Weekly Evidence Report

Health Technology Assessment Philippines

30 October - 05 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 30 October - 05 November 2021. The HTA Unit reviewed a total of 13 studies for the said period.

Evidence includes 2 studies on Epidemiology; 2 study on Transmission; 3 study on Drugs; 1 study on Vaccines, 1 study on Equipment and Devices; 4 studies on Medical and Surgical Procedures; 0 study on Traditional Medicine; and 0 studies on Preventive & Promotive Health.

The following report notes that 0 studies have not been peer-reviewed, each highlighted accordingly.

Sections

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
03 Nov 2021	Vaselli et al., 2021	The seroprevalence of SARS-CoV-2 during the first wave in Europe 2020: A systematic review	*PLOS ONE / Systematic Review*	• The review of SARS-CoV-2 seroprevalence studies in Europe was undertaken to inform public health strategies including vaccination, that aim to accelerate population immunity. • 115 studies were included spanning 17 European countries, that estimated the seroprevalence of SARS-CoV-2 from samples obtained between November 2019 -August 2020. A total of 54/115 studies included HCWs with a reported seroprevalence among HCWs ranging from 0.7% to 45.3%, which did not differ significantly by country. • In community studies significant heterogeneity was reported in the seroprevalence between different age groups and the majority of studies reported there was no significant difference by gender. • The review demonstrated a wide heterogeneity in reported seroprevalence of SARS-CoV-2 antibodies between populations. Continued evaluation of seroprevalence is required to understand the impact of public health measures and inform interventions including vaccination programmes.
03 Nov 2021	Yang et al., 2021	Coronavirus disease 2019 pandemic and pregnancy and neonatal outcomes in general population: A living systematic review and meta-analysis (updated Aug 14, 2021)	*Acta Obstetricia et Gynecologica Scandinavica/ Systematic Review and meta-analysis*	• The objective of the study was to conduct a living systematic review and meta-analyses of studies reporting pregnancy and neonatal outcomes by comparing the pandemic and pre-pandemic periods. • There was significant reduction in unadjusted estimates of PTB (35 studies, unadjusted odds ratio [uaOR] 0.95, 95% CI 0.92-0.98), but not in adjusted estimates (six studies, adjusted OR [aOR] 0.95, 95% CI 0.80-1.13). • There was reduction in spontaneous PTB (six studies, uaOR 0.89, 95% CI 0.81-0.96) and induced PTB (five studies, uaOR 0.89, 95% CI 0.81-0.97). • There was an increase in mean birthweight during the pandemic period compared with the pre-pandemic period (six studies, mean difference 17 g, 95% CI 7-28 g). • The COVID-19 pandemic may be associated with a reduction in PTB; however, referral bias cannot be excluded. There was no statistically significant difference in stillbirth between pandemic and pre-pandemic periods.

Evidence on Transmission

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2021	Liu, et al., 2021	Rapid Review of Social Contact Patterns During the COVID-19 Pandemic	*Epidemiology Wolters Kluwer/ Rapid Review*	• The review aimed to synthesize empirical data on the changing social contact patterns during the COVID-19 pandemic. • They conducted a systematic review using PubMed, Medline, Embase, and Google Scholar following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. They descriptively compared the distribution of contacts observed during the pandemic to pre-COVID data across countries to explore changes in contact patterns during physical distancing measures. • Identified 12 studies reporting social contact patterns during the COVID-19 pandemic. Eight studies were conducted in European countries and eleven collected data during the initial mitigation period in the spring of 2020 marked by government-declared lockdowns. • Most study settings reported a mean of between 2 and 5 contacts per person per day, a substantial reduction compared to pre-COVID rates, which ranged from 7 to 26 contacts per day. • Information on changes in contact patterns during physical distancing measures can guide more realistic representations of contact patterns in mathematical models for SARS-CoV-2 transmission.
03 Nov 2021	Karki et al., 2021	Risk of infection and contribution to transmission of SARS-CoV-2 in school staff: a systematic review	*BMJ Open/ Systematic Review*	• The review aimed to summarise the comparative risk of infection in school staff and their contribution to SARS-CoV-2 transmission. • The risk of infection for teachers compared with students were similar in one study in low incidence setting, higher in three studies (RR 1.2–4.4) and lower in three studies in medium to high incidence settings. The risk of infection for teachers in a high infection environment is higher in face-to-face than in distance classes when compared with general population groups. The risk of infections as well as risk of hospitalisation both increased for teachers during school openings compared with school closure. • The review concluded that while in low incidence settings there is little evidence for school staff to be at high risk of SARS-CoV-2 infection, in high incidence settings there is an increased risk of SARS-CoV-2 infection in school staff teaching face-to-face compared to staff teaching digitally and general population.

