

# Weekly Evidence Report



Health Technology Assessment Philippines

16 to 20 May 20 2022

## Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of 29 May 16 to May 20 2022. The HTA Unit reviewed a total of 10 studies for the said period.

Evidence includes 2 studies on Epidemiology; 2 studies on Transmission; 2 studies on Drugs; 4 studies on Vaccines, 2 studies on Equipment and Devices; 0 studies on Medical and Surgical Procedures; 0 studies on Traditional Medicine; and 3 studies on Preventive & Promotive Health.



## Sections

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Epidemiology

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Transmission

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Drugs

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Vaccines

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Equipment & Devices

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Medical & Surgical Procedures

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Traditional Medicine

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Preventive & Promotive Health

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## Evidence on Epidemiology

### Local COVID-19 Case Tracker:

[https://doh.gov.ph/2019-nCoV?qclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX\\_VVSGA-HmO0Pt5\\_CscykID7xZv4zqIXG5vm9PM2xoC27QQAxD\\_BwE](https://doh.gov.ph/2019-nCoV?qclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX_VVSGA-HmO0Pt5_CscykID7xZv4zqIXG5vm9PM2xoC27QQAxD_BwE)

Date	Author/s	Title	Journal/ Article Type	Summary
18 May 2022	WHO Global	<a href="#">Coronavirus Disease 2019 (COVID-19) Weekly Epidemiological Update</a>	<i>WHO Global (COVID-19 Weekly Epidemiological Update)</i>	<ul style="list-style-type: none"> <li>As of 15 May 2022, over 518 million confirmed cases and over six million deaths have been reported globally.</li> <li>After the continued decline observed since the end of March 2022, new weekly COVID-19 cases have stabilized during the reporting period (9 May to 15 May 2022), with over 3.6 million cases reported, a 1% increase as compared to the previous week.</li> <li>The number of new weekly deaths continues to decline, with over 9000 fatalities reported during the same period, representing a 21% decrease as compared to the previous week.</li> <li>At the regional level, the number of new weekly cases increased in the Eastern Mediterranean Region (+63%), in the Region of the Americas (+26%), in the Western Pacific Region (+14%) and in the African Region (+6%) and decreased in the remaining two regions. The number of new weekly deaths decreased in all the regions except the African Region, where a 48% increase in new weekly deaths was reported.</li> </ul>
19 May 2022	European Centre for Disease Prevention and Control (ECDC)	<a href="#">Country overview report: week 19 2022</a>	<i>Situation Report</i>	<ul style="list-style-type: none"> <li>The 14-day COVID-19 death rate has been decreasing for five weeks (14.4 deaths per million population, compared with 18.1 deaths the previous week). Increasing trends in the COVID-19 death rate (duration in weeks) were observed in two countries (Bulgaria (one) and Portugal (one)), albeit death rates in this group are still low (8.7 and 5.8 % of pandemic maximum, respectively)</li> </ul>

**Evidence on Epidemiology (cont.)**

Date	Author/s	Title	Journal/ Article Type	Summary
19 May 2022	European Centre for Disease Prevention and Control (ECDC)	<a href="#">Country overview report: week 19 2022</a>	<i>Situation Report</i>	(cont.) <ul style="list-style-type: none"> <li>The estimated distribution (median and range of values from 14 countries for weeks 17 and 18, 25 April to 8 May 2022) of variants of concern (VOCs) was 99.7% (0.5–100.0%) for B.1.1.529 (Omicron) and 0.0% (0.0–0.2%, nine detections) for B.1.617.2 (Delta).</li> <li>The estimated distribution of Omicron sub-lineages for this period, from countries reporting data on sub-lineages at an adequate sequencing volume was 95.2% (80.3–99.1%, from 14 countries) for BA.2, 1.3% (0.2–8.9%, 419 detections from 14 countries) for BA.1, 1.2% (0.2–6.0%, 215 detections from 10 countries) for BA.4, 0.9% (0.1–19.1%, 422 detections from 11 countries) for BA.5 and 0.1% (0.1–0.1%, 10 detections from 3 countries) for BA.3.</li> </ul>

