

Weekly Evidence Report



Health Technology Assessment Philippines

07 March - 13 March 2022

Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Division reviewed for the period of March 07 - March 13, 2022. The HTA Division reviewed a total of **11 studies** for the said period.

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

The following report notes that 0 studies have not been peer-reviewed, each highlighted accordingly.



Sections

Epidemiology

Transmission

Drugs

Vaccines

Equipment & Devices

Medical & Surgical Procedures

Traditional Medicine

Preventive & Promotive Health

Other Health Technologies

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
10 Mar 2022	Maida, et al., (2022)	Wastewater-based epidemiology for early warning of SARS-CoV-2 circulation: A pilot study conducted in Sicily, Italy	<i>International Journal of Hygiene and Environmental Health/ Pilot Research Study</i>	SARS-CoV-2 environmental surveillance was conducted from September 2020 and July 2021 in 9 wastewater treatment plants (WTPs) located in central and western Sicily, serving over 570,000 residents. Of the samples collected, 51% tested positive which was statistically associated with daily prevalence of SARS-CoV-2 active cases suggesting the feasibility of wastewater surveillance for epidemic management.

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
10 Mar 2022	Hui-Ling et al., (2022)	Transmission of SARS-CoV-2 delta variant (AY.127) from pet hamsters to humans, leading to onward human-to-human transmission: a case study	<i>The Lancet/ Case Study</i>	COVID-19 outbreak suspected to originate from a petshop was investigated through RT-PCR or serological testing in hamsters, rabbits, guinea pigs and mice. Multiple zoonotic transmission including SARS-CoV-2 transmission was detected among pet hamsters strongly suggesting pet hamsters as potential source of the COVID-19 outbreak.
12 Mar 2022	Janssen, et al., (2022)	Airborne SARS-CoV-2 RNA excretion by patients with COVID-19 on different oxygen delivery systems: a prospective observational study	<i>Journal of Hospital Infection/ Prospective Observational Study</i>	Airborne SARS-CoV-2 transmission were investigated through air samples among patients with various COVID-19 modalities. Air sample positivity is correlated with viral load and not on the type of oxygen support device.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
14 Mar 2022	Saeedi-Broujeni, et al., (2022)	Tranilast as an Adjunctive Therapy in Hospitalized Patients with Severe COVID-19: A Randomized Controlled Trial	<i>Archives of Medical Research/ Randomized Clinical Trial</i>	<p>Tranilast, a potential NLRP3 inflammasome inhibitor with diverse immunologic functions, was evaluated as a potential anti-COVID-19 drug in terms of expression of inflammatory cytokine, laboratory tests, and clinical findings.</p> <p>In comparison with the control group, tranilast showed significantly lower levels of NLR (p = 0.001), q-CRP (p = 0.002), IL-1 (p = 0.001), TNF (p = 0.001), and LDH (p = 0.046) in comparison with the control group suggesting inhibition of severe inflammation in patients with COVID-19 without leading to complications and toxicity.</p>

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
12 Mar 2022	Otani, et al., (2022)	COVID-19 Vaccine Administration in Patients with Reported Reactions to Polyethylene Glycol- and Polysorbate-Containing Therapeutics	<i>Annals of Allergy, Asthma & Immunology / Retrospective Cohort</i>	<p>Reactions to polyethylene glycol (PEG) and polysorbates was initially associated with COVID-19 vaccine administration. As such, the study reviewed the safety outcome in patients with previously reported reactions to PEG and polysorbate.</p> <p>Of the 252 patients receiving mRNA COVID-19 vaccines, 235 received both doses with 3 mild allergic reactions. Of the 44 patients who had previously reported PEG/polysorbate reactions, 43 received 2nd dose and all 3 who developed symptoms following 2nd dose (one requiring epinephrine) had negative PEG skin testing demonstrating safe vaccination among this population.</p>

Evidence on Equipment and Devices

Date	Author/s	Title	Journal/ Article Type	Summary
11 Mar 2022	El Haddi, et al., (2022)	CRISIS ventilator: A 3D printed option for ventilator surge in mass respiratory pandemics	<i>The American Journal of Surgery/ Material Development</i>	The study demonstrates the feasibility of developing autoclavable and reusable 3D printed ventilator that can achieve 4–12L minute ventilation for immediate use in mass respiratory pandemic. The researchers note however the need for registration of these type of devices with the Food and Drug Administration before commercial distribution.
09 Mar 2022	Colbert, et al., (2022)	PD-LAMP smartphone detection of SARS-CoV-2 on chip	<i>Analytica Chimica Acta/ Diagnostic Study</i>	Combining smartphone biosensor capabilities with isothermal amplification, and particle diffusometry, the researchers were able to develop a point of care COVID-19 testing with a limit of detection of 50 virus particles μL^{-1} from 10% saliva samples on a microfluidic chip suggesting its potential use in a large scale COVID-19 screening.

Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
N/A	N/A	N/A	N/A	N/A

Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
13 Mar 2022	Jeon, et al., (2022)	Complementary and alternative medicine (CAM) interventions for COVID-19: An overview of systematic reviews	<i>Integrative Medicine Research/ Review of Systematic Reviews</i>	Twenty four (24) systematic reviews were included reporting the potential use of traditional Chinese herbal medication in COVID-19 management based on a decreased rate of disease progression (relative risk (RR) 0.30, 95% confidence intervals (CI) [0.20, 0.44]), decreased time to the resolution of fever (standard mean difference (SMD) -0.98, 95% CI [-1.78, -0.17]) and lower rate of progression to severe COVID-19 cases (RR 0.34, 95% CI [0.18, 0.65]), although gastrointestinal reactions were cited as the most common adverse events.
09 Mar 2022	Yang, et al., (2022)	Traditional Chinese medicine against COVID-19: Role of the gut microbiota	<i>Biomedicine & Pharmacotherapy/ Narrative Review</i>	The narrative review suggests the therapeutic role of traditional Chinese medicine in maintaining gut microbiota balance in events of disruption due to severe COVID-19.

Evidence on Preventive & Promotive Health

Date	Author/s	Title	Journal/ Article Type	Summary
11 Mar 2022	Rajan, et al.,	What have European countries done to prevent the spread of COVID-19? Lessons from the COVID-19 Health System Response Monitor	<i>Health Policy/ Historical Review</i>	<p>Based on literature and country responses from March 2020 to December 2020 among European countries, the authors considered some critical aspects of public health policy responses including surveillance, outbreak control, effective testing and contact tracing, clear messaging and the ability to implement a major vaccine rollout.</p> <p>The authors concluded that effective pandemic response informed by scientific expertise and equipped with strong political leadership can be achieved through a whole systems approach to a coordinated implementation.</p>

Evidence on Other Health Technologies

Date	Author/s	Title	Journal/ Article Type	Summary
08 Mar 2022	Jung, et al., (2022)	Artificial Intelligence-based decision support model for new drug development planning	<i>Expert Systems with Applications / Modelling Study</i>	The Drug Development Recommendation (DDR) model utilizes association rule learning, collaborative filtering, and content-based filtering approaches for enterprise-customized recommendations, and was able to predict higher success probability in the clinical phase of the COVID-19 vaccine development.