

# Weekly Evidence Report



Health Technology Assessment Philippines

29 October - 04 November 2022

## Overview

The following report presents summaries of evidence the Department of Health (DOH) - Health Technology Assessment (HTA) Division reviewed for the period of 29 October - 04 November 2022 on current public health emergency concerns, COVID-19 and monkeypox. The HTA Division reviewed a total of 13 studies for COVID-19 and 6 studies for monkeypox.

For COVID-19, evidence includes 3 studies on Epidemiology; 6 studies on Vaccines; 1 study on Drugs; 0 studies on Transmission; 0 studies on Equipment and Devices; 1 study 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 1 study on Epidemiology; 1 study on Transmission; 1 study on Vaccines; 1 study on Drugs; 1 study on Equipment and Devices; 0 studies on Medical and Surgical Procedures; 0 studies on Traditional Medicine; 1 study 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-HmO0Pt5\\_CscykID7xZv4zqlXG5vm9PM2xoC27QQAvD\\_BwE](https://doh.gov.ph/2019-nCoV?gclid=CjwKCAjwjtOTBhAvEiwASG4bCOmLzFMQljh8DX_VVSGA-HmO0Pt5_CscykID7xZv4zqlXG5vm9PM2xoC27QQAvD_BwE)

Date	Author/s	Title	Journal/ Article Type	Summary
02 Nov 2022	<a href="#">WHO</a>	Weekly epidemiological update on COVID-19 - 02 November 2022	<i>WHO/Situation Report</i>	<ul style="list-style-type: none"> <li>Globally, the number of new weekly cases decreased by 17% during the week of 24 to 30 October 2022 as compared to the previous week, with over 2.3 million new cases reported. The number of new weekly deaths decreased by 5% as compared to the previous week, with over 9300 fatalities reported. As of 30 October 2022, over 627 million confirmed cases and over 6.5 million deaths have been reported globally.</li> <li>During epidemiological week 41 (10 to 16 October 2022), and among Omicron sister lineages, BA.5 and its descendent lineages continued to be dominant globally, accounting for 74.9% of sequences. Other subvariants under monitoring such as BA.2.75 showed a rise in sequence prevalence from 2.9% to 3.7%. Similarly, there was a rise in prevalence from 5.7% to 9.0% for BQ.1*, 1.0% to 1.5% for XBB* and 0.3% to 0.7% for BA.2.3.20. BA.5 descendent lineages with additional mutations in SARS-CoV-2 Spike (R346X, K444X, V445X, N450D and/or N460X) rose in prevalence from 19.5% to 21.0%. After several weeks of increase, BA.4.6 prevalence remained stable at 4.1% during weeks 40 and 41. During week 41, unassigned sequences (presumed to be Omicron) accounted for 11.8% of sequences submitted to GISAID.</li> </ul>
04 Nov 2022	<a href="#">European Centre for Disease Prevention and Control (ECDC)</a>	Country overview report: week 43 2022	<i>ECDC/Situation Report</i>	<ul style="list-style-type: none"> <li>The overall pooled EU/EEA notification rate of COVID-19 (all-age) decreased by 23%, albeit two of the 30 reporting countries reporting recent increases.</li> <li>All pooled EU/EEA hospital and ICU indicators have remained stable in comparison to the previous week albeit seven of 24 countries reporting an increasing trend in one of these indicators within the previous week. A decreasing trend continues to be observed for pooled EU/EEA COVID-19 death rate which remain low at 9% of the pandemic maximum</li> <li>Among the 10 countries with an adequate volume of sequencing or genotyping for weeks 41–42 (10 October to 23 October 2022), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 91.8% (58.6–100.0% from 10 countries) for BA.4/BA.5, 11.3% (4.8–28.9% from 5 countries) for BQ.1, 1.6% (0.2–18.4% from 8 countries) for BA.2.75 and 1.0% (0.1–2.3% from 8 countries) for BA.2.</li> </ul>

