

# Weekly Evidence Report



Health Technology Assessment Philippines

06 - 12 November 2021

## Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Unit reviewed for the period of 06 - 12 November 2021. The HTA Unit reviewed a total of **12 studies** for the said period.

Evidence includes **2** studies on Epidemiology; **3** studies on Transmission; **2** studies on Drugs; **1** study on Vaccines, **1** study on Equipment and Devices; **0** studies on Medical and Surgical Procedures; **1** study 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The following report notes that 0 studies have not been peer-reviewed, each highlighted accordingly.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
08 Nov 2021	Matta et al., 2021	<a href="#">Association of Self-reported COVID-19 Infection and SARS-CoV-2 Serology Test Results With Persistent Physical Symptoms Among French Adults During the COVID-19 Pandemic</a>	<i>JAMA Internal Medicine/ Cross-sectional study</i>	<ul style="list-style-type: none"> <li>The authors aim to examine the associations of self-reported COVID-19 infection and SARS-CoV-2 serology test results with persistent physical symptoms (eg, fatigue, breathlessness, or impaired attention) in the general population during the COVID-19 pandemic. Participants in the cross-sectional analysis were from the French population-based CONSTANCES cohort, included between 2012 and 2019, who took part in the nested SAPRIS and SAPRIS-SERO surveys.</li> <li>Logistic regressions for each persistent symptom as the outcome were computed in models including both self-reported COVID-19 infection and serology test results and adjusting for age, sex, income, and educational level.</li> <li>Self-reported COVID-19 infection was associated with most persistent physical symptoms, whereas laboratory-confirmed COVID-19 infection was associated only with anosmia. Those associations were independent from self-rated health or depressive symptoms.</li> <li>The findings suggest that persistent physical symptoms after COVID-19 infection may be associated more with the belief in having been infected with SARS-CoV-2 than with having laboratory-confirmed COVID-19 infection.</li> <li>Further research in the area should consider underlying mechanisms.</li> </ul>
11 Nov 2021	Dutta et al., 2021	<a href="#">Wastewater-based epidemiology: a new frontier for tracking environmental persistence and community transmission of COVID-19</a>	<i>Springer Nature/ Systematic Review</i>	<ul style="list-style-type: none"> <li>The aim of the study is to critically evaluate major laboratory research that examines potential presence of SARSCoV-2.</li> <li>Various strategies and techniques including the efficacy of laboratory-based RT-qPCR techniques are examined for tracking environmental persistence and community transmission of COVID-19.</li> <li>Additionally, relevant research on environmental survivability of SARS-CoV-2 and any gaps in it are examined. Wastewater-based epidemiology (WBE) shows considerable promise in the near future for tracking environmental persistence and community transmission of SARS-CoV-2.</li> </ul>

## Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
06 Nov 2021	Mikszewski et al., 2021	<a href="#">Increased close proximity airborne transmission of the SARS-CoV-2 Delta variant</a>	<i>Elsevier B.V./ Systematic Review</i>	<ul style="list-style-type: none"> <li>A Monte Carlo simulation was performed using a social contact network and exponential dose-response model to quantify the close proximity reproduction number of both wild-type SARS-CoV-2 and the Delta variant.</li> <li>The viral load-dependent probability of infection curves and the secondary case distributions resulting from the Monte Carlo simulations for both wild-type and Delta SARS-CoV-2 indicates that close proximity interactions less than 25 min in duration present a low risk (<math>\leq 1\%</math>) to a susceptible person below a viral load of approximately <math>\log_{10} 5.5</math> RNA copies <math>\text{mL}^{-1}</math>.</li> <li>Mounting evidence suggests surgical masks inadequately protect health care workers against SARS-CoV-2, consistent with the authors' simulation analysis that shows close proximity airborne transmission may account for a majority of secondary transmission. This also supports the recent hypothesis that short-range (our close proximity) airborne transmission is the dominant mode for SARS-CoV-2 (Li, 2021).</li> </ul>
08 Nov 2021	Smith et al., 2021	<a href="#">Transmission of SARS-CoV-2 Virus, Delta Variant, Between Two Fully Vaccinated Healthcare Personnel</a>	<i>Cambridge Coronavirus Collection/ Letter to the Editor</i>	<ul style="list-style-type: none"> <li>The authors reported apparent SARS-CoV-2 viral transmission between two fully vaccinated healthcare workers (HCW) in the setting of occupational unmasked close contact.</li> <li>Healthcare personnel are screened daily and report COVID-19 symptoms to occupational health. Symptomatic HCW are tested for SARS-CoV-2 using a nasopharyngeal swab sample and the cobas SARS-CoV-2 assay (Roche).</li> <li>Contact tracing is conducted by interviewing personnel who test positive and their close contacts. Whole genome sequencing is conducted for all SARS-CoV-2 viral isolates as previously described. Consensus sequences were analyzed with Clustal omega (ebi.ac.uk) and visualized with interactive tree of life (itol.embl.de).</li> <li>The genetic and epidemiological data from the investigation of two HCW with breakthrough SARS-CoV-2 infection strongly suggest transmission of the SARS-CoV-2 virus delta variant from one fully vaccinated individual to another in the setting of unmasked close contact.</li> <li>Limitations include the fact that source of the infection for the first HCW is unknown; it remains possible that both HCWs were infected with SARS-CoV-2 from a common source or through separate exposures.</li> </ul>

## Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
09 Nov 2021	Sarti et al., 2021	<a href="#">COVID-19 in Workplaces: Secondary Transmission</a>	<i>Oxford Academic - Annals of Work Exposures and Health/ Retrospective observational study</i>	<ul style="list-style-type: none"> <li>• The study aims to describe a COVID-19 cluster among workers in an office in Italy.</li> <li>• The study was conducted on a cluster of COVID-19 that occurred from 20 November through 3 December 2020 in a group of six colleagues (A-F) working in the same office full time 5 days a week, 8 h a day. The workers used the following prevention measures: social distancing (desks were &gt;1 m, 1.76–5.01 m range), plexiglas panels, hands disinfection, and use of face mask. However, they did not wear face mask when in static position sitting at their desk and they did not aerate the place frequently.</li> <li>• The disease spread from one worker (subject A) to four (80%) of the five colleagues (subjects B–F). Only subject D was negative to COVID-19 on 14 days after last contact with subject A (20 November 2020) as confirmed by nasopharyngeal swab testing. Subject D, in particular, did not contact subject A in the 48 h before symptoms onset.</li> <li>• COVID-19 positivity of subject A was promptly communicated to the colleagues, who started self-isolation from their relatives and none of their households were infected. COVID-19 transmission was observed only in households of subject A.</li> <li>• The rapid communication of COVID-19 positivity to the colleagues and the prompt isolation of index case's close contacts allowed to eliminate the secondary transmission to their households. The contagion of index case's colleagues occurred from second day before symptoms onset. Distancing of &gt;1 m, use of plexiglass panels, sanitizing hand gel, and inconsistent use of face mask may not be enough for infection prevention in closed places with poor ventilation and high occupancy.</li> </ul>

## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
09 Nov 2021	Lévy et al., 2021	<a href="#">Monoclonal antibody-mediated neutralization of SARS-CoV-2 in an IRF9-deficient child</a>	<i>Proceedings of the National Academy of Sciences of the United States of America/ Case Report</i>	<ul style="list-style-type: none"> <li>The authors describe an unvaccinated child at risk for life-threatening COVID-19 due to an inherited deficiency of IRF9, which governs ISGF-3-dependent responses to type I and III interferons (IFN). <ul style="list-style-type: none"> <li>Admitted, with a high nasal SARS-CoV-2 load on day 1 of upper respiratory tract infection</li> <li>Viremic on day 2 and received casirivimab and imdevimab</li> <li>Clinical manifestations and viremia disappeared on days 3 and 4, respectively</li> </ul> </li> <li>Circulating SARS-CoV-2 virus induced the expression of IFN-stimulated genes in leukocytes on day 1, whereas the secretion of blood type I IFNs, which peaked on day 4, did not. Antibody-mediated SARS-CoV-2 neutralization is, therefore, sufficient to overcome a deficiency of antiviral IFNs.</li> </ul>
09 Nov 2021	Eloy et al., 2021	<a href="#">Combined treatment of molnupiravir and favipiravir against SARS-CoV-2 infection: One + zero equals two?</a>	<i>The Lancet/ Commentary</i>	<ul style="list-style-type: none"> <li>As pointed out by the meta-analysis conducted by the COVID-NMA initiative (<a href="http://www.covid-nma.com">www.covid-nma.com</a>), the level of evidence on favipiravir virological and clinical endpoints remains therefore low to very low.</li> <li>Molnupiravir has been studied in SARS-CoV-2 infected patients as a monotherapy at the dose of 800 mg BID in outpatients and hospitalized patients, with both virological and clinical endpoints. Data from phase II/III trial showed that molnupiravir is unlikely to demonstrate a clinical benefit in hospitalized patients.</li> <li>By thoroughly evaluating the antiviral activity of these drugs in the hamster model, alone or in combination, Abdelnabi et al. demonstrate that the combination of the two drugs at suboptimal doses is synergic, and leads to a strong reduction in both total viral load and infectious virus, when treatment is administered before or very rapidly after infection.</li> <li>Before this combination can be tested in clinical studies, several important questions will need to be studied in depth.</li> <li>Both favipiravir and molnupiravir have a panviral activity, with evidence of activity against several viruses, including influenza and hemorrhagic fever viruses. Their results could therefore be applied rapidly in other contexts, for which there is a desperate lack of effective antiviral treatments</li> </ul>

## 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
09 Nov 2021	Walter et al., 2021	<a href="#">Evaluation of the BNT162b2 Covid-19 Vaccine in Children 5 to 11 Years of Age</a>	<i>The New England Journal of Medicine/ Randomized Clinical Trial</i>	<ul style="list-style-type: none"> <li>COVID-19 vaccines are urgently needed in children younger than 12 years of age.</li> <li>A phase 1, dose-finding study and an ongoing phase 2–3 randomized trial are being conducted to investigate the safety, immunogenicity, and efficacy of two doses of the BNT162b2 vaccine administered 21 days apart in children 6 months to 11 years of age. The results presented are for 5-to-11-year-old children.</li> <li>In the 5-to-11-year-olds, as in other age groups, the BNT162b2 vaccine had a favorable safety profile. No vaccine-related serious adverse events were noted. One month after the second dose, the geometric mean ratio of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) neutralizing titers in 5-to-11-year-olds to those in 16-to-25-year-olds met the ratio of prespecified immunogenicity success criterion.</li> <li>A Covid-19 vaccination regimen consisting of two 10-µg doses of BNT162b2 administered 21 days apart was found to be safe, immunogenic, and efficacious in children 5 to 11 years of age.</li> </ul>

