



Financial sustainability for immunisation in the poorest countries: **lessons from GAVI 2000-2006**





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Executive summary

From 2000 to 2005, the Financing Task Force (FTF) of the Global Alliance for Vaccines and Immunisation (the GAVI Alliance, GAVI) applied innovative thinking to the question of financial sustainability of immunisation programmes. By developing a set of guidelines and providing thoughtful support, the FTF helped more than 50 countries complete rigorous financial sustainability plans (FSPs) by 2005. The FTF collected data from these plans and generated many useful analyses that contributed to major GAVI policies in the areas of financing, demand forecasting, and supply strategies. This document describes the major activities, findings, and achievements of the FTF during Phase 1 (2000-2005).

The GAVI Proto-Board established the FTF in 1999 to address the capacity of countries and their immunisation partners to make immunisation programmes financially sustainable. The first step in this area was to define “financial sustainability”:

Although self-sufficiency is the ultimate goal, in the nearer term sustainable financing is the ability of a country to mobilise and efficiently use domestic and supplementary external resources on a reliable basis to achieve current and future target levels of immunisation performance.

Once this operational definition had been endorsed by the GAVI Alliance Board, the FTF developed guidelines for financial sustainability planning and provided technical assistance to countries, primarily in the form of workshops at the regional level followed by specific technical support provided by trained consultants. As countries moved from planning to implementation, a paid coordinator at the World Health Organization (WHO) and regional working groups carried the work forward in regions and countries.

One of the key outcomes of the financial sustainability planning process was the development of an immunisation financing database containing information from all the FSPs. The database was used to analyse trends, define policy changes, and extract lessons for GAVI activities.

An analysis of all plans developed in Phase 1 shows rising immunisation expenditure, an inverse relation between expenditure per infant and population size, rising expenditure on health overall, varying by region, rising government expenditure on health and specifically on immunisation, persistent, large funding gaps for immunisation, rising vaccine prices, and volatile external aid. The analyses have resulted in changes in the way GAVI works, including extending the period before countries take over the financing of vaccines originally funded by GAVI and introducing co-financing for GAVI-supported vaccines in Phase 2.

Feedback from the FSPs and various country consultations indicated that GAVI Phase 1 was successful in accelerating the introduction of new vaccines; however, improvements in vaccine financing were proposed, including the following.

- Countries should employ evidence-based decision making to better understand the costs and benefits of introducing new vaccines from the outset.
- Support should be provided in such a way as to enable a gradual transition of financial responsibility from GAVI to national governments and their partners. GAVI's original assumption that five years would be sufficient time to ensure financial sustainability was too optimistic.

- Good predictability of vaccine expenditure is important for planning and budgeting, both to countries and to the GAVI Alliance.
- Analyses should include both costs and benefits of immunisation, as the cost and long-term financing implications of adding a new vaccine may seem high when seen in isolation. The focus has been almost exclusively on estimating current and future costs and financing, whereas countries need means to estimate the economic benefits.
- Costing and immunisation financing should be considered within a country's multi-year plan for immunisation (cMYP), which in turn should be included as one element of a national health sector plan and not as a separate exercise for GAVI. The development and implementation of FSPs had many strengths, but the required integration of GAVI documents into national planning and budgeting was difficult and rarely successful.
- The original GAVI strategy for introduction of a new vaccine was based on the pentavalent product¹, a vaccine that was not available in sufficient quantities and for which there were very few suppliers. As a result, there was insufficient vaccine supply to meet the increased country demand, and the vaccine price declined more slowly than expected. Attaining financial sustainability therefore requires a healthier supply market.

Important lessons and achievements can also be derived from the process of developing the FSPs. Immunisation programme managers and other national officials in virtually all countries reported that the major commitments of time and effort required to develop an FSP more than equalled the benefits of the plan itself. Most indicated that they had not previously understood programme costing and financing structures, the financial challenges of introducing a new vaccine with GAVI support, and the financial implications in the medium term

of sustaining an immunisation programme. Many requested similar information for other health interventions. They reported that preparing a FSP had contributed to building capacity in an important area and had built bridges between the ministries of health and finance, resulting in improved communication. In addition, financial sustainability kept immunisation on the policy agenda as the country debated ways of handling financing gaps for immunisation programmes.

