

EXTERNAL VACANCY NOTICE No. CONS./UGA/2019/10

Post Title: Consultant -Costing the Introduction of Booster Doses of Diphtheria- Tetanus- And Pertussis- Containing Vaccine in Uganda

Grade: UN National Officer Category (NO-C Grade Step 01)

Contract Type: Agreement for Performance of Work (APW)

Duty Station: WHO Country Office, Uganda

Duration of Contract: 40 working days

Closing Date: 26th September; 2019

ABOUT WHO:

World Health Organization (WHO) works as a body of the United Nations (UN) system, responsible for directing and coordinating health. The goal of the organization is to build a better, healthier future for all people in the world whose staff work side by side with governments and other partners to ensure the highest attainable level of health for all people

BACKGROUND TO THE ASSIGNMENT:

Diphtheria, pertussis and tetanus (neonatal and non-neonatal), are diseases of public health importance in Uganda. DTP-containing vaccine (DTPCV) are part of Uganda's national routine immunization schedule and are meant to provide immunity from diphtheria, tetanus and pertussis. However, coverage of DTP (specifically the third dose) remains sub-optimal when compared to the globally recommended target of 90%¹. In addition to sub-optimal coverage, evidence shows that immunity obtained from infant vaccination with DTP wanes as age increases resulting into immunity gaps in adults and school going children^{2,3}. All these increase

¹ World Health Organization. WHO vaccine-preventable diseases: monitoring system. 2018 global summary - Uganda. http://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=UGA&commit=OK.

² Steinglass R. Using Early Childhood Booster Doses to Maintain the Elimination of Neonatal Tetanus. Based on a paper delivered at the World Health Organization (WHO) Neonatal Tetanus Elimination Technical Consultation, Geneva, 1997. Arlington, VA: U.S. Agency for International Development (USAID) by the Basic Support for Institutionalizing Child Survival (BASICS) Project: 1998.

the risk of outbreaks across the population. While country routine systems for surveillance of diphtheria and pertussis does not capture diphtheria and pertussis, data from global burden of disease shows that in 2017, there were 44.9 cases (range: 17.75 - 88.57) and 11.82 deaths (range: 4.36-24.41) from diphtheria across all ages in Uganda, though the highest proportion of both cases and deaths were in children 1 – 4 years⁴. Similarly, while Uganda achieved elimination of neonatal tetanus elimination (MNTE) status in 2011, Uganda remains one of the African countries with the highest burden of total tetanus⁵.

In 2017, the Ugandan Technical Advisory Group on Immunization (UNITAG) reviewed a variety of evidence to inform prioritization of five vaccines that were proposed to be introduced into Uganda's EPI schedule in the coming years. Among the five vaccines, the three WHO-recommended booster doses of DTaP were rated as the top priority for introduction⁶. Booster doses for DTaP for both males and females in the second year of life and at school-age have been recommended by WHO since 1997⁷. In 2018, the Strategic Advisory Group of Experts (SAGE) and World Health Organization reviewed and revised recommendations for booster doses of DTaP vaccines where the timing of the final dose was revised down from early adulthood to age 9 – 15 years⁸.

In 2018, Gavi Board approved provision of funding to, a) establish platforms as catalytic support for the introduction of each DTaP booster dose and b) support procurement of the DTaP booster doses in line with the co-financing policy⁹. Providing DTaP booster doses in the second year of life (2YL), school entry and adolescent immunization time points could also provide opportunity to provide missed doses in routine immunization but also address coverage and equity gaps contributing to the attainment of the goals of the Global Vaccine Action Plan and Uganda's Country Multi Year Plan.

Although booster doses recommended by WHO, have been approved for funding by the Gavi Board and countries like Uganda have expressed interest in introducing them, there has been no evaluation of the costs and cost-effectiveness of introducing three DTP booster doses at a country level, in any Gavi-eligible country. Given the scarcity of resources for both health and

³ Makumbi F, Byabagambi J, Muwanika R, Kigozi G, Gray R, Galukande M, Bagaya B, Ssebagala D, Karamagi E, Rahimzai M, et al. Prevalence of protective tetanus antibodies and immunological response following tetanus toxoid vaccination among men seeking medical circumcision services in Uganda. PLOS ONE 2019, 13:e0209167.