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

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Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
02 Nov 2021	Malgie, et al., 2021	Decreased mortality and increased side effects in COVID-19 patients treated with IL-6 receptor antagonists: systematic review and meta-analysis	*Scientific Reports/ Systematic Review and Meta-analysis*	• The objective of the study was to **give updates to answer the following research questions**: (1) Do patients hospitalized for COVID-19 treated with IL-6 (receptor) antagonists have lower mortality compared to standard of care? (2) Do patients hospitalized for COVID-19 treated with IL-6 (receptor) antagonists have more side effects compared to standard of care? • The search strategy retrieved 2975 unique titles of which **71 studies (9 RCTs and 62 observational) studies** comprising 29,495 patients were included. Mortality (RR 0.75) and mechanical ventilation (RR 0.78) were **lower** and **the risk of neutropenia (RR 7.3), impaired liver function (RR 1.67) and secondary infections (RR 1.26) were higher for patients treated with IL-6 (receptor) antagonists** compared to patients not treated with treated with IL-6 (receptor) antagonists. • IL-6 (receptor) antagonists are **effective in reducing mortality** in COVID-19 patients, while the risk of side effects was higher. • The baseline risk of mortality was an important effect modifier: IL-6 (receptor) antagonists were **effective when the baseline mortality risk was high** (e.g. ICU setting), while they **could be harmful when the baseline mortality risk was low.**
03 Nov 2021	Poggio, et al., 2021	Safety of systemic hormone replacement therapy in breast cancer survivors: a systematic review and meta-analysis	*Breast Cancer Research and Treatment/ Systematic Review and Meta-analysis*	• The review aimed to assess the safety of systemic HRT on risk of disease recurrence in BC survivors. • Four RCTs were included in the meta-analysis (n = 4050 patients). Overall, 2022 patients were randomized to receive HRT (estrogen/progestogen combination or tibolone) and 2023 to the control group with placebo or no HRT. • HRT significantly increased the risk of BC recurrence compared to placebo (HR 1.46, 95% CI 1.12-1.91, p = 0.006). At the subgroup analysis, the risk of BC recurrence with the use of HRT was significantly increased in patients with hormone receptor-positive disease (HR 1.8, 95% CI 1.15-2.82, p = 0.010) but not in those with hormone receptor-negative tumors (HR 1.19, 95% CI 0.80-1.77, p = 0.390). • Use of HRT was associated with a detrimental prognostic effect in BC survivors, particularly in those with hormone receptor-positive disease.

Evidence on Drugs

Date	Author/s	Title	Journal/ Article Type	Summary
02 Nov 2021	Hunter et al., 2021	Zinc for the prevention or treatment of acute viral respiratory tract infections in adults: a rapid systematic review and meta-analysis of randomised controlled trials	*BMJ Open / Systematic Review and Meta-analysis*	• The review aimed to evaluate the benefits and risks of zinc formulations compared with controls for prevention or treatment of acute viral respiratory tract infections (RTIs) in adults. • Twenty-eight RCTs with 5446 participants were identified. None were specific to SARS-CoV-2. Compared with placebo, oral or intranasal zinc prevented 5 RTIs per 100 person-months (95% CI 1 to 8, numbers needed to treat (NNT)=20, moderate-certainty/quality). Sublingual zinc did not prevent clinical colds following human rhinovirus inoculations (relative risk, RR 0.96, 95% CI 0.77 to 1.21, moderate-certainty/quality). • There were clinically significant reductions in day 3 symptom severity scores (mean difference, MD -1.20 points, 95% CI -0.66 to -1.74, low-certainty/quality), but not average daily symptom severity scores (standardised MD -0.15, 95% CI -0.43 to 0.13, low-certainty/quality). • Non-serious adverse events (AEs) (eg, nausea, mouth/nasal irritation) were higher (RR 1.41, 95% CI 1.17 to 1.69, NNHarm=7, moderate-certainty/quality).

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
31 Oct 2021	Desai, et al., 2021	Can SARS-CoV-2 vaccine increase the risk of reactivation of Varicella zoster? A systematic review	*Journal of Cosmetic Dermatology/ Systematic Review*	• The review aimed to describe the demographic, clinical, morphological characteristics, outcomes, and timing of development of herpes zoster to the various COVID-19 vaccines. And to identify on whether COVID-19 vaccine has temporal relationship between development of herpes zoster (HZ). • A total of 54 cases consisting of 27 male and 27 female patients have been reported. • Majority of the cases were from the high-income and/or middle-income countries. 86.27% of the cases of HZ were reported due to mRNA vaccine. Thirty-six patients 36/45 (80%) developed herpes zoster following the priming dose of COVID-19 vaccine among those who received mRNA vaccine. • The authors cannot establish definite link but there may be possible association between COVID-19 vaccine and shingles. Large-scale studies may help to understand the cause-effect relationship.

