

Update on Forecasting Activities and Plan for 2002

Forecasting Group, GAVI Financing Task Force

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This document gives a brief summary of the development and status of vaccine demand forecasting activities carried out through the Financing Task Force (FTF) of the Global Alliance for Vaccines and Immunizations (GAVI). It then proposes priority ongoing and new activities for 2002. It is intended for circulation and discussion by members of the FTF, FTF Forecasting Group, and other interested parties.

Context: The GAVI partners, with financial support through the Vaccine Fund (VF), have developed a process and committed resources to provide hepatitis B, Hib, and yellow fever vaccines for countries with a GNP/capita of less than \$1000US. UNICEF Supply Division serves as the procuring agency. Forecasting of potential demand for these vaccines began in 1999, followed by establishment of a Forecasting Group, which has met three times during 2000 and 2001. Additionally, information has been available electronically, and updates on all countries approved for vaccine support routinely publicized to all GAVI partners. The Forecasting Group has included representatives of major vaccine manufacturers, including a number of developing country manufacturers, and public sector agencies.

General principles agreed in the development and work of the Forecasting Group included:

1) It was in the interest of both the public and private sectors to have the most robust data of future vaccine demand. 2) The forecasts should be done transparently, drawing upon input from each of the partners, and therefore the estimates being “owned” by both sectors. 3) The process would be iterative. 4) Initial estimates would be modeled due to the lack of history for the target vaccines in the poorest countries, however as baselines are established, forecasts would increasingly come from established forecasting systems (e.g. UNICEF).

Timeline of Major Activities and Related Events

1999 – Early projections made

May, 2000 - Initial meeting of the Forecasting Group and review of first model

July, 2000 – Second meeting to look at revised forecasts and modeling

August, 2000 – RFP issued by UNICEF SD utilizing maximum forecasts current to the date

Late 2000 – Policy for allocation of scarce vaccines approved by GAVI Board due to demand for combination vaccines exceeding supply; Essentially no Yellow Fever vaccine available

January, 2001 – Third meeting of Forecasting Group and updated estimates

Late, 2000 – March, 2001 – UNICEF and WHO meet with most VF-eligible countries to discuss available products and country plans; Awards to manufacturers finalized by UNICEF SD based upon UNICEF data

Mid-2001 – UNICEF SD working to balance supply of available products with those demanded by countries; UNICEF SD and GAVI Working Group discuss purchasing excess supply within awards, particularly for monovalent Hepatitis B, and some combination vaccines in 2001; Minor updates to forecasting model although limited circulation.

September, 2001 – UNICEF SD Report to Working Group that issues with excess awards are resolved.

November, 2001 – UNICEF SD develops and implements new annual forecasting system for completion by countries, which integrates forecasts for GAVI / the VF products; Available supply of combination vaccines decreases.

January, 2002 – Fourth meeting of Forecasting Group. 65 of 74 eligible countries have requested some type of assistance from GAVI / the VF. Of these, 38 have been fully approved for vaccines and a further 9 have been conditionally approved.

Current Status & Future Steps

A consideration of strengths and weaknesses of the process to date, a major update of the demand forecasts recognizing challenges of the processes to date, and a discussion of future steps are all urgently required.

Process to Date

Strengths

- Generally wide interest and support from public and private sectors
- Work has generally adhered to the principles listed above
- Process has broken new ground and provided numerous lessons for current and future vaccines
- Has provided data to assist in informing GAVI/ the VF decision-making
- Portion of the data has proven quite accurate and robust

Weaknesses

- Risks of potential conflicts of interest between procuring agency and manufacturers limited some interactions which could have strengthened the forecasts
- Primarily forecasting by number of children without formulation led to disconnect between supply (generic ability to immunize against a disease) and demand (country requests for specific products), and therefore delayed messages that there would be shortfalls of the most requested products
- Estimates have not been as robust as desirable; a number of issues should be considered (see below); Original RFP included only highest estimate for uptake, which included even the weakest data without differentiation.
- Magnitude of the challenge to ensure coordination and updating from numerous data sources to ensure that best information on current and changing plans from both supply and demand sides are used to inform estimates

Challenges for Forecasts

Details on the accuracy of the forecasts to date will be available in late January, 2002.

However, a number of major issues have evolved in considering actual demand for products:

- Forecasted estimates were tiered to reflect the strength of the source information, allowing for more accurate interpretation of risks within each component of the projections;
- There has been no or limited demand for some products to date. Although this low estimate has generally been reflected in the forecasts, there are an increasing number of demand creation activities underway which may alter rates of adoption.
- The variables driving demand within individual countries can be difficult to understand or track. Additional consideration is needed, particularly for countries not yet approved for vaccines from the VF, to understand major determinants and improve estimates.
- Limited availability of combination products has in turn led to delayed introduction and phasing in over multiple years as compared to original plans, particularly in a number of large countries (e.g. Pakistan and Bangladesh.)
- Late changes in countries as they finalized or moved to implement plans lowered actual uptake as well as delayed introduction. Some countries lowered their coverage estimates beyond previous reports due to incentives in the resource allocation for more accurate coverage data. A number of countries delayed their introduction by 6 or more months beyond their original target in order to further prepare systems and train staff prior to introduction.

Process Forward

There continues to be an important need for forecasting and communicating future demand for products and, a role for collaboration between the public and private sectors in this process. Therefore it is proposed that the Forecasting Group continue to meet.

It is proposed that during 2002:

- 1) The Forecasting Group convene at a frequency determined by the meeting participants (e.g. 2 times)
- 2) UNICEF SD, WHO, the GAVI Secretariat, Vaccine Fund, and appropriate public sector partners meet every 1-2 months to share information, consider revisions to projections, and distribute updates as relevant

In relation to the need to continue or expand forecasting efforts, it is proposed that:

- 1) General principles outlined previously remain central to this effort.
 - 2) The process underway of moving away from modeling to integrating forecasting for Hep B, Hib, and YF into routine, country-level UNICEF SD and PAHO data collection systems be continued and supported by partners where appropriate. Support may include provision of technical assistance to countries to strengthen routine national forecasting systems. Consideration should be given to variables at country level that can be monitored and/or impacted to better understand demand and improve the strength of forecasts.
 - 3) In accordance with the request from manufacturers at previous meetings, projections be expanded to reflect the public sector demand in all low and middle-income countries. This will then be complemented with global supply and capacity data in the aggregate. This will be piloted at the January, 2002 meeting with discussions of Hepatitis B, and if successful this could be expanded to include other routine EPI vaccines at future meetings.
- QF** The Forecasting Group begins considering demand for vaccines that will soon be available. To this end, it is proposed to look initially at the potential market for a pneumococcal vaccine in the developing world, beginning at the January, 2002 meeting. Future meetings could look at rotavirus or other vaccines.