⁴ Global Burden of Disease Collaborative Network. **Global Burden of Disease Study 2016 (GBD 2016) Results.** <http://ghdx.healthdata.org/gbd-results-tool>

⁵ Nanteza B, Galukande M, Aceng J, Musunguzi J, Opio A, Mbonye AK, Mukooyo E, Behumize P, Makumbi F. **The burden of tetanus in Uganda.** Springerplus 2016, 5:705.

⁶ Uganda National Academy of Sciences. **Prioritisation of vaccine introduction in the UNEPI Report of Uganda National Immunisation Technical Advisory Group (UNITAG) to Ministry of Health Uganda.** Kampala, Uganda Uganda National Academy of Sciences, : 2017.

⁷ Steinglass R. **Using Early Childhood Booster Doses to Maintain the Elimination of Neonatal Tetanus. Based on a paper delivered at the World Health Organization (WHO) Neonatal Tetanus Elimination Technical Consultation, Geneva, 1997.** Arlington, VA: U.S. Agency for International Development (USAID) by the Basic Support for Institutionalizing Child Survival (BASICS) Project: 1998.

⁸ World Health Organization. **WHO recommendations for routine immunization - summary tables.** http://www.who.int/immunization/policy/immunization_tables/en/.

⁹ Gavi The Vaccine Alliance. **Gavi Board starts framing Alliance's approach to 2021-2025 period.** <https://www.gavi.org/library/news/press-releases/2018/gavi-board-starts-framing-alliance-s-approach-to-2021-2025-period/>.

immunization in Uganda, any decision to introduce a new vaccine into the national immunization program should be informed by country-specific estimates. Estimating the costs of introducing DTPCV booster doses would also inform the long-term sustainability of introducing other new vaccines.

OVERALL OBJECTIVE

To generate economic evidence to inform decision-making by the Government of Uganda about implementing the UNITAG recommendation to introduce three WHO-recommended booster doses of DTPCV in Uganda

SPECIFIC OBJECTIVES:

1. To estimate the incremental cost total and unit (per child and per dose) to Government of Uganda of introducing a DTPCV in Uganda, using a combination of health facility-based, outreach-sites and school-based delivery platforms to reach the target population.
2. To assess the effect of introducing the recommended DTPCV booster doses on the Government of Uganda budgets and the prospects for financial sustainability

SCOPE OF WORK

To achieve the objectives, the selected consultant is expected to do the following:

- 1) Undertake a desk review of available estimates from previous published and unpublished routine immunization costing exercises
- 2) Collect primary data on the financial and opportunity costs of delivering vaccines in schools, using human papillomavirus (HPV) vaccine as an example. These data to be collected from 2 purposively selected districts. The costs for school-based vaccination program delivery will include those to create “new” platform and to use existing school-based delivery platform. The consultant will also collect data to enable disaggregation of costs by platform. The consultant will review and refine a data collection tool that has been developed for this exercise.
- 3) Collate all the relevant financial and economic cost estimates from primary and secondary data and use them to calculate the cost of DTPCV booster dose introduction activities and subsequent inclusion in routine immunization using a combination of health facility fixed site, school, and outreach platforms.
- 4) Develop an Excel based costing tool to estimate the total and unit costs of introducing 3 DTPCV booster doses in Uganda.
- 5) Prepare presentation of initial results and deliver to EPI stakeholders meeting for validation of cost estimates.
- 6) Develop a final report containing all results, and costing tool

QUALIFICATIONS AND EXPERIENCE

- 1) Post-graduate qualification in health economics, health financing or related. PhD in these areas is an added advantage
- 2) At least 8 years' experience in Uganda's health sector
- 3) Previous experience in conducting costing studies in immunization in Uganda and other countries
- 4) Strong proven analytical and writing skills

EXPECTED DELIVERABLES

- a) Inception report
- b) Draft report and presentation of draft cost estimates including data collected from both primary and secondary sources in country meeting for validation
- c) Final report, presentation and costing sheet
- d) As co-author, support to draft a manuscript of the study results to be submitted to a peer reviewed journal

LEVEL OF EFFORT

The expected total effort for the selected consultant is 40 days over a 2 months period (September 2019 to November 2019)

APPLICATIONS SHOULD BE SENT TO:

- afwcougwrsec@who.int

Only shortlisted candidates will be contacted