**Note.** Studies that have not been peer-reviewed are highlighted in red.

Back to [Sections](#) page

**Evidence on Epidemiology**

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2022	<a href="#">Jassat et al.</a>	A cohort study of Post COVID-19 Condition across the Beta, Delta and Omicron waves in South Africa: 6-month follow up of hospitalised and non-hospitalised participants	<i>medRxiv/observational study</i>	<ul style="list-style-type: none"> <li>Among hospitalised and non-hospitalised participants, 46.7% (1,227/2,626) and 18.5% (199/1,074) had <math>\geq 1</math> symptoms at 6 months (<math>p &lt; 0.001</math>). Among hospitalised participants 59.5%, 61.2% and 18.5% experienced <math>\geq 1</math> symptoms at 6 months among individuals infected during the Beta, Delta and Omicron dominant waves respectively. Among PLWH who were hospitalised, 40.4% had <math>\geq 1</math> symptoms at 6 months compared to 47.1% among HIV-uninfected participants (<math>p = 0.108</math>).</li> <li>Risk factors for PCC included older age, female sex, non-black race, the presence of a comorbidity, greater number of acute COVID-19 symptoms, hospitalisation/ COVID-19 severity and wave period (individuals infected during the Omicron-dominated wave had a lower risk of persistent symptoms [adjusted Incident Risk Ratio 0.45; 95% Confidence Interval 0.36 – 0.57] compared to those infected during the Beta-dominated wave). There were no associations between self-reported vaccination status before or after SARS-CoV-2 infection with persistent symptoms.</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>

**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
04 Nov 2022	<a href="#">Lau et al.</a>	Population-based sero-epidemiological estimates of real-world vaccine effectiveness against Omicron infection in an infection-naive population, Hong Kong, January to July 2022	<i>medRxiv/observational study</i>	<ul style="list-style-type: none"> <li>While current vaccines remain effective against severe disease and death, robust evidence on vaccine effectiveness (VE) against all Omicron infections (i.e. irrespective of symptoms) remains sparse. A community-wide serosurvey was conducted with 5,310 subjects by estimating how vaccination histories modulated risk of infection in Hong Kong (which was largely infection naive) during a large wave of Omicron epidemic during January-July 2022. It is estimated that Omicron infected 45% (41-48%) of the Hong Kong population. Three and four doses of BNT162b2 or CoronaVac were effective against Omicron infection (VE of 47% (95% credible interval 34-68%) and 70% (43-99%) for three and four doses of BNT162b2 respectively; VE of 31% (1-73%) and 59% (10-99%) for three and four doses of CoronaVac respectively) seven days after vaccination, but protection waned with half-lives of 15 (3-47) weeks for BNT162b2 and 5 (1-37) weeks for CoronaVac. Findings suggest that booster vaccination can temporarily enhance population immunity ahead of anticipated waves of infections.</li> </ul>

## Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2022	<a href="#">Chemaitelly et al.</a>	COVID-19 primary series and booster vaccination and immune imprinting	<i>medRxiv/observational study</i>	<ul style="list-style-type: none"> <li>Matched, retrospective, cohort studies were conducted to investigate differences in incidence of SARS-CoV-2 reinfection in the national cohort of persons who had a primary omicron infection, but different vaccination histories.</li> <li>The adjusted hazard ratio comparing incidence of reinfection in the two-dose cohort to that in the unvaccinated cohort was 0.43 (95% CI: 0.38-0.48). The adjusted hazard ratio comparing incidence of reinfection in the three-dose cohort to that in the two-dose cohort was 1.38 (95% CI: 1.16-1.65). The adjusted hazard ratio comparing incidence of reinfection in the three-dose cohort to that in the unvaccinated cohort was 0.53 (95% CI: 0.44-0.63). All adjusted hazard ratios appeared stable over 6 months of follow-up. Divergence in cumulative incidence curves in all comparisons increased markedly when incidence was dominated by BA.4/BA.5 and BA.2.75*. No reinfection in any cohort progressed to severe, critical, or fatal COVID-19.</li> </ul>
01 Nov 2022	<a href="#">Davis-Gardner et al</a>	Results of safety mRNA bivalent booster enhances neutralization against BA.2.75.2 and BQ.1.1	<i>bioRxiv/Observational study</i>	<ul style="list-style-type: none"> <li>The bivalent COVID-19 mRNA booster vaccine within the United States is comprised of the ancestral and the Omicron BA.5 spike. Since its approval and distribution, additional Omicron subvariants have been identified with key mutations within the spike protein receptor binding domain that are predicted to escape vaccine sera. Of particular concern is the R346T mutation which has arisen in multiple subvariants, including BA.2.75.2 and BQ.1.1. Using a live virus neutralization assay, the serum samples from individuals who had received either one or two monovalent boosters or the bivalent booster to determine neutralizing activity against wild-type (WA1/2020) virus and Omicron subvariants BA.1, BA.5, BA.2.75.2, and BQ.1.1 were evaluated. In the one monovalent booster cohort, relative to WA1/2020, there was an observed reduction in neutralization titers of 9-15-fold against BA.1 and BA.5 and 28-39-fold against BA.2.75.2 and BQ.1.1. In the BA.5-containing bivalent booster cohort, the neutralizing activity improved against all the Omicron subvariants. Relative to WA1/2020, there was a reduction in neutralization titers of 3.7- and 4-fold against BA.1 and BA.5, respectively, and 11.5- and 21-fold against BA.2.75.2 and BQ.1.1, respectively. These data suggest that the bivalent mRNA booster vaccine broadens humoral immunity against the Omicron subvariants.</li> </ul>

## Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2022	<a href="#">Grewal et al.</a>	Effectiveness of mRNA COVID-19 vaccine booster doses against Omicron severe outcomes	<i>medRxiv/ Observational study</i>	<ul style="list-style-type: none"> <li>• A test-negative design and multivariable logistic regression to estimate vaccine effectiveness (VE; 2, 3, or 4 doses compared to unvaccinated individuals) and marginal effectiveness (3 or 4 doses compared to 2 doses) against Omicron-associated hospitalization or death among community-dwelling adults aged <math>\geq 50</math> years who were tested for SARS-CoV-2 between January 2, 2022 and October 1, 2022 in Ontario, Canada, stratified by age group and time since vaccination. VE during periods of Omicron BA.1/BA.2 and BA.4/BA.5 sublineage predominance was also compared.</li> <li>• 11,160 cases of Omicron-associated severe outcomes and 62,880 test-negative symptomatic controls were included. Compared to unvaccinated individuals, VE was 91-98% 7-59 days after a third dose, waned to 76-87% after <math>\geq 240</math> days, was restored to 92-97% 7-59 days after a fourth dose, and waned to 86-89% after <math>\geq 120</math> days. Trends in marginal effectiveness were consistent with VE estimates. VE was lower during the BA.4/BA.5-predominant period compared to the BA.1/BA.2-predominant period based on the same intervals since vaccination.</li> <li>• Findings suggest that 1 or 2 booster doses of monovalent mRNA COVID-19 vaccines initially restored very strong protection against Omicron-associated severe outcomes in all age groups, but VE subsequently declined over time with some age-related differences, and particularly so during a period of BA.4/BA.5 predominance.</li> </ul>
01 Nov 2022	<a href="#">Li et al.</a>	Safety and Immunogenicity of a Booster SARS-CoV-2 Vaccination in Patients with Chronic Liver Disease	<i>medRxiv/ observational study</i>	<ul style="list-style-type: none"> <li>• A total of 114 patients with CLD who received a SARS-CoV-2 vaccine booster were enrolled in this study. Serum samples were collected from enrolled patients at least 14 days after the booster dose and tested for SARS-CoV-2 neutralizing antibody (novel coronavirus neutralizing antibody, nCoV NTA) and IgG antibody against SARS-CoV-2 spike binding domain (novel coronavirus spike receptor-binding domain antibody, nCoV S-RBD antibody) levels. The positive rates of nCoV NTA and nCoV S-RBD in patients with CLD were 87.72% and 91.23%, respectively, after the booster injection of coronavirus disease 2019 (COVID-19) vaccine. The booster injection resulted in the production of nCov NTA in 66.7% of patients and nCov-SRBD antibody in 71.43% of patients with CLD who failed basic immunization. After basic SARS-CoV-2 immunization, the booster SARS-CoV2 vaccine increased the serum conversion rate and the level of nCov NTA and nCov-SRBD antibodies in patients with CLD (including patients with cirrhosis). The severity of the liver disease is related to the immune response to COVID-19 vaccine.</li> </ul>

## Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
30 Oct 2022	<a href="#">Hu et al.</a>	Results of safety monitoring of BNT162b2 (Pfizer-BioNTech) COVID-19 vaccine in U.S. children aged 5-17 years	<i>medRxiv/ Surveillance report</i>	<ul style="list-style-type: none"> <li>A rapid cycle analysis of 20 pre-specified health outcomes, 13 of which underwent sequential testing and 7 of which were monitored descriptively within a cohort of vaccinated individuals. Investigators tested for increased risk of each health outcome following vaccination compared to a historical baseline, while adjusting for repeated looks at the data as well as claims processing delay. Question: Did active monitoring detect potentially elevated risk of health outcomes following BNT162b2 COVID-19 vaccination in the U.S. pediatric population aged 5-17 years?</li> <li>Twelve of 13 health outcomes did not meet the safety signal threshold following BNT162b2 COVID-19 vaccination in three large commercial claims databases using near real-time monitoring. Myocarditis/pericarditis met the statistical threshold for a signal following primary series vaccination in ages 12-17 years. Results from near-real time monitoring of health outcomes following BNT162b2 COVID-19 vaccination provide additional reassuring evidence of vaccine safety in the pediatric population. The myocarditis/pericarditis signal is consistent with current evidence and is being further evaluated.</li> </ul>

## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
03 Nov 2022	<a href="#">Bakouny et al.</a>	Interplay of Immunosuppression and Immunotherapy Among Patients With Cancer and COVID-19	<i>Journals of the American Medical Association/ Brief report</i>	<ul style="list-style-type: none"> <li>Cytokine storm due to COVID-19 can cause high morbidity and mortality and may be more common in patients with cancer treated with immunotherapy (IO) due to immune system activation. This registry-based retrospective cohort study included 12 046 patients reported to the COVID-19 and Cancer Consortium (CCC19) registry from March 2020 to May 2022. The CCC19 registry is a centralized international multi-institutional registry of patients with COVID-19 with a current or past diagnosis of cancer. Records analyzed included patients with active or previous cancer who had a laboratory-confirmed infection with SARS-CoV-2 by polymerase chain reaction and/or serologic findings</li> </ul>

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## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
03 Nov 2022	<a href="#">Bakouny et al.</a>	Interplay of Immunosuppression and Immunotherapy Among Patients With Cancer and COVID-19	<i>Journals of the American Medical Association/ Brief report</i>	<p>&lt;continued from previous page&gt;</p> <ul style="list-style-type: none"> <li>Although no difference in COVID-19 severity and cytokine storm was found in the IO group compared with the untreated group in the total cohort (adjusted odds ratio [aOR], 0.80; 95% CI, 0.56-1.13, and aOR, 0.89; 95% CI, 0.41-1.93, respectively), patients with baseline immunosuppression treated with IO (vs untreated) had worse COVID-19 severity and cytokine storm (aOR, 3.33; 95% CI, 1.38-8.01, and aOR, 4.41; 95% CI, 1.71-11.38, respectively). Patients with immunosuppression receiving non-IO therapies (vs untreated) also had worse COVID-19 severity (aOR, 1.79; 95% CI, 1.36-2.35) and cytokine storm (aOR, 2.32; 95% CI, 1.42-3.79).</li> <li>This cohort study found that in patients with cancer and COVID-19, administration of systemic anticancer therapies, especially IO, in the context of baseline immunosuppression was associated with severe clinical outcomes and the development of cytokine storm</li> </ul>

## Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
30 Oct 2022	<a href="#">Tsujiimoto et al.</a>	A novel hospital-at-home model for patients with COVID-19 built by a team of local primary care clinics and clinical outcomes: A multi-center retrospective cohort study	<i>medRxiv/ Retrospective cohort study</i>	<ul style="list-style-type: none"> <li>Hospital-at-home (HaH) care has been proposed as an alternative to inpatient care for patients with COVID-19. Previous reports were hospital-led and involved patients triaged at the hospitals. To reduce the burden on hospitals, A novel HaH care model organised by a team of local primary care clinics was constructed.</li> <li>A multi-center retrospective cohort study was conducted with COVID-19 patients who received our HaH care from Jan 1st to Mar 31st, 2022. Patients who were not able to be triaged for the need for hospitalization by the Health Center solely responsible for the management of COVID-19 patients in Osaka City were included. The primary outcome was receiving medical care beyond the HaH care defined as a composite outcome of any medical consultation, hospitalization, or death within 30 days from the initial treatment.</li> <li>&lt;continue to next page&gt;</li> </ul>

## Evidence on Medical and Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
30 Oct 2022	<a href="#">Tsuji moto et al.</a>	A novel hospital-at-home model for patients with COVID-19 built by a team of local primary care clinics and clinical outcomes: A multi-center retrospective cohort study	medRxiv/ Retrospective cohort study	<p>&lt;continued from previous page&gt;</p> <ul style="list-style-type: none"> <li>Of 382 eligible patients, 34 (9%) were triaged for hospitalization immediately after the initial visit. Of the remaining 348 patients followed up, 37 (11%) developed the primary outcome, while none died. Obesity, fever, and gastrointestinal symptoms at baseline were independently associated with an increased risk of needing medical care beyond the HaH care. A further 129 (37%) patients were managed online alone without home visit, and 170 (50%) required only one home visit in addition to online treatment</li> </ul>

## Evidence on Traditional Medicine

Date	Author/s	Title	Journal/ Article Type	Summary
04 Nov 2022	<a href="#">Furukawa et al.</a>	Antiviral effect of candies containing persimmon-derived tannin against SARS-CoV-2 delta strain	bioRxiv/ Scientific report	<ul style="list-style-type: none"> <li>Inactivation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the mouth has the potential to reduce the spread of coronavirus disease 2019 (COVID-19) because the virus is readily transmitted by dispersed saliva. Persimmon-derived tannin has strong antioxidant and antimicrobial activity owing to its strong adhesiveness to proteins, and it also exhibited antiviral effects against non-variant and alpha variant SARS-CoV-2 in a previous study. In this report, the antiviral effects of persimmon-derived tannin against the delta variant of SARS-CoV-2 in vitro via the plaque assay method was demonstrated. Then, the effects of candy containing persimmon-derived tannin was examined. Plaque assay results show that saliva samples provided by healthy volunteers while they were eating tannin-containing candy remarkably suppressed the virus titers of the SARS-CoV-2 delta variant. In addition, the SARS-CoV-2 viral load in saliva from patients with COVID-19 that was collected immediately after they had eaten the tannin-containing candy was below the level of detection by PCR for SARS-CoV-2. These data suggest that adding persimmon-derived tannin to candy and holding such candy in the mouth is an effective method by which to inactivate the SARS-CoV-2 in saliva, and the application of this approach has potential for inhibiting the transmission of COVID-19.</li> </ul>



