

## Executive Summary: October 2016 SAGE Session on Yellow Fever Vaccines

### Introduction

Yellow fever (YF) cannot be eradicated but epidemics can be eliminated if population immunity levels are heightened and maintained. A three-pronged approach of adding the YF antigen to routine immunization programmes; preventive mass vaccination in at-risk countries/populations; and rapidly responding to outbreaks has successfully controlled the disease in West Africa since 2010. However, recent outbreaks in East and Central Africa highlighted the need to revisit and expand the control strategy and highlighted the need for vaccine supply surge capacity, as the global stockpile became exhausted, and the ability to immunize at-risk populations was in jeopardy. This SAGE session is divided into two sections. The first sub-session is dedicated to WHO's new strategic approach to YF, called "Global Strategy for Eliminating Yellow fever Epidemics (EYE)". This section takes a long term view for how to effectively prevent YF epidemics. The second sub-session addresses issues of vaccine surge capacity in response to major outbreaks. Acknowledging that there are risks for vaccine demand that may exhaust vaccine supply, as experienced in 2016, there is a need to have on hand options for surge capacity (e.g. stockpiling, bulk storage, and dose fractioning). Focus will be on the fractional dose strategy that was used in a recent preventive vaccination campaign in Kinshasa, Democratic Republic of Congo.

SAGE previously reviewed the evidence for YF vaccines in April 2013, which resulted in a revised Vaccine Position Paper published in July 2013.

### Purpose of Session

- SAGE is asked to provide feedback on the general approach of the "Global Strategy for Eliminating Yellow fever Epidemics (EYE)".
- SAGE is asked to provide recommendations and research priorities for fractional dose use of YF vaccine as a response to major outbreaks.

### Overview of Background Documents in Yellow Book

#### 1) *Global Strategy for Eliminating Yellow fever Epidemics (EYE)*

This document proposes a global and comprehensive long term (2017-2026) strategy able to target the most vulnerable countries and regions, address global risk by building resilience in urban centres and preparedness in areas with potential for outbreaks, while ensuring reliable vaccine supply by forming a global coalition of partners to predict needs and shape vaccine production. The Gavi Programme and Policy Committee (PPC) will review this document together with SAGE feedback at the end of October, and the revised version will be submitted to the Gavi Board in December 2016. SAGE is asked to provide feedback on the strategy outlined in this document.

#### 2) *Fractional dose yellow fever vaccine as a dose-sparing option for outbreak response: WHO Secretariat Information Paper (July 2016)*

This secretariat paper was written in June 2016 and was reviewed by YF experts and SAGE to inform the use of fractional dose in the August 2016 mass vaccination campaign. The

underlying evidence base has not changed. The document reviews the existing evidence on dose-sparing strategies through fractional dosing of YF vaccine as an immediate and short-term option in response to eventual large scale campaign needs, and makes recommendations for fractional dose vaccination in case of imminent need. Updated information to what was known in June 2016 is provided through the Report from DRC Yellow fever campaign (#3 below). Technical annexes to the document with additional evidence are posted on the meeting's website. SAGE is asked to update recommendations with consideration of those outlined in Section 13 of this document.

3) *Yellow fever mass vaccination campaign using fractional dose in Kinshasa, DRC*

In August 2016, a preventive YF vaccination campaign was undertaken in Kinshasa and along the DRC-Angola border. In Kinshasa, a 1/5 fractional dose was administered subcutaneously to individuals 2 years of age and older. This brief report summarizes the experience with fractional dose in Kinshasa, including challenges and lessons learned. This document is for information.

4) *Short-term research priorities for dose-sparing of YF vaccine*

While the current scientific data on fractional dose support WHO's recommendations, important data gaps remain, such as fractional-dose performance in infants, applicability to all WHO-prequalified vaccines, and persistence of neutralizing antibody. Some of this information can be obtained in the near term, while other information would require long-term follow up. The priorities listed in this document focus on the most important short term objectives. SAGE is asked to review and provide suggestions to the research priority document.

**Additional Documents on Web**

- 1) *Eliminating Yellow fever Epidemics: Yellow Fever Long Term Strategy with Annex*
- 2) *Fractional dose yellow fever vaccine as a dose-sparing option for outbreak response: WHO Secretariat Information Paper with Annex*
- 3) *Vaccines and vaccination against yellow fever WHO Position Paper – June 2013*