UGANDA NATIONAL ACADEMY OF SCIENCES

Advisory Report on the Introduction of More WHO Approved Covid-19 Vaccines In Uganda

Ratified Recommendation of the Interim Report submitted on November 25, 2021

By

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BACKGROUND

On November 03, 2020, the Uganda National Immunisation Technical Advisory Group (UNITAG) received a request from the Ministry of Health (MoH) to guide the selection of COVID-19 vaccine (s) for Uganda in the event that the World Health Organization (WHO) approves more than one vaccine. UNITAG has since recommended the use of six (6) approved vaccines, including; the two mRNA vaccines (Moderna, mRNA-1273 and Pfizer/ BioNTech – BNT162b2), two Non-Replicating Viral Vector vaccines (Janssen's Johson and Johnson - Ad26.COV2.S, Oxford/ AstraZeneca AZD1222) and two Inactivated vaccines (Sinopharm - Beijing – BBIBP-CorV-Vero Cells and Sinovac -CoronaVac).

On November 03, 2021, WHO issued an emergency use listing (EUL) for COVAXIN®, an inactivated vaccine developed by Bharat Biotech, expanding the availability of COVID-19 vaccines, the most effective medical tools there is to end the pandemic. Following this approval and WHO's guidance that the inactivated vaccine can be used globally since it meets the standards for protection against COVID-19 and its benefit far outweighs risks, UNITAG COVAX Working Group convened to determine whether the new COVID-19 vaccine type should be introduced and recommended for use in Uganda. Through interdisciplinary dialogue, the Committee reviewed data from the current COVID-19 vaccine logistical supply in Uganda from the Ministry of Health to inform the groups' conclusions and recommendations.

SUMMARY OF EVIDENCE

1. Current COVID-19 Vaccine Supply Status in Uganda

The Government of Uganda has accessed sizable doses of vaccines through different mechanisms. These include the COVAX Facility donations, COVAX shared doses mechanism, bilateral arrangements that the government has had with other countries, and other donations through the African Union the African Vaccine Acquisition Trust (AVAT) mechanism.

According to an analysis of the MoH COVID-19 vaccine logistical supply data, the country had received a total of 15,541890 doses of COVID-19 vaccines as of November 25, 2021. Aggregated in the six (6) COVID-19 Vaccine types currently present in the country, these included; 5,067,060 doses of AZ; 2,551,220 of Moderna; 346,800 doses of Sinopharm; 1,000,000 doses of Sinovac; 1,413,600 doses of J&J and 5,163,210 doses of Pfizer. Of these, a total of 8,956,518 doses had been distributed across the country, leaving a balance of 6,585,372 doses still undistributed at the National Medical Stores (NMS). While more 10,942,060 doses had been secured, the country still expects an excess of 16,440,850 doses (confirmed) by the end of December 2021. Overall, the country is expected to have 42,924,800 doses, which, triangulated in people equivalent, indicated that 31,315,600 people would be vaccinated by the end of December 2021. This is good news as an excess of almost 10 million people would be vaccinated against the national vaccination target of 22,000,000 people.

Furthermore, the analysis indicated that the cold chain storage is currently overstretched with routine and COVID-19 vaccines. It was also noted that the country is facing a challenge of inadequate ultracold chain storage capacity to accommodate all the available, expected and

secured ultracold chain vaccines. In other words, in addition to 3,488,940 doses of Pfizer still undistributed at NMS, an addition of 2,919,150 doses of Pfizer were expected on December 5, 2021, all to be stored at the Central Vaccine Stores (CVS), whose maximum capacity accommodates approximately 4.5 million doses of vaccines. In addition to the 6,408,090 doses of Pfizer expected at NMS, and about 12 to13 million doses of J&J expected to arrive by the end of December 2021, the country will have nearly 20 million excess vaccine doses at the CVS. Moreover, MoH indicated that they had engaged with other partners and the private sector, including DAS at Entebbe International Airport, Uganda Virus Research Institute (UVRI), Central Public Health Laboratories (CPHL), for a short-term storage arrangement. As the ongoing Accelerated Mass Vaccination Campaigns (AMVC) utilise the available vaccines, MoH hopes to free up storage capacity to accommodate the vaccines in the pipeline.

