

Criterion	Summary of Findings
Responsiveness to Magnitude and Severity	<p>For the burden of disease, COVID-19 continues to be a significant public health concern despite the observed decrease in COVID-19 cases, weekly positivity rates, and severe and critical hospital admissions from late August to early September 2022. In terms of mortality, the case fatality ratio of the adult population aged 18 to 49 years old remained relatively the same (0.44% to 0.46%) since January 2022.</p>
Clinical Efficacy, Effectiveness and Safety	<p>The HTAC looked at evidence on duration of protection of the first booster during the omicron-dominant period. According to the WHO’s Good Practice Statement on the use of second booster doses for COVID-19 vaccines (August 2022), “the decline in vaccine effectiveness (VE) in the period following the booster vaccination is small for severe disease [5% (95% CI 2 to 9)] from 1 month to 4 months after booster vaccination and 8% (95% CI: 4 to 14%) projected out to 6 months after booster vaccination. The decline in VE against symptomatic disease 1 month to 4 months after booster vaccination is 24% decrease over time (95% CI 20 to 29%), and 29% (95% CI 18 to 41%) when projected out to 6 months after booster vaccination.”. This is consistent with the findings of studies reviewed by the International Vaccine Access Center (IVAC) on duration of protection of 1st booster as of September 2022.</p> <p>In terms of the effectiveness of second booster:</p> <p>Overall, there is limited clinical evidence suggesting that the absolute vaccine effectiveness of the 2nd booster of Pfizer-BioNTech and Moderna passed the HTAC specifications for symptomatic COVID-19.</p> <p>A study in Thailand showed a passing absolute VE of 2nd booster of Pfizer-BioNTech and Moderna against any SARS-CoV infection in the general population aged 18 years and older [Pfizer-BioNTech: 71% (95% CI: 60 to 79); Moderna: 71% (95% CI: 59 to 79)], compared to the unvaccinated population, based on low certainty of evidence. HTAC noted that, although AstraZeneca had a passing VE against any SARS-CoV-2 infection [VE: 73% (95% CI: 48 to 89), very low certainty of evidence], the study population was small. Thus, more studies are needed to establish its effectiveness. It was also noted that the study had a short follow up period of 40 days after the second booster.</p> <p>Further, its relative VE versus the 1st booster was found to be inconclusive. A study in Hungary showed inconclusive vaccine effectiveness against any COVID-19 relative to the first booster for individuals ages 18 to 54 years [16-24 years old.: 76.58% (95% CI: - 66.2 to 96.70); 25-34 years old: 26.94% (95% CI: -23.4 to 56.74); 35-44 years old: 31.41% (95% CI: 0 to 52.97%); 45-54</p>

	<p>years old: 40.01% (95% CI: 20.84 to 54.54) based on low to very low certainty of evidence.</p> <p>HTAC notes rates of myocarditis and pericarditis have been reported to be greater after the primary series, compared to boosters (UK MHRA, 2022; US ACIP, 2022). Meanwhile, the rate of thrombotic thrombocytopenia syndrome (TTS) following immunization with AstraZeneca is low (TGA Australia, 2022). In terms of autoimmunity, a systematic review by Jara et al. noted that incidence of autoimmune events is low and the benefits of vaccines outweigh the risk.</p> <p>Except for the Thai study which had a short follow-up period, there is minimal/no evidence of any benefit of second booster dose in protecting healthy adults 18-49 years old even if safety profile is acceptable. Hence, there is not enough benefit for HTAC to make a strong recommendation for a second booster dose in the said age group.</p>
Affordability, Viability, and Feasibility	<p>In terms of affordability, the DOH has no further plans to procure COVID-19 vaccines for 2022 and will use existing supplies for this vaccination strategy, thus, implementing second boosters for individuals ages 18 to 49 years without comorbidities will not incur additional budget impact. The NVOC has already implemented this strategy in other populations and shall apply the best practices and lessons learned from these previous implementations in the rollout of second booster for the current target population, so the rollout of second boosters among adults ages 18 to 49 years without comorbidities is viable and feasible.</p>
Household Financial Impact	<p>A second booster of Pfizer-BioNTech and Moderna also has the potential to reduce out-of-pocket expenses due to averted costs of isolation and treatment of mild, moderate, and severe COVID-19 on individuals ages 18 to 49 years without comorbidities.</p>
Social Impact	<p>In terms of social impact, Pfizer-BioNTech and Moderna possess some of the characteristics desired by key stakeholders (safety and efficacy, potential for high and equitable coverage, ease in logistics and administration, cost effectiveness, and availability of mechanisms to manage untoward serious AEFIs,).</p> <p>However, local acceptability showed a general hesitancy towards getting boosters, in general, as they think that they will not be infected again by the COVID-19 since they are already vaccinated with the primary series (DOH HPB, 2022).</p>

Responsiveness to Equity

Although there is adequate supply of COVID-19 vaccines for the target population, the HTAC notes the moderate (10-40%) first booster vaccination coverage in the country. According to the study by WHO, the number needed to vaccinate to avert one death with a second booster is higher compared to that for primary series (WHO, 2022).