At a global level, the work of the FTF helped the GAVI Alliance:

- understand the reasons for inadequate financing for vaccines and immunisation;
- support countries in sustainable financing of vaccines and immunisation programmes;
- explore the effects of vaccine supply and demand on vaccine choice, production costs, and price; and
- find innovative sources of financing for vaccines and immunisation programmes.

In summary, the innovative work of the FTF made significant contributions to the thinking on financial sustainability of immunisation programmes, and its considerations and findings have relevance for sectors beyond immunisation and health. The FTF had a major impact on the way the GAVI Alliance has structured support for countries' vaccine programmes, as well as the current co-financing policy.

This document seeks describe to the FTF's activities and lessons learnt, thus providing a historical overview that can feed into current discussions on financial sustainability of donor-assisted interventions.

¹ Vaccine against hepatitis B and *Haemophilus influenzae* type b in combination with diphtheria and tetanus toxoids and pertussis vaccine

Introduction to the GAVI Alliance

The GAVI Alliance was officially launched in Davos, Switzerland, in January 2000² as a public-private global health partnership with the mission to save children's lives and protect people's health by increasing access to immunisation in poor countries.³ Members of the Alliance include governments of both developing and industrialised countries, established and emerging vaccine manufacturers, civil society organisations, research and public health institutions, the World Health Organisation (WHO),

United Nations Children's Fund (UNICEF), the World Bank, and the Bill & Melinda Gates Foundation. During Phase 1, the GAVI Alliance provided support for immunisation services, new and underused vaccines, and injection safety supplies in the form of multi-year grants. GAVI awarded support for *immunisation service strengthening (ISS)* for the equivalent of five years, provided in the form of investments during the first two years, with subsequent funds provided as rewards for additional children vaccinated. *Injection safety support (INS)* was provided for three years, after which countries were expected to take over this cost. Support for procurement of new vaccines (NVS) covered the cost of supplying a country with new and underused vaccine⁴ for five years.

GAVI support was intended to catalyse new activity in immunisation and augment, not replace, existing funding. To receive an award, countries were asked to submit rigorous applications, which were then reviewed by a panel of independent experts drawn from a wide cultural and technical base.



² Although the first Board meeting was held in November 1999

³ The GAVI Alliance Board has decided that countries with a Gross Domestic Product (GDP) of less than US\$ 1,000 per capita are eligible for GAVI support. The list of eligible countries was last revised in 2004, including countries with a GDP/capita of less than US\$ 1,000 in 2003.

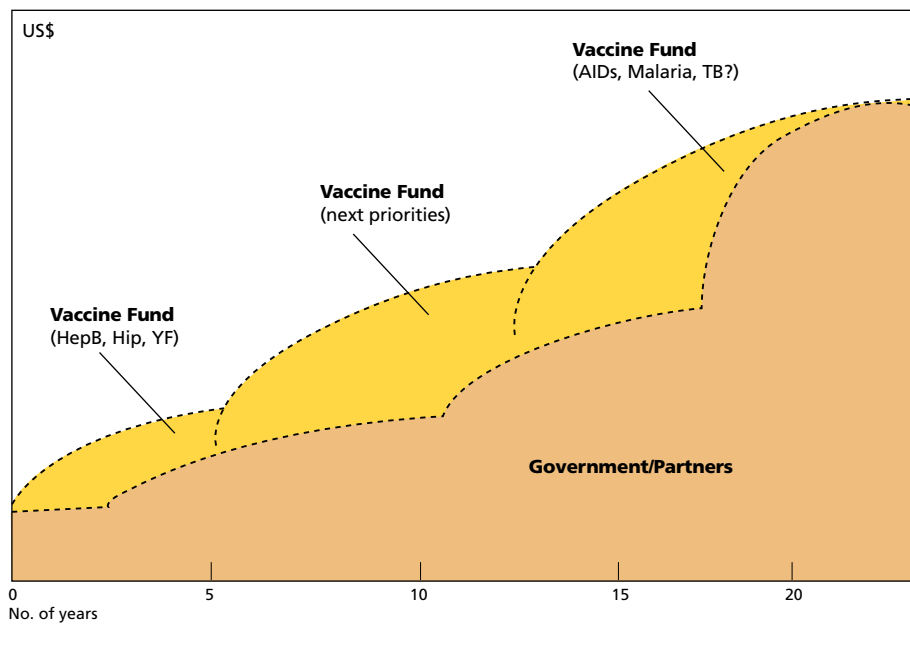
⁴ New vaccines supported in phase I included Hepatitis B vaccine, *Haemophilus influenzae* Type b (Hib) vaccine, and yellow fever vaccines in countries where the disease is endemic.

According to the logic of the time, the increased demand for new and under-used vaccines would stimulate investment by manufacturers resulting in a reduction in vaccine prices to a level that would be affordable to countries with limited resources. GAVI funds could then be redirected toward additional new vaccines, as shown in Figure 1. After three years, countries were expected to demonstrate in their FSPs how they intended to continue financing their programmes beyond the grant period.⁵

Since inception, GAVI has pioneered new work in a neglected area of immunisation and successfully established a process for new vaccine introduction in an ambitious timetable. Unlike previous global initiatives, GAVI made financial sustainability one of its building blocks, using the introduction of new vaccines and improved immunisation infrastructure to increase coverage. By the end of 2007, the GAVI Alliance had committed US\$ 3.5 billion to support immunisation in the world's poorest countries, in a concerted effort to reduce child mortality, resulting in more global funding for immunisation services than ever before.

FIGURE 1

Financing model for GAVI Phase 1⁶



⁵ It is important to recognize the assumptions implicit in this model, which in fact were never validated: first, that national partners would step forward to assist countries in paying for new vaccines, and, second, that the prices of vaccines would rapidly drop to their 'mature' levels as the market expanded. Neither of these assumptions has been borne out to date.

⁶ Footnote: From GAVI. HepB = hepatitis B; Hib = *Haemophilus influenzae* type b; YF = yellow fever)

GAVI's Financing Task Force

Knowing that financial sustainability depends on how well national governments and the international community understands and manages their financial roles and responsibilities,⁷ GAVI made financing considerations an integral part of planning and decision-making for immunisation. By writing and implementing financing plans, GAVI reasoned, countries would be better able to sustain their programmes and introduce later generations of vaccines and technologies, for which the financing challenges would be even greater.

Before GAVI's official launch, the Proto-Board established the FTF in 1999 to address the capacity of countries and their immunisation partners to make immunisation programmes financially sustainable (see Box 1).

The FTF started as a fairly informal network, with a paid coordinator and two co-chairpersons representing different GAVI Alliance partners. As its work on financial sustainability moved from concept to implementation, the FTF recognised the need for a project management structure. In response, WHO supported two staff members: one to coordinate financial sustainability at the global level and the other to manage an immunisation financing database, which became critical in providing timely analyses on progress and challenges in financial sustainability to the GAVI Board.

The FTF also interacted with other GAVI task forces, such as those on implementation and advocacy and communication. To bring the focus closer to the country level, the FTF began to interact with regional working groups of GAVI partners.

During GAVI Phase 1, the FTF regularly provided the GAVI Board with the results of analyses of financing issues and challenges, which spurred changes in GAVI's vaccine financing policy, such as:

- recognising and quantifying the difficulties countries faced in transitioning from donor to government financing for immunisation, culminating in the currently implemented policy change to vaccine co-financing;
- permitting countries to spread the initial five-year grant over an eight-year period;
- designing alternative financing strategies to assist countries in sustaining the benefits of new and more expensive combination vaccines including a mechanism to raise funds on the capital markets, the International Finance Facility for Immunisation (IFFIm), and a mechanism to encourage manufacturers to invest in developing vaccines

BOX 1

Role of the FTF

The FTF worked in three key areas:

- supporting countries to achieve financial sustainability of vaccine and immunisation programmes;
- tracking the effect of vaccine supply and demand on vaccine choice, production costs, and price per dose; and,
- identifying new sources of financing for vaccines and immunisation programmes through, for example, capital market mechanisms.

⁷ Drawing on the lessons learnt from GAVI's early years, comprehensive multi-year plans for immunisation have now taken over the functions of the financial sustainability plans, as described below.

for poor countries, an Advance Market Commitment (AMC), both now being implemented by GAVI; and

- recognising the critical roles of vaccine demand forecasting, procurement and supply strategies in vaccine affordability. This which led to plans for accelerated introduction, an initiative to make available *Haemophilus influenzae* Type b (Hib) vaccine, and procurement and supply strategy groups at GAVI.

At the start of GAVI Phase 2, the FTF collaborated with others to create a

vaccine co-financing strategy and develop the mechanisms for its application.

The success of the FTF would not have been possible without the enthusiasm and great efforts of the different partner organisations and individual members of the FTF. The main lessons learnt from the work of the FTF are summarised in Box 2. The FTF was dissolved in 2006. The history of the work of the FTF is summarised on the GAVI website:

<http://www.gavialliance.org/about/governance/taskteamsindexphp?thetype=former>.

GAVI FTF Core Group meeting, London, England, September 2002



BOX 2

Work of the FTF – Lessons learnt

- The FTF was an important strategic “think tank” that introduced innovation into vaccine financing by harnessing the skills of individual members and the power of its wide and varied institutional base.
- By directly linking decision-makers in partner agencies, the FTF was able to overcome institutional resistance and involve a wide range of partners. Early successes highlighted the value of working together.
- By working to achieve a shared vision, individual members showed their willingness to leave behind institutional preconceptions.
- One of its successes was its ability to be self-critical, to evaluate what was not working, and to adopt new approaches.
- Although formed at the global level, the intent of the FTF was to implement its work plan at the regional and national level. This approach proved to be very labour-intensive.



**First financial sustainability planning Workshop,
Nairobi, Kenya, July 2002**

Major activities 1999-2006

The FTF was active between 1999 and 2006. During this time, the FTF had a very broad scope of work (Annex 1 lists the key activities of the FTF). This document focuses on its efforts to improve the financial sustainability of national immunisation programmes.

A definition for financial sustainability

In its first phase of support, GAVI sought to address the question of financial sustainability systematically, by requiring all countries receiving GAVI support for new vaccines to indicate in their applications how they planned to finance the added recurrent cost of new vaccines in the future and to commit themselves to preparing a detailed FSP. Because the initial term of GAVI support was five years, this meant that midway through the funding period countries had to submit a plan describing how they would manage the transition and finance the costs of immunisation services with new vaccines after the end of the GAVI commitment.

In 2000, however, before the financial sustainability strategy was initiated, discussions with partners revealed profound philosophical differences and a lack of consensus on the definition of financial sustainability in the context of immunisation in the world's poorest countries. Much of the initial thinking was based on costing studies and financial sustainability work from the 1990s,⁸ which proposed tiered pricing for vaccine procurement. For some, financial sustainability was synonymous with "self-sufficiency", which described situations in which external donors sought to induce the governments of developing countries to mobilise domestic resources for activities that had previously been funded externally. For others, self-sufficiency was seen as completely unattainable in poor countries and inconsistent with – and for many countries in direct opposition to – established GAVI milestones of increasing coverage and introducing new vaccines.

Following several heated discussions, it became apparent that the FTF could not produce guidelines for financial sustainability planning without a common understanding of what financial sustainability

meant in the context of GAVI. It therefore commissioned a paper entitled *Financial sustainability of