluntary?	<i>Chinese Medical Journal (Letter to the Editor)</i>	<ul style="list-style-type: none"> Vaccination trials of children in China has already started in Phase I/II clinical trials by Sinovac Biotech The impending vaccination merits careful deliberation as to whether pediatric vaccination must be mandated or not
21 Sep 2021	Self et al.	Comparative Effectiveness of Moderna, Pfizer-BioNTech, and Janssen (Johnson & Johnson) Vaccines in Preventing COVID-19 Hospitalizations Among Adults Without Immunocompromising Conditions	<i>CDC MMWR (Morbidity and Mortality Weekly Report)</i>	<ul style="list-style-type: none"> Among U.S. adults without immunocompromising conditions, vaccine effectiveness against COVID-19 hospitalization during March 11–August 15, 2021, was higher for the Moderna vaccine (93%) than the Pfizer-BioNTech vaccine (88%) and the Janssen vaccine (71%) Although these real-world data suggest some variation in levels of protection by vaccine, all FDA-approved or authorized COVID-19 vaccines provide substantial protection against COVID-19 hospitalization

Evidence on Equipment & Devices

Date	Author/s	Title	Journal/ Article Type	Summary
21 Sep 2021	Hunt et al.	Towards Detection of SARS-CoV-2 RNA in Human Saliva: A Paper-based Cell-free Toehold Switch Biosensor with a Visual Bioluminescent Output	<i>New Biotechnology Journal</i>	<ul style="list-style-type: none"> The COVID-19 pandemic has illustrated the global demand for rapid, low-cost, widely distributable and point-of-care nucleic acid diagnostic technologies. Conventional nucleic acid diagnostic procedures require trained personnel, complex laboratories, expensive equipment, and protracted processing times. In this work, lyophilized cell-free protein synthesis (CFPS) and toehold switch riboregulators are employed to develop a promising paper-based nucleic acid diagnostic platform activated simply by the addition of saliva

Evidence on Medical & Surgical Procedures

Link to Living CPG: <http://www.linktolivingcpghere.com>

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

Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
21 Sep 2021	Kumar et al.	22-Hydroxyhopane, a novel multitargeted phytochemical against SARS-CoV-2 from Adiantum latifolium Lam	<i>Natural Products Research Journal</i>	<ul style="list-style-type: none"> • 2-Hydroxyhopane is a bioactive triterpenoid compound with antibacterial activity, present in the leaves of <i>Adiantum latifolium</i> • In this study, molecular docking method revealed strong binding affinity of the compound for ten proteins essential for SARS-CoV-2 multiplication in host cells, including seven nonstructural proteins, two structural proteins and one receptor protein • We conclude that 22-hydroxyhopane may be used as a best source for the development of novel therapeutic drugs for COVID-19, but requires further evaluations.

Evidence on Preventive & Promotive Health

Evidence on Screening

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

Evidence on Personal Measures

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

Evidence on Preventive & Promotive Health

Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
24 Sep 2021	Tesfaw et al.	Community risk perception and barriers for the practice of COVID-19 prevention measures in Northwest Ethiopia: A qualitative study	<i>Public Library of Science Journal (PLoS One)</i>	<ul style="list-style-type: none"> ● In this qualitative study, the major perceived barriers for the practice of COVID-19 prevention measures were: Lack of knowledge and awareness about the disease, socio-demographic barriers, presence of strong cultural and religious practices, perceiving that the disease does not affect the young, misinformation about the disease, and lack of trust on the prevention measures ● The results support the need for creating community awareness and education programs about the prevention measures of COVID-19 and increasing diagnostic facilities with strong community-based surveillance ● Compulsory national policies for those who are reluctant to practice prevention measures may be necessary to save the lives of the majority.