

# PRIORITIZATION OF NEW VACCINES: UGANDA

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## REQUEST

A request (2016) from the Ministry of Health to review and advise on prioritize of five new vaccines into the Ugandan EPI<sup>1</sup>: meningitis vaccine, hepatitis B vaccine (at birth), tetanus-diphtheria vaccine, yellow fever vaccine, and a second measles containing vaccine dose.

## BACKGROUND

Uganda started an EPI in the 1960s and currently has twelve vaccines for childhood immunization<sup>2</sup>. With an increasing number of vaccines, the cost of the EPI has grown fourfold from US\$20.4 million in 2012 to US\$85.6 million in 2016<sup>3</sup> and, in the absence of co-funding, is projected to result in a financial gap in the immunization resources required of 90% (over 2016-2020)<sup>4</sup>. In addition, Uganda has the third largest refugee population in the world and has porous land-borders with several countries with civil disruption<sup>5</sup>.

The Uganda NITAG started to review evidence about each vaccine with help from SIVAC. The SIVAC framework considered each vaccine individually, with PICO questions and sub-questions for each disease/vaccine used to initiate a systematic review. The framework concluded with a GRADE evaluation of evidence and a recommendation for each vaccine, but not a head-to-head prioritization between them.

## SCENARIO

PriorityVax criteria were made to match those of the SIVAC framework and the qualitative scores from the GRADE process were entered. Three sets of weights were examined: duplicating the SIVAC process (equally weighted criteria); using the mean of the core members; examining the spread of individual member's weights.

There was insufficient evidence about the benefit of a Hepatitis B birth dose in the Uganda setting for a recommendation, hence the NITAG excluded this scenario from the SIVAC analysis.

	Severity of Disease	Benefit to Population	Economic Considerations	Programmatic & Policy
<i>Mean weights (%)</i>	36	19	31	14
<b>Measles</b>	31	40	21	10
<b>Meningococcal A</b>	20	34	17	30
<b>Tetanus-Diphtheria</b>	40	34	40	20
<b>Yellow-Fever</b>	28	38	20	15

<sup>1</sup> Uganda National Immunisation Technical Advisory Group. 2017. Kampala, Uganda: Ugandan National Academy of Sciences.

<sup>2</sup> Gavi. 2018. Joint Appraisal: Uganda.

<sup>3</sup> Kanya, Carol, Christabel Abewe, Peter Waiswa, et al. 2020. BMC Public Health pre-print. <https://doi.org/10.21203/rs.3.rs-17585/v1>.

<sup>4</sup> Ministry of Health, Uganda. 2016.

<sup>5</sup> UNHCR. 2019.

## OUTCOMES

Using the SIVAC process, the meningococcal and yellow fever vaccines were tied (63.125) and closely preceded by the measles (63.5) vaccine. Using PriorityVax broke the tie.

The core member's weighting were consistent and resulted in the same prioritization, however the non-core member's weights revealed some notable differences of opinion.

### Summary

Measles-containing Measles, Uganda, Total Population  
Priority Score: 66.675

Meningococcal A Meningococcal meningitis, Uganda, Total Population  
Priority Score: 57.825

Tetanus-Diphtheria (TD) Tetanus, Uganda, Total Population  
Priority Score: 90.15

Yellow Fever Yellow fever, Uganda, Total Population  
Priority Score: 64