While the Working Group would have benefited from current data on reconciliation and triangulation of vaccine expiries as of November 2021, as requested from MoH, evidence from October 2021 reconciliations showed 128 doses of Moderna and 20 doses of AZ having expired from Kween district in Eastern Uganda. This evidence indicated a likelihood of more vaccines expiring due to their short shelf life and the consistent low uptake in the country following the underutilisation at the district level.

2. COVID 19 Vaccine Rollout and Uptake

With more vaccines becoming available, as of December 04, 2021, MoH/UNEPI COVID 19 vaccine rollout and uptake report indicates that a total of 7,610,437 doses were administered with 6,346,198 in first dose and 1,264,239 in the second dose. While 21% (4,623,121) of the target 22,000,000 people above 18years had received their first dose pending the second dose, only 8% (1,723,077) of these had been fully vaccinated leaving 71% (15,620,000) unvaccinated. Meanwhile, a total of 2,197,634 doses had been administered following the launch of the AMVC. Although the AMVCs have boosted uptake since the first round of accelerated vaccination in Teso, Lango, Ankole and Kigezi sub-regions, fewer people have taken up their second dose overall compared to first dose uptake, indicating a high dropout rate. Specifically, the priority groups full vaccination indicated that only 49.8% of health workers, 29.4% of security personnel, 28% of teachers, 5.4% of the elderly above 50years and 2.9% of people with comorbidities had been fully vaccinated as of December 04, 2021. Therefore, as the program continues to roll out COVID-19 vaccines across the country, uptake among priority groups remains worryingly low especially among the elderly and people with comorbidities.

Conclusion

Although the evidence showed that all the WHO-approved COVID-19 vaccines are safe, effective, and efficacious against moderate and severe disease, hospitalisation, and death, the introduction of a new COVID-19 vaccine into the immunisation program is not recommended at this point because of the following reasons;

i) Uganda currently has a stable and consistent supply of vaccines, including the sizable doses received and being distributed, expected, and secured that meets the target population required.

ii) Vaccines will likely expire as more vaccines become available amidst the underutilisation of vaccines at the district level and the overall low uptake.

iii) Introducing a new COVID-19 vaccine type in the immunisation program would create more complexities in logistical handling of the vaccines, including storage, delivery, and documentation, and increase the confusion health workers and the public are already experiencing with the multiple COVID-19 vaccines being distributed at the same time.

iv) Introducing a new vaccine type would require commitment in supply and double procurement (for two-dose schedules) to avoid mix and matching.

Recommendations

Based on the aforementioned evidence and informed conclusions, UNITAG made the following recommendations in addition to the updated recommendation report on accelerating COVID-19 vaccine uptake in Uganda as of December 09, 2021:

i) Considering the short-shelf life that most COVID-19 vaccines have, the Ministry of Health should emphasise efficient rolling out and rapid consumption of the available vaccines to avoid expiries.

ii) In particular, the EPI program should consider communicating better, including specifying the location of all the vaccines for all stakeholders to get involved.

iii) MoH should ensure all departments and implementation partners work in sync through timely coordination and collaboration to support the AMVC response and expedite vaccine consumption to avoid expiries.

iv) The EPI program should openly communicate the private storage arrangement to avoid public and bad press speculation amidst this unprecedented period.

v) As we advance, MoH should consider selective procurement based on vaccine storage requirements to counter the limited ultracold chain storage capacity challenge.

Way forward

Due to the rapidly changing context both at the local and global level, this recommendation will be reviewed at least within the next three to six months following the conclusion of the AMVC drive.

References

1. Background document on the Bharat Biotech BBV152 COVAXIN® vaccine against COVID-19: https://extranet.who.int/iris/restricted/discover?query=covaxin
2. WHO interim recommendations for use of the Bharat Biotech BBV152 COVAXIN® vaccine against COVID-19, November 03 2021: https://extranet.who.int/pqweb/vaccines/who-recommendation-bharat-biotech-international-ltd-covid-19-vaccine-whole-virion
3. WHO COVID-19 Vaccine Tracker: https://covid19.trackvaccines.org/agency/who/