**Evidence on Transmission**

Date	Author/s	Title	Journal/ Article Type	Summary
19 May 2022	European Centre for Disease Prevention and Control (ECDC)	<a href="#">Country overview report: week 19 2022</a>	<i>Situation Report</i>	Overall transmission continues to decline in most countries, as shown by both overall case notification rates and case rates among people aged 65 years and older. While decreasing overall, transmission in the 65 years and older age group is still high (50% of the pandemic maximum for the EU/EEA) and two countries reported recent increases among this age group. Whereas this could reflect targeted testing practices in some countries, it is still important to continue monitoring the disease burden in older age groups.
18 May 2022	Ning et al.	<a href="#">Potential intestinal infection and faecal-oral transmission of human coronaviruses</a>	<i>Reviews in Medical Virology</i>	Several studies have demonstrated the presence of viral RNA in faeces or anal/rectal swabs of patients with COVID-19. The possibility of faecal-oral transmission of SARS-CoV-2 has implications, particularly in areas with poor sanitation. Transmission via the faecal-oral route is theoretically possible, particularly in individuals with reduced gastric acidity due to medications such as proton pump inhibitors.

## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
16 May 2022	Moeinafshar et al.	<a href="#">Immune-based therapeutic approaches in COVID-19</a>	<i>Biomedicine and Pharmacotherapy</i>	Corticosteroids are advised to be considered in severe or critically ill patients due to their variety of potential side effects. IVIG has shown promising results in trials, though its use is limited and more studies need to be conducted due to the risk of multisystem adverse events. Interferon therapy though considered beneficial in a variety of infectious diseases, including COVID-19, it can cause a range of immune system imbalances; therefore, its usage is currently limited. Monoclonal antibodies are a targeted therapeutic modality and have shown promising results in patients in a variety of disease stages. Nevertheless, due to the rapid emergence of new variants they might lose their efficacy in different outbreaks based on the prevalent variants, hence, it is important to develop antibodies against new epitopes
17 May 2022	Lan et al.	<a href="#">Favipiravir-based treatment for outcomes of patients with COVID-19: a systematic review and meta-analysis of randomized controlled trials</a>	<i>Expert Review of Clinical Pharmacology</i>	Overall, the clinical improvement rate was significantly higher in the study group than in the control group (other alternative treatments or placebo) at the assessment conducted after 14 days (OR, 1.83; 95% CI, 1.12-2.98). The rate of virological eradication was significantly higher in the study group than in the control group at the assessment conducted after 28 days (OR, 2.09; 95% CI, 1.15-3.78). No significant difference was observed in the rates of invasive mechanical ventilation requirement or ICU admission, mortality, or risk of an adverse event between the study and control groups.  Except the clinical improvement rate within 14 days and the virological eradication rate within 28 days, favipiravir-based treatment did not provide significantly additional benefit for patients with COVID-19. Therefore, more evidence is necessary.

## 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/](https://vac-lshtm.shinyapps.io/ncov_vaccine_landscape/)

### ACIP Files:

[https://drive.google.com/drive/u/0/folders/1v-jd66qllxnUkfzXWKqiD0mkVvqy\\_VvJ?pli=1](https://drive.google.com/drive/u/0/folders/1v-jd66qllxnUkfzXWKqiD0mkVvqy_VvJ?pli=1)