## Evidence on Equipment and Devices

Date	Author/s	Title	Journal/ Article Type	Summary
07 Nov 2021	Ghosh et al., 2021	<a href="#">Evaluation of recombinase-based isothermal amplification assays for point-of-need detection of SARS-CoV-2 in resource-limited settings</a>	<i>International Journal of Infectious Diseases/ Comparative Analysis (pre-proof)</i>	<ul style="list-style-type: none"> <li>Two recombinase-based isothermal techniques, reverse transcription recombinase polymerase amplification assay (RT-RPA) and reverse transcription recombinase aided amplification assay (RT-RAA), were evaluated for detection of SARS-CoV-2 in clinical samples.</li> <li>In total, 76 real-time reverse transcription polymerase chain reaction (real-time RTPCR) confirmed COVID-19 cases and 100 negative controls were evaluated to determine the diagnostic performance of the isothermal methods.</li> <li>The investigation revealed equally promising diagnostic accuracy of the methods with a sensitivity of 76.32% (95% CI: 65.18%-85.32%) when the target genes were RdRP and ORF1ab for RT-RPA and RT-RAA, respectively, while the combination of N and RdRP in RT-RPA augmenting the accuracy of the assay at a sensitivity of 85.53% (95% CI: 75.58%-92.55%).</li> <li>Furthermore, high specificity was observed for each of the methods ranged 94.00%-98.00% (95% CI: 87.40-9.76%).</li> <li>Considering the diagnostic accuracies, both RT-RPA and RT-RAA assays appear suitable for point-of-need deployment towards detection of the pathogen, understanding its epidemiology, case management, and curbing the transmission.</li> </ul>

## Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
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## Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
08 Nov 2021	Chen et al., 2021	<a href="#">Efficacy and safety of Bufe Huoxue capsules in the management of convalescent patients with COVID-19 infection: A multicentre, double-blind, and randomised controlled trial</a>	<i>PubMed/ Randomized clinical trial</i>	<ul style="list-style-type: none"> <li>• The study aimed to evaluate the efficacy and safety of <i>Bufe Huoxue</i> (BFHX) in restoring the functional status and exercise tolerance of patients recovering from COVID-19.</li> <li>• The primary outcomes was to evaluate improvements in exercise tolerance and imaging manifestations on chest computed tomography (CT).</li> <li>• BFHX may exert strong rehabilitative effects on physiological activity in patients recovering from COVID-19, which may in turn attenuate symptoms of fatigue and improve exercise tolerance.</li> </ul>



## Evidence on Preventive & Promotive Health

### Evidence on Screening

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### Evidence on Personal Measures

Date	Author/s	Title	Journal/ Article Type	Summary
12 Nov 2021	Nasa et al, 2021	<a href="#">Infection control in the intensive care unit: expert consensus statements for SARS-CoV-2 using a Delphi method</a>	The Lancet/ Expert Consensus	<ul style="list-style-type: none"> <li>Multidisciplinary experts, including those from low-income and middle-income countries, reached broad consensus on infection control measures for SARS-CoV-2 in intensive care units using a Delphi process.</li> <li>Ideal practice might be amended if facilities or equipment are unavailable.</li> </ul>

### Evidence on Other Health Technologies

Date	Author/s	Title	Journal/ Article Type	Summary
08 Nov 2021	Raesi et al., 2021	<a href="#">The impact of education through nurse-led telephone follow-up (telenursing) on the quality of life of COVID-19 patients</a>	<i>Journal of the Egyptian Public Health Association/ Quasi-experimental study</i>	<ul style="list-style-type: none"> <li>As one of the main concepts of nursing, patient education is a health education approach to planning, providing, and evaluating healthcare, the purpose of which is to maintain the patient's integrity and provide unique care for each patient.</li> <li>The quasi-experimental study used a pretest-posttest design and two groups. Sampling in the study was continuous and was built on the convenience sampling method.</li> <li>Inclusion criteria were definitive diagnosis of COVID-19 with positive PCR, appropriate mental health as reported in psychiatric counseling at the time of admission, full consciousness, lack of speech and language problems, ability to self-care, and access to a phone at home.</li> <li>The two groups were not significantly different regarding the quality of life mean scores at baseline. However, after the intervention, the mean and standard deviation of the total life quality score was significantly different between the control and intervention groups.</li> <li>Telenursing improves the life quality of COVID-19 patients. Through appropriate policies, health managers may put on the agenda the implementation of telenursing for COVID-19 patients.</li> </ul>