## Evidence on Preventive & Promotive Health

### Evidence on Screening

Date	Author/s	Title	Journal/ Article Type	Summary
03 Nov 2022	<a href="#">O'Hare et al</a>	Complexity and Challenges of the Clinical Diagnosis and Management of Long COVID	<i>JAMA network/ qualitative study</i>	<ul style="list-style-type: none"> <li>This qualitative study including health records from 200 randomly sampled veterans identified 2 dominant themes: (1) clinical uncertainty: it was often unclear whether particular symptoms were due to long COVID, given the medical complexity and functional limitations of many patients and absence of specific markers for this condition, which led to ongoing monitoring, diagnostic testing, and referral; and (2) care fragmentation: post-COVID-19 care processes were often siloed from other care and could be burdensome to patients.</li> </ul>

### Evidence on Community Measures

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

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

Date	Author/s	Title	Journal/ Article Type	Summary
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### Evidence on Equipment and Devices

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

Date	Author/s	Title	Journal/ Article Type	Summary
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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
04 November 2022	<a href="#">WHO</a>	2022 Monkeypox Outbreak: Global Trends	<i>WHO / Global Epidemiological Report</i>	<ul style="list-style-type: none"> <li>From 01 January to 03 November 2022, there have been a total of 78,236 laboratory-confirmed cases of monkeypox, 3,685 probable cases, and 38 deaths reported by 109 member states across all WHO regions.</li> <li>The ongoing outbreak of monkeypox in countries outside of West and Central Africa continue to affect men who have sex with men. According to the WHO, there is currently no signal suggesting sustained transmission beyond these networks.</li> <li>WHO assesses the risk as moderate globally and low-moderate in the Western Pacific Region.</li> <li>The following are the key features of reported cases with available data: 96.9% are male, majority of which are between 18-44 years of age and identify as MSM, including bisexual men. Sexual encounter was the most commonly reported type of transmission while a party setting with sexual contacts was the most commonly reported exposure setting.</li> </ul>

## Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
02 Nov 2022	<a href="#">Ward et al.</a>	Transmission dynamics of monkeypox in the United Kingdom: contact tracing study	<i>The BMJ / Surveillance study</i>	<ul style="list-style-type: none"> <li>To analyse the transmission dynamics of the monkeypox outbreak in the UK, a contact tracing study was conducted using data from 2,746 people with PCR-confirmed monkeypox virus between 06 May and 01 August 2022.</li> <li>The mean age of participants was 37.8 years and 95% reported being gay, bisexual, and other men who have sex with men.</li> <li>Analysis of the instantaneous growth rate of monkeypox incidence in the UK indicated that short serial intervals (i.e., the time from symptom onset in a primary case to symptom onset in a secondary case) were more common than short incubation periods suggesting considerable pre-symptomatic transmission.</li> <li>For patients who could be linked through personal identifiable infection, the maximum time that transmission was detected before manifestation of symptoms was four days.</li> <li>The incubation period after exposure, which ranged from 16 to 23 days in the study, would be adequate to identify 95% of infected individuals, and may be used for post-exposure isolation policies.</li> </ul>

## Evidence on Vaccines

Date	Author/s	Title	Journal/ Article Type	Summary
04 November 2022	<a href="#">Hayat et al.</a>	Design of a novel multiple epitope-based vaccine: an immunoinformatics approach to combat monkeypox	<i>Journal of Biomolecular Structure and Dynamics</i> / Research article	<ul style="list-style-type: none"> <li>• In this study, which used immunoinformatics approaches, a multi-epitope vaccine was constructed for the Monkeypox virus.</li> <li>• The vaccine construct was selected based on promising vaccine candidates and immunogenic potential. Further epitopes were selected based on antigenicity score, non-allergenicity and good immunological properties.</li> <li>• Molecular docking showed that there were strong interactions between the toll-like-receptor-9 and the vaccine construct. Stability was also confirmed through molecular dynamics.</li> <li>• The computer-constructed vaccine was predicted to have good stability, expression, immunostimulatory capabilities and significant solubility.</li> </ul>

## Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
04 November 2022	<a href="#">Sahoo et al.</a>	In silico identification of potential inhibitors of vital monkeypox virus proteins from FDA approved drugs	<i>Molecular Diversity</i> / In silico study	<ul style="list-style-type: none"> <li>• This was a computational drug repurposing study to identify the existing approved drugs which can be potential inhibitors of the two vital monkeypox virus proteins, thymidylate kinase and D9 decapping enzyme.</li> <li>• The structures of the identified proteins were modelled and subjected to molecular dynamics simulations to evaluate their stability, then were docked against a manually curated library of 202 US FDA approved antivirals and antibiotics.</li> <li>• The study identified Tipranavir, Cefiderocol, Doxorubicin and Dolutegravir to have significant binding to the two target proteins that were modelled, and had stable protein-ligand complexes.</li> <li>• However, further in vivo and in vitro experimental evaluations are needed to validate the four promising inhibitors of monkeypox proteins predicted by this study.</li> </ul>

## Evidence on Equipment and Devices

Date	Author/s	Title	Journal/ Article Type	Summary
02 November 2022	<a href="#">Ouafi et al.</a>	Oropharyngeal samples versus lesion specimens at diagnosis in patients infected with Monkeypox virus in Northern France	<i>Journal of Medical Virology</i> / Primary study	<ul style="list-style-type: none"> <li>This study investigated monkeypox virus DNA detection in oropharyngeal samples, and compared the viral load to that in lesion samples (i.e., cutaneous or anal/rectal samples) at diagnosis in 228 patients infected with monkeypox.</li> <li>A positive result in OPS was observed in 54 out of 60 patients (90%). However, the viral load in OPS (median Ct value = 29.5; IQR= 24.7 - 34) was significantly lower than that in lesion samples (median Ct value = 17.8; IQR= 16.3 and 19.7) (p&lt; 0.0001).</li> <li>The study concluded that pharyngeal sampling does not bring additional information for the initial diagnosis in patients presenting with typical lesions.</li> </ul>

## Evidence on Preventive & Promotive Health

### Evidence on Screening

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

Date	Author/s	Title	Journal/ Article Type	Summary
29 October 2022	<a href="#">Adler and Taggart</a>	Monkeypox exposure during pregnancy: what does UK public health guidance advise?	<i>The Lancet</i> / Correspondence	<ul style="list-style-type: none"> <li>Amendments were proposed to the flowchart previously published in <i>The Lancet</i> on the screening and management of monkeypox in pregnant women to fully align the pathway to the recommendations of the UK HSA.</li> <li>New recommendations include precautionary hospital admission for any pregnant person with a positive monkeypox PCR, regardless of symptoms.</li> <li>As for vaccination, this was only recommended among pregnant women after significant exposure if tested to be negative.</li> <li>Contrary to the previous <i>Lancet</i> publication, Adler and Taggart also recommended against prophylactic antibiotics for pregnant women who have been admitted to the hospital.</li> <li>Lastly, self-isolation for monkeypox contacts was no longer recommended unless at high risk (e.g. after sexual contact).</li> </ul>

**Evidence on Preventive & Promotive Health (cont.)****Evidence on Community Measures**

<b>Date</b>	<b>Author/s</b>	<b>Title</b>	<b>Journal/ Article Type</b>	<b>Summary</b>
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**Evidence on Traditional Medicine**

<b>Date</b>	<b>Author/s</b>	<b>Title</b>	<b>Journal/ Article Type</b>	<b>Summary</b>
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**Evidence on Medical and Surgical Procedures**

<b>Date</b>	<b>Author/s</b>	<b>Title</b>	<b>Journal/ Article Type</b>	<b>Summary</b>
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**Evidence on Other Health Technologies**

<b>Date</b>	<b>Author/s</b>	<b>Title</b>	<b>Journal/ Article Type</b>	<b>Summary</b>
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