

# Weekly Evidence Report



Health Technology Assessment Philippines

03 – 09 December 2022

## Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Division reviewed for the period of 03 – 09 December 2022 on current public health emergency concerns, COVID-19 and monkeypox. The HTA Division reviewed a total of 15 studies for COVID-19 and 3 studies for monkeypox.

For COVID-19, evidence includes 1 study on Epidemiology; 8 studies on Vaccines; 4 studies on Drugs; 0 studies on Transmission; 0 studies on Equipment and Devices; 0 studies on Medical and Surgical Procedures; 1 study on Traditional Medicine; 1 study on Preventive & Promotive Health; and 0 studies on Other Health Technologies.

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



## Sections

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Epidemiology

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Vaccines

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Drugs

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Transmission

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Traditional Medicine

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Equipment & Devices

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Medical & Surgical Procedures

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Preventive & Promotive Health

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Other Health Technologies

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# COVID-19

## Evidence on Epidemiology

### Local COVID-19 Case Tracker:

[https://doh.gov.ph/2019-nCoV?gclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX\\_VVSGA-Hm00Pt5\\_CscykID7xZv4zqlXG5vm9PM2xoC27QQAvD\\_BwE](https://doh.gov.ph/2019-nCoV?gclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX_VVSGA-Hm00Pt5_CscykID7xZv4zqlXG5vm9PM2xoC27QQAvD_BwE)

Date	Author/s	Title	Journal/ Article Type	Summary
7 Dec 2022	WHO Global	<a href="#">Weekly epidemiological update on COVID-19 - 10 December 2022</a>	<i>WHO Global Situation Report</i>	<ul style="list-style-type: none"> <li>Globally, the number of weekly cases remained stable (-3%) during the week of 28 November to 4 December 2022 as compared to the previous week, with just under 3 million new cases reported.</li> <li>The number of new weekly deaths decreased by 17% as compared to the previous week, with about 7,800 fatalities reported.</li> <li>As of 4 December 2022, over 641 million confirmed cases and over 6.6 million deaths have been reported globally.</li> </ul>

**Evidence on Vaccines (1 of 2)****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>**WHO SAGE Vaccine Recommendations:**<https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization>**Local COVID-19 Vaccine Updates:** <https://doh.gov.ph/vaccines>

Date	Author/s	Title	Journal/ Article Type	Summary
5 Dec 2022	<a href="#">Yasuhara et al</a>	Myopericarditis After COVID-19 mRNA Vaccination Among Adolescents and Young Adults: A Systematic Review and Meta-analysis	<i>JAMA Pediatrics/ Systematic Review</i>	<ul style="list-style-type: none"> <li>The incident rate was higher after the second dose than the first dose, with 74.4% (95% CI, 58.2%-90.5%) of events occurring after the second dose</li> <li>Most patients (84.4% [95% CI, 80.5%-88.3%] of patients) had preserved left ventricular (LV) function. Of the 15.6% (95% CI, 11.7%-19.5%) of patients with LV systolic dysfunction (LV ejection fraction [LVEF] &lt;55%), most (14.1% [95% CI, 10.2%-18.1%]) were mild (ie, LVEF 45%-54%), and only 1.3% (95% CI, 0%-2.6%) of patients had severe LV systolic dysfunction (ie, LVEF&lt;35%).</li> </ul>
5 Dec 2022	<a href="#">Zou and Daveluy</a>	Lichen planus after COVID-19 infection and vaccination	<i>Archives of Dermatological Research/ Systematic Review</i>	<ul style="list-style-type: none"> <li>Lichen planus (LP) is an inflammatory disorder believed to result from CD8 + cytotoxic T-cell (CTL)-mediated autoimmune reactions against basal keratinocytes</li> <li>LP is a rare complication of COVID-19 infection and vaccination that may be mediated by overstimulation of T-cell responses and proinflammatory cytokine production</li> </ul>
6 Dec 2022	<a href="#">Abufares et al</a>	COVID-19 Vaccines, Effectiveness, and Immune Responses	<i>International Journal of Molecular Science/ Narrative Review</i>	<ul style="list-style-type: none"> <li>Review of safety and effectiveness of WHO-approved COVID-19 vaccines</li> <li>Exposure of healthy individuals to adenovirus vectors or mRNA vaccines causes the early production of antibodies from B and T cells</li> <li>Unhealthy individuals were more likely to experience harmful events due to relapses in their existing conditions</li> </ul>
6 Dec 2022	<a href="#">Wallace et al</a>	Effectiveness of Pfizer-BioNTech COVID-19 vaccine as evidence for policy action: A rapid systematic review and meta-analysis of non-randomized studies	<i>PLoS One/ Systematic Review</i>	The pooled VE of Pfizer-BioNTech COVID-19 vaccine was 92.4% (95% CI: 87.5%-95.3%) against symptomatic COVID-19 with moderate evidence certainty (eight studies), 94.3% (95% CI: 87.9%-97.3%) against hospitalization due to COVID-19 with moderate certainty (eight studies), 96.1% (95% CI: 91.5%-98.2%) against death due to COVID-19 with moderate certainty (four studies), and 89.3% (88.4%-90.1%) against asymptomatic SARS-CoV-2 infection with very low certainty (two studies)