Date	Author/s	Title	Journal/ Article Type	Summary
16 May 2022	Wang et al.	<a href="#">A multitope SARS-CoV-2 vaccine provides long-lasting B cell and T cell immunity against Delta and Omicron variants</a>	<i>The Journal of Clinical Investigation</i>	<p>The study is a phase I/II trial results of UB-612, a multitope subunit vaccine containing S1-RBD-sFc protein and rationally designed promiscuous peptides representing sarbecovirus conserved helper T cell and cytotoxic T lymphocyte epitopes on the nucleocapsid (N), membrane (M), and spike (S2) proteins.</p> <p>UB-612 elicited respective neutralizing antibody titers similar to a panel of human convalescent sera. The most striking findings were long-lasting virus-neutralizing antibodies and broad T cell immunity against SARS-CoV-2 variants of concern (VoCs), including Delta and Omicron, and a strong booster-recalled memory immunity with high cross-reactive neutralizing titers against the Delta and Omicron VoCs.</p> <p>No vaccine-related serious adverse events were recorded. The most common solicited adverse events were injection site pain and fatigue, mostly mild and transient.</p>
18 May 2022	Verdier et al.	<a href="#">Response to three doses of the Pfizer/BioNTech BNT162b2 COVID-19 vaccine: a retrospective study of a cohort of haemodialysis patients in France</a>	<i>BMC Nephrology</i>	<p>Data suggest that dialysis patients vaccinated with two doses of BNT162b2 might not have a sufficient level of protection against SARS-CoV-2 and should receive a third dose (at least) as part of a personalized vaccination strategy.</p>

## Evidence on Vaccines (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
18 May 2022	Verdier et al.	<a href="#">Response to three doses of the Pfizer/BioNTech BNT162b2 COVID-19 vaccine: a retrospective study of a cohort of haemodialysis patients in France</a>	<i>BMC Nephrology</i>	<i>(cont.)</i> Due to (i) the emergence of new, virulent SARS-CoV-2 variants and (ii) the frequently reported post-fall in anti-SARS-CoV-2 antibodies some months after vaccination, the need for long-term, regular boosts with new or modified COVID-19 vaccines is likely for this patient population. Indeed, we have now started to recommend a fourth dose to our dialysis patients.
19 May 2022	Moreira et al.	<a href="#">Safety and Efficacy of a Third Dose of BNT162b2 Covid-19 Vaccine</a>	<i>The New England Journal of Medicine</i>	This ongoing, placebo-controlled, randomized, phase 3 trial assigned participants who had received two 30- $\mu$ g doses of the BNT162b2 vaccine at least 6 months earlier to be injected with a third dose of the BNT162b2 vaccine or with placebo.  A third dose of the BNT162b2 vaccine administered a median of 10.8 months after the second dose provided 95.3% efficacy against Covid-19 as compared with two doses of the BNT162b2 vaccine during a median follow-up of 2.5 months.
16 May 2022	Liu et al.	<a href="#">Immunogenicity and Safety of a 3-Dose Regimen of a SARS-CoV-2 Inactivated Vaccine in Adults: A Randomized, Double-Blind, Placebo-Controlled Phase 2 Trial</a>	<i>The Journal of Infectious Diseases</i>	In a phase 2 randomized, double-blind, placebo-controlled trial, 500 adults aged 18–59 years or $\geq$ 60 years were randomized in 2:2:1 ratio to receive 3 doses of 5 $\mu$ g or 10 $\mu$ g of a SARS-CoV-2 inactivated vaccine, or placebo separated by 28 days.  The third dose slightly (<1.5 fold) increased GMTs compared to two doses. Seroconversion percentages were 94% or more after 2 doses, which were generally similar after 3 doses. The predominant AEs were injection-site pain. All the AEs were grade 1 or 2 in intensity. No serious AE was deemed related to study vaccination.

## 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
16 May 2022	Ebrahimzadeh et al.	<a href="#">Thoracic imaging tests for the diagnosis of COVID-19</a>	<i>Cochrane Library</i>	<p>For chest CT (69 studies, 28285 participants, 14,342 (51%) cases), sensitivities ranged from 45% to 100%, and specificities from 10% to 99%. The pooled sensitivity of chest CT was 86.9% (95% confidence interval (CI) 83.6 to 89.6), and pooled specificity was 78.3% (95% CI 73.7 to 82.3).</p> <p>For chest X- ray (17 studies, 8529 participants, 5303 (62%) cases), the sensitivity ranged from 44% to 94% and specificity from 24 to 93%. The pooled sensitivity of chest X- ray was 73.1% (95% CI 64. to - 80.5), and pooled specificity was 73.3% (95% CI 61.9 to 82.2).</p> <p>For ultrasound of the lungs (15 studies, 2410 participants, 1158 (48%) cases), the sensitivity ranged from 73% to 94% and the specificity ranged from 21% to 98%. The pooled sensitivity of ultrasound was 88.9% (95% CI 84.9 to 92.0), and the pooled specificity was 72.2% (95% CI 58.8 to 82.5).</p> <p>Indirect comparisons of modalities evaluated across all 94 studies indicated that chest CT and ultrasound gave higher sensitivity estimates than X- ray (P = 0.0003 and P = 0.001, respectively). Chest CT and ultrasound gave similar sensitivities (P=0.42). All modalities had similar specificities (CT versus X- ray P = 0.36; CT versus ultrasound P = 0.32; X- ray versus ultrasound P = 0.89).</p>
17 May 2022	Nishio et al.	<a href="#">Deep learning model for the automatic classification of COVID-19 pneumonia, non-COVID-19 pneumonia, and the healthy: a multi-center retrospective study</a>	<i>Nature</i>	<p>A deep learning model based on EfficientNet with noisy student was constructed using the three datasets. The test set of 150 CXR images in the private dataset were evaluated by the deep learning model and six radiologists. The diagnostic performance of the model was significantly better than that of the consensus interpretation by the six radiologists for COVID-19 pneumonia.</p>

## Evidence on Traditional Medicine

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

### Evidence on Screening

Date	Author/s	Title	Journal/ Article Type	Summary
16 May 2022	Kantele et al.	<a href="#">Scent dogs in detection of COVID-19: triple-blinded randomised trial and operational real-life screening in airport setting</a>	<i>British Medical Journal</i>	This large randomised controlled triple-blinded validation study with a pre-calculated sample size conducted at an international airport showed that trained scent dogs screen airport passenger samples with high accuracy. One of our findings highlights the importance of continuous retraining as new variants emerge. Using scent dogs may present a valuable approach for high throughput, rapid screening of large numbers of people.

### Evidence on Personal Measures

Date	Author/s	Title	Journal/ Article Type	Summary
16 May 2022	Manookian et al.	<a href="#">Physical problems of prolonged use of personal protective equipment during the COVID-19 pandemic: A scoping review</a>	<i>Nursing Forum</i>	<p>The literature demonstrated the adverse impacts of using PPE on HCWs. HCWs have experienced various physical disorders including skin, respiratory, musculoskeletal, nervous, urinary, and circulatory system problems that are associated with PPE in various body systems. Among these, skin problems were the most frequent physical problems.</p> <p>Therefore, healthcare policymakers should take the appropriate measures to improve the work environment during the COVID-19 pandemic, which could consequently prevent and mitigate the adverse effects of using PPE.</p>

## Evidence on Preventive & Promotive Health

### Evidence on Personal Measures (cont.)

Date	Author/s	Title	Journal/ Article Type	Summary
17 May 2022	Gaikwad et al.	<a href="#">A retrospective observational insight into COVID-19 exposures resulting from personal protective equipment (PPE) breaches</a>	<i>Plos One</i>	<p>A total of 347 PPE breaches were analyzed from the available records of the Hospital Infection Control team repository. Amongst the 347 breaches, 268 (77.2%) were classified as low-risk exposures and 79 (22.8%) as high-risk exposures. Cadre wise distribution of high and low-risk exposures revealed that, PPE breaches occurred most commonly in the category of nursing officers (n = 174, 50.1%). Among all of the breaches, 15.2% of high-risk exposures and 2.6% of low-risk exposures resulted in COVID-19 positivity with a cumulative positivity of 5.4%. Collectively, non-mask related breaches accounted for the majority (63.2%) of the positive COVID-19 cases.</p> <p>Appropriate use of PPE by HCWs is vital for their protection. However, breaches in the use of PPE may occur while managing COVID-19 patients due to physical and mental exhaustion among HCWs resulting from work overload. Early identification and appropriate management of HCWs with high-risk exposures can help prevent transmission to other hospital staff and patients, thus preserving resources and workforce.</p>

### Evidence on Community Measures

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