Evidence on Equipment & Devices

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2021	Laramie, et al. 2021	Aerosol Transmission of Infectious Disease and the Efficacy of Personal Protective Equipment (PPE): A systematic Review	*Journal of Occupational and Environmental Medicine / Systematic Review*	• The review discussed the **inhalation of virus-laden aerosols as a viable mechanism of transmission** of various respiratory infectious diseases and **PPE efficacy.** • The transmission of infectious disease is of concern for all respirable diseases discussed (SARS-CoV-1, SARS-CoV-2, MERS, influenza, and tuberculosis), and the **effectiveness of facemasks is dependent on the efficiency of the filter, fit, and proper use.** • The review concluded that **PPE should be the last resort** in preventing the spread of infectious disease and **should only be used for protection and not to control the transmission.**

Evidence on Medical & Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
30 Oct 2021	Zhang, et al., 2021	Effect of ventilation strategy during cardiopulmonary bypass on postoperative pulmonary complications after cardiac surgery: a randomized clinical trial	*Journal of Cardiothoracic Surgery / Randomized Clinical Trial*	• The objective of the trial is to determine whether maintaining ventilation during cardiopulmonary bypass (CPB) with a different fraction of inspired oxygen (FiO2) had an impact on the occurrence of postoperative pulmonary complications (PPCs). • The primary outcomes were the incidence and severity of PPCs during hospitalization. The composite incidence of PPCs did not significantly differ between the NoV (63%), LOV (49%) and HOV (57%) groups (P = 0.069). And there was also no difference regarding the incidence of PPCs between the non-ventilation (NoV) and ventilation (the combination of LOV and HOV) groups. The LOV group was observed a lower proportion of moderate and severe pulmonary complications (grade ≥ 3) than the NoV group (23.1% vs. 44.2%, P = 0.001). • The trial concluded that maintaining ventilation during CPB did not reduce the incidence of PPCs in patients undergoing cardiac surgery.
30 Oct 2021	Podda, et al., 2021	A randomised controlled multicentre investigator-blinded clinical trial comparing efficacy and safety of surgery versus complex physical decongestive therapy for lipedema (LIPLEG)	*Trials BMC / Randomized Control Trial*	• The LIPLEG trial evaluates the efficacy and safety of liposuction compared to standard CDT. • Women with lipedema (n=405) without previous liposuction will be allocated 2:1 to liposuction or CDT. The primary outcome of the trial is leg pain reduction by ≥2 points on a visual analogue scale ranging 0-10 at 12 months on CDT or post-completion of liposuction. • The primary analysis bases on intention-to-treat. Success proportions are compared using the Mantel-Haenszel test stratified by lipedema stage at a 5% two-sided significance level. If this test is statistically significant, the equality of the response proportions in the separate strata is evaluated by Fisher's exact test in a hierarchical test strategy. • LIPLEG assesses whether surgical treatment of lipedema is safe and effective to reduce pain and other lipedema-related health issues.

Evidence on Medical & Surgical Procedures

Date	Author/s	Title	Journal/ Article Type	Summary
01 Nov 2021	Hoang et al., 2021	Self-reported olfactory and gustatory dysfunction and psychophysical testing in screening for Covid-19: A systematic review and meta-analysis	*International Forum of Allergy and Rhinology/ Systematic Review and Meta-analysis*	• The review aimed to assess the sensitivity of self-reporting and psychophysical tests for OGD. • In the 50 included studies (42,902 patients), self-reported olfactory dysfunction showed a sensitivity of 43.9% (95% CI, 37.8%-50.2%), a specificity of 91.8% (95% CI, 89.0%-93.9, and a DOR of 8.74 (95% CI, 6.67-11.46) for predicting COVID-19 infection. • Self-reported gustatory dysfunction yielded a sensitivity of 44.9% (95% CI, 36.4%-53.8%), a specificity of 91.5% (95% CI, 87.7%-94.3%), and a DOR of 8.83 (95% CI, 6.48-12.01). • Olfactory psychophysical tests analysis revealed a sensitivity of 52.8% (95% CI, 25.5% to 78.6%), a specificity of 88.0 % (95% CI, 53.7% to 97.9%), and a DOR of 8.18 (95% CI, 3.65 to 18.36). One study used an identification test for gustatory sensations assessment. • The review concluded that neither self-reported OGD nor unvalidated and limited psychophysical tests were sufficiently sensitive in screening for COVID-19. They were not suitable adjuncts in ruling out the disease.
01 Nov 2021	Barik, et al., 2021	Results after treatment of congenital radioulnar synostosis: a systematic review and pooled data analysis	*Journal of Pediatric Orthopedics / Systematic Review*	• The review aimed to derive any correlation between various influencing factors, outcomes and complications • A total of 374 forearms with a mean age of 6.7 years (2.0–18.8) were analyzed. Derotational surgeries were more commonly performed (91%) than motion-preserving surgeries (9%). The mean deformity improved from 64.8° pronation (−75° to 110°) to a mean of 2.8° pronation (−50° to 80°). In total, 17.9% of patients presented with complications. • A significant correlation was noted between age and major complications, proximal osteotomies and complications, and postoperative loss of reduction and double level osteotomies as the primary treatment modality. Most of the complications occurred above the threshold of 65–70° of correction and in children 7 years and above. Surgery is essential to improve the quality of life of children with CRUS.

Evidence on Traditional Medicine

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Evidence on Preventive & Promotive Health

Evidence on Screening

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Evidence on Personal Measures

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