**Evidence on Vaccines (2 of 2)****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>**WHO SAGE Vaccine Recommendations:**<https://www.who.int/groups/strategic-advisory-group-of-experts-on-immunization>**Local COVID-19 Vaccine Updates:** <https://doh.gov.ph/vaccines>

<b>Date</b>	<b>Author/s</b>	<b>Title</b>	<b>Journal/ Article Type</b>	<b>Summary</b>
7 Dec 2022	<a href="#">Grana et al</a>	Efficacy and safety of COVID-19 vaccines	<i>Cochrane Database Systematic Review/ Systematic review</i>	<ul style="list-style-type: none"> <li>Compared to placebo, most vaccines reduce, or likely reduce, the proportion of participants with confirmed symptomatic COVID-19, and for some, there is high-certainty evidence that they reduce severe or critical disease</li> <li>There is probably little or no difference between most vaccines and placebo for serious adverse events</li> </ul>
8 Dec 2022	<a href="#">US FDA</a>	Coronavirus (COVID-19) Update: FDA Authorizes Updated (Bivalent) COVID-19 Vaccines for Children Down to 6 Months of Age	FDA News Release	Authorization of updated (bivalent) Moderna and Pfizer-BioNTech COVID-19 vaccines to include use in children down to 6 months of age as a single booster dose at least 2 months after completion of primary vaccination with the monovalent COVID-19 Vaccine
9 Dec 2022	<a href="#">US CDC</a>	CDC Expands Updated COVID-19 Vaccines to Include Children Ages 6 Months through 5 Years	CDC News Release	Following FDA action, today CDC expanded the use of updated (bivalent) COVID-19 vaccines for children ages 6 months through 5 years. Children ages 6 months through 5 years who previously completed a Moderna primary series are eligible to receive a Moderna bivalent booster 2 months after their final primary series dose. Children ages 6 months through 4 years who are currently completing a Pfizer primary series will receive a Pfizer bivalent vaccine as their third primary dose.
9 Dec 2022	<a href="#">Sandoval et al</a>	Effectiveness of mRNA, protein subunit vaccine and viral vectors vaccines against SARS-CoV-2 in people over 18 years old: a systematic review	<i>Expert Review of Vaccines/ Systematic Review</i>	<ul style="list-style-type: none"> <li>Results suggest that new vaccinations could have more than 90% efficacy against SARS-CoV-2, regardless of the technology used.</li> <li>Adverse reactions go from mild to moderate, and good immunogenicity can be observed for all vaccine types</li> </ul>

## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
3 Dec 2022	<a href="#">Liu et al</a>	Therapeutic Polypeptides and Peptidomimetics: Powerful Tools for COVID-19 Treatment	<i>Clinical Drug Investigation/ Systematic Review</i>	<ul style="list-style-type: none"> <li>Notably, monoclonal antibodies have shown beneficial effects in the early stages of infection, while Paxlovid can significantly reduce hospitalization and mortality among non-vaccinated patients.</li> <li>Among clinical experimental drugs, both the interleukin-1 receptor antagonist anakinra and the bradykinin B2 receptor antagonist icatibant are well tolerated and effective in patients with COVID-19, but long-term trials are needed to confirm the durability of efficacy</li> </ul>
3 Dec 2022	<a href="#">Yoshida et al</a>	Sotrovimab use in Japanese inpatients with COVID-19: post-infusion adverse events	<i>Infectious Disease/ Retrospective cohort study</i>	<ul style="list-style-type: none"> <li>For the outcome of pyrexia and/or dyspnea (N = 40, 28.8%), multivariate analysis showed that significant risk factors were pre-infusion lowered oximetry below 96.5% (Odds Ratio [OR] 0.344, 95% Confidence Interval [CI] 0.139-0.851, P = 0.021) and pre-infusion temperature more than 36.7 degrees Celsius (OR 4.056, 95% CI 1.696-9.701, P = 0.002).</li> <li>Infusion-related reactions included vomiting immediately after infusion, chill/shivering, dizziness, rash, pruritus, pyrexia, and dyspnea among 44 patients 44 (31.6%)</li> </ul>
5 Dec 2022	<a href="#">Ceramella et al</a>	Drugs for COVID-19: An Update	<i>Molecules/ Narrative Review</i>	<ul style="list-style-type: none"> <li>Several drugs are used, including antiviral and antimalarial agents, antibiotics, immunomodulators, angiotensin II receptor blockers, bradykinin B2 receptor antagonists and corticosteroids</li> <li>Among the many potential drug candidates, remdesivir, lopinavir/ritonavir, and chloroquine (or hydroxychloroquine), have received an increased scientific attention, but only remdesivir has been approved by the FDA for the treatment of patients with COVID-19, although its clinical efficacy is still controversial</li> </ul>
9 Dec 2022	<a href="#">Batiha et al.</a>	A perspective study of the possible impact of obeticholic acid against SARS-CoV-2 infection	<i>Inflammopharmacology/ Observational study</i>	<ul style="list-style-type: none"> <li>Obeticholic acid (OCA) is a powerful farnesoid X receptor (FXR) agonist possessing marked antiviral and anti-inflammatory effects.</li> <li>Interestingly, OCA inhibits the reaction between this virus and angiotensin-converting enzyme type 2 (ACE2) receptors. FXR agonists control the expression of ACE2 and the inflammatory signaling pathways in this respiratory syndrome, which weakens the effects of Covid-19 disease and accompanied complications.</li> <li>Taken together, FXR agonists like OCA may reveal both direct and indirect impacts in the modulation of immune reaction in SARS-CoV-2 conditions.</li> </ul>

## Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
6 Dec 2022	<a href="#">Singh and Yang</a>	Pharmacological Mechanism of NRICM101 for COVID-19 Treatments by Combined Network Pharmacology and Pharmacodynamics	<i>International Journal of Molecular Science/ In-vitro analysis</i>	<ul style="list-style-type: none"> <li>Taiwan Chingguan Yihau (NRICM101), a TCM designed based on a medicinal formula with a long history of almost 500 years, has demonstrated its antiviral properties through clinical studies, yet the pharmacogenomic knowledge for this formula remains unclear</li> <li>Results showed that there were 434 common interactions found between NRICM101 and COVID-19 related genes/proteins.</li> <li>The prevalent use of NRICM101 for standardized treatments to attenuate common residual syndromes or chronic sequelae of COVID-19 were also revealed for post-pandemic future</li> </ul>

## Evidence on Preventive & Promotive Health

### Evidence on Screening

Date	Author/s	Title	Journal/ Article Type	Summary
6 Dec 2022	<a href="#">Grant et al</a>	Considerations and Challenges for Real-World Deployment of an Acoustic-Based COVID-19 Screening System	<i>Sensors / Observational study</i>	<ul style="list-style-type: none"> <li>Acoustic-based artificial intelligence (AI) tools could provide a simple, scalable, and prompt method to screen for COVID-19 using easily acquirable physiological sounds</li> <li>System performance is robust to confounding factors, such as gender, age group, and the presence of other respiratory conditions</li> <li>The system achieves promising performance with an AUC-ROC of 0.78</li> </ul>

### Evidence on Personal Measures

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### Evidence on Community Measures

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### Evidence on Transmission

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### Evidence on Equipment and Devices

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### Evidence on Medical and Surgical Procedures

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### Evidence on Other Health Technologies

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# MONKEYPOX

## Evidence on Epidemiology

### Monkeypox Case Tracker:

**WHO:** <https://extranet.who.int/publicemergency/#>

**US CDC:** <https://www.cdc.gov/poxvirus/monkeypox/response/2022/index.html>

Date	Author/s	Title	Journal/ Article Type	Summary
7 Dec 2022	European CDC	<a href="#">Mpox situation update</a>	<i>Epidemiological update</i>	<ul style="list-style-type: none"> <li>Since the start of the mpox outbreak and as of 6 December 2022, <b>20 934</b> confirmed cases of mpox have been reported from 29 EU/EEA countries, and <b>62</b> cases have been reported from three Western Balkan countries and Türkiye</li> </ul>
8 Dec 2022	WHO	<a href="#">WHO situation report</a>	<i>Epidemiological update</i>	<ul style="list-style-type: none"> <li>A total of <b>82,522 laboratory confirmed cases</b> and <b>1,524 probable cases</b>, including <b>65 deaths</b>, have been reported to WHO</li> <li>WHO assesses the global risk as <b>Moderate</b>. Regionally, WHO assesses the risk in the Region of the Americas as <b>High</b> and as <b>Moderate</b> in the African Region, Eastern Mediterranean Region, European Region and the South-East Asia Region. The risk in the Western Pacific Region is assessed as <b>Low</b>.</li> </ul>

## Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
5 Dec 2022	US CDC	<a href="#">Mpox Vaccination Basics</a>	<i>Vaccination guidelines</i>	<ul style="list-style-type: none"> <li>In the US, the main vaccine being used against mpox during the 2022 mpox outbreak is JYNNEOS. JYNNEOS is a 2-dose vaccine which may be given to children and adults who are at high risk for mpox. The second dose of JYNNEOS should be given 4 weeks after the first dose.</li> <li>In the current outbreak, there are two groups of people who may get vaccinated: 1) people who have already been exposed to mpox, and 2) people who might be exposed in the future.</li> </ul>



### Evidence on Drugs

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

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### Evidence on Traditional Medicine

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### Evidence on Equipment and Devices

Date	Author/s	Title	Journal/ Article Type	Summary
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### Evidence on Medical and Surgical Procedures

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
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### Evidence on Personal Measures

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### Evidence on Community Measures

Date	Author/s	Title	Journal/ Article Type	Summary
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## Evidence on Other Health Technologies

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