13 October 2021

FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health

Dear Secretary Duque:

Greetings!

In light of the public health emergency, the Health Technology Assessment Unit (HTAU) has been reviewing COVID-19 vaccines following the request of the DOH for the Health Technology Assessment Council (HTAC) to urgently come up with recommendations to guide the 2021 (4th quarter) rollout and 2022 implementation. The HTAC, therefore, respectfully submits its **interim recommendations as of 11 October 2021 on the following vaccination strategies:**

I. Boosters
   A. 2021 (4th Quarter) implementation of boosters among healthcare workers
   B. 2022 implementation for boosters among eligible priority groups

II. Additional Dose
   A. 2021 and 2022 implementation of additional dose/third dose for immunocompromised individuals

We emphasize that these recommendations are being offered in consideration of sufficient vaccine supply and acceptable coverage for primary vaccination. The HTAC considered the best available evidence which is based on low to very low quality of evidence and the following criteria:

- Effectiveness against COVID-19 variants of concern, particularly against delta variant
- Delivery and logistics including the capacity to supply in 2021 and 2022
- Costing (cost per dose and threshold cost per dose per individual)
- Flexibility to be used in a homologous and heterologous booster vaccine strategy
Below are the HTAC recommendations on the said vaccine strategies for 2021 and 2022 implementations.

I. Recommendations on Boosters
   A. 2021 (4th Quarter) Implementation among Healthcare Workers (A1) and Elderly (A2) Populations

   Provided there is sufficient vaccine supply and acceptable primary vaccination coverage achieved, HTAC recommends booster vaccination for the last quarter of 2021 among Healthcare workers (A1) and Elderly (A2) priority populations at least six (6) months after the primary series.

   B. 2022 Implementation among Eligible Priority Groups

   The HTAC recommends the implementation of boosters in 2022 following the same prioritization among eligible groups (i.e., A1-A5) only if acceptable vaccination coverage in the primary series [i.e., 50% for all priority groups including A1 (Workers in Frontline Health Services), A2 (Senior Citizens), A3 (Individuals with Comorbidities), A4 (Frontline Personnel in Essential Sector) and A5 (Poor population); and at least 70% of the total target population in the hotspot regions (Manila, Cebu, Davao, Ilo-ilo, Calabarzon and Region 3)] is achieved among the originally identified priority groups (i.e., A1 to A5).

   The rationale for the set threshold prior to implementation of booster includes ensuring maximum coverage for the primary series as the premature roll-out of booster vaccination without attaining acceptable coverage would exacerbate existing inequities. Considering the current vaccination rate and coverage, these set thresholds are deemed attainable and thus will not delay the booster program.

In addition, HTAC recommends the following booster vaccination strategies for both 2021 and 2022 implementations.

<table>
<thead>
<tr>
<th>Primary Series</th>
<th>Recommended Booster</th>
<th>Booster Vaccination Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfizer-BioNTech</td>
<td>Pfizer-BioNTech</td>
<td>Homologous</td>
</tr>
<tr>
<td>AstraZeneca</td>
<td>Preferred: Pfizer-BioNTech (based on JCVI)</td>
<td>Heterologous</td>
</tr>
<tr>
<td></td>
<td>AstraZeneca</td>
<td>Homologous</td>
</tr>
<tr>
<td>Janssen</td>
<td>Janssen</td>
<td>Homologous</td>
</tr>
<tr>
<td>CoronaVac</td>
<td>Preferred: Pfizer-BioNTech, AstraZeneca</td>
<td>Heterologous</td>
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</tr>
<tr>
<td></td>
<td>CoronaVac</td>
<td>Homologous (only for those contraindicated with mRNA/ AstraZeneca)</td>
</tr>
<tr>
<td>Moderna</td>
<td>Preferred: Pfizer-BioNTech (based on JCVI)</td>
<td>Heterologous (preferred due to cost)</td>
</tr>
<tr>
<td></td>
<td>Moderna</td>
<td>Homologous</td>
</tr>
</tbody>
</table>

### II. Recommendations for Additional Dose

#### A. 2021 and 2022 Implementation for Immunocompromised Patients

HTAC recommends an **additional homologous dose of at least 28 days after the completion of the initial COVID-19 vaccine series for immunocompromised individuals** considering studies demonstrating improved immune response after an additional dose/third dose:

- Been receiving active cancer treatment for tumors or cancers of the blood
- Received an organ transplant and are taking medicine to suppress the immune system
- Received a stem cell transplant within the last 2 years or are taking medicine to suppress the immune system
- Moderate or severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Advanced or untreated HIV infection
- Active treatment with high-dose corticosteroids or other drugs that may suppress immune response
- Dialysis patients
- People living with autoimmune disease, and treatment with specific immunosuppressive medications (Czech, Israel)
- Diagnosed with conditions that are considered to have an equivalent level of immunocompromise as advised by the physician (e.g., severe malnutrition)
- People with rare diseases (list from UP NIH - Institute of Human Genetics)

Currently, there is no available evidence for a homologous additional dose for Janssen and CoronaVac. However, if data from available booster studies will be extrapolated, HTAC recommends a heterologous additional dose using Pfizer-BioNTech for immunocompromised individuals who received Janssen and CoronaVac as primary series.

Based on the WHO statement on 04 October 2021, immunocompromised individuals with an insufficient immune response to primary series must be prioritized for an additional dose.
particularly when there is evidence of waning immunity, severe disease, and death. Data on breakthrough infections have also shown a high proportion in immunocompromised which shows the likelihood of severe COVID-19 complications and death. Further, several studies have also demonstrated improved immunogenicity and considerable safety after giving homologous additional mRNA vaccine to an mRNA primary series.

Moreover, HTAC recommends exploring mechanisms to allow flexibility in the procurement plans to accommodate next-generation vaccines that may be effective against future variants of concerns (e.g., delta, gamma, beta).

Furthermore, we emphasize that these recommendations are interim and HTAC is actively on the watch for evidence as it is rapidly evolving. We shall update its recommendation when new information becomes available, if necessary. Finally, the HTAC shall consider in its recommendations the WHO SAGE guidance which is anticipated to be released by 15 November 2021.

We thank you for the opportunity to be of assistance to the Department of Health.

Respectfully yours,

For the Health Technology Assessment Council (HTAC):

MARITA V. TOLENTINO-REYES, MD
Chair, HTAC

Approval of the HTAC Recommendation:

FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health

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