

Yellow Fever Continuation Investment Case

Background

The GAVI Alliance and Fund Boards funded a stockpile from 2002-2006 for 24 million doses to provide timely outbreak response and to improve the security of the yellow fever vaccine supply. In 2005, the GAVI Alliance and Fund Boards approved a Yellow Fever investment case for \$58.6 million to finance a stockpile of 57 million vaccine doses for use in emergency outbreak response and preventive vaccination campaigns in 12 GAVI eligible most at-risk countries over a five year period (2006-2010.) This estimate of 57 million vaccines was based on the best available epidemiological data at the global level which had been derived largely on sparse national data sets. Thus, the original investment case also financed the development of a risk assessment tool to define high risk populations within these countries. Upon applying the tool to six of the countries, it was found that the size of the at-risk population was significantly higher than estimated in the 2005 approved investment case (especially in Nigeria), revealing a need for significantly more vaccines than originally estimated.

In February 2008, in response to a request from the Yellow Fever stockpile programme, the GAVI Alliance Secretariat agreed that a costed extension proposal for the Yellow Fever Stockpile be presented at the June 2008 GAVI Alliance Board meeting.

The GAVI Alliance Secretariat established an Independent Review Committee (IRC) to carry out an independent review of the yellow fever continuation investment case. The IRC had strong developing country representation. Members of the IRC had high level expertise in the areas of epidemiology, vaccine and child health research, immunization services, health systems, applied economics and health financing. The investment case was also reviewed by the GAVI Working Group and the GAVI Secretariat whose comments were shared with the IRC.

Objective

The objective of the proposed continuation investment case is to continue and extend the efforts of the yellow fever investment case approved in 2005 to ensure the goal of reducing the risk of large uncontrollable yellow fever outbreaks in the 12 West African countries¹ considered to be most at risk of epidemics of the disease.

Continuation investment case activities

The continuation investment case proposes increased funding and an extension of the 2005 approved yellow fever investment case to enable the 12 highest risk countries to fully implement yellow fever control strategies to meet the objectives of the original investment case. Activities would continue until 2013 in the following three areas:

Continuation and expansion of the yellow fever vaccine stockpile

Based on updated estimates using the risk assessment tool, it will take approximately eight years to vaccinate the entire 190 million persons estimated to be at high risk (55% of these live in Nigeria). Activities would include procurement and transportation for an additional 169 million doses.

¹ Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Senegal, Sierra Leone, Togo, Nigeria

Comprehensive risk assessment and strengthening of surveillance systems

Activities under this area would be to:

- Develop risk assessment software to standardize the risk assessment tool for countries to assess yellow fever vulnerability on an annual basis
- Strengthen national laboratory and surveillance systems/network
- Develop rapid field test

Use of global yellow fever vaccine stockpile

Activities under this area would be to:

- Conduct emergency campaigns for any confirmed yellow fever outbreak globally
- Conduct preventive campaigns for twelve high risk countries
- Improve surveillance of serious Adverse Events Following Immunization (AEFI)
- Conduct independent surveys on vaccine coverage

Financial implications

The estimated overall cost of the continuation investment case for GAVI would be \$230.9 million, with 78% of these funds going toward bundled vaccine and injection safety. GAVI would be providing approximately 74% of the total continuation investment case costs, with other donors and countries providing the remaining costs.

Yellow Fever Investment Case Funding		
Item	GAVI-funded amount for original YF investment case (millions)	NEW requested GAVI funding for proposed investment case (millions)
Bundled vaccine and injection safety	\$39,701	\$180,277
Campaign operational costs	\$14,903	\$43,796
Risk assessment	\$2,397	\$1,471
Program management	\$1,637	\$5,413
TOTAL	\$58,638	\$230,958

Monitoring and evaluation

Success would be monitored by the same process and outcome indicators as defined in the 2005 approved investment case.

Process indicators:

- Timely response to outbreaks to limit the spread of the disease, measured by: emergency campaign being conducted within four weeks
- The building of an immune barrier, measured by:
 - Implementation of preventive vaccination campaigns by the date agreed during risk assessment phase
 - Vaccination coverage achieved during the preventive campaigns (at least 90% of the target population)
 - Routine YF vaccination coverage in the 12 selected countries, as indicated by the weighted average of annual administrative coverage or proportion of the birth cohort vaccinated of each country

Outcome indicator

- Reduction of virus circulation in the 12 countries measured by annual number of laboratory confirmed cases of yellow fever reported to WHO by the countries and the number of countries reporting yellow fever-confirmed cases

Independent Review Committee Recommendations

The IRC recognized the public health importance of the ongoing efforts from the GAVI-supported yellow fever investment case in reducing the risks and devastating effects of yellow fever outbreaks. Of note, campaigns have been conducted in Togo and Senegal with excellent coverage. The IRC also acknowledged the merits of the investment case for engaging countries in implementing campaigns as well as striving for improvement in AEFI monitoring.

However, the IRC recommends to the Board that a decision on the Yellow Fever continuation investment case be deferred until October 2008 in order for the IRC to review pending information critical to making a more definitive recommendation to the Board. Specifically, this information is:

- Disease occurrence by country (sporadic cases and outbreaks) from 2004 up to 2008
- Further detailed information about how the risk assessment was used to develop risk profiles in proposed expanded target population
- Recommendations from the upcoming WHO Global Advisory Committee meeting for Immunization Safety in June 2008

- More detailed information and data from campaigns conducted in first three countries, including process and results from AEFI

In recommending a deferral of the decision, the IRC noted that there are still ongoing resources available for emergency and preventive campaigns from the 2005 approved investment case and there will be no interruption to the ongoing implementation of this work.

Next steps

The GAVI Secretariat shall coordinate with the IRC to gather further information from the Yellow Fever continuation investment case authors and present a more definitive recommendation to the Board at the October 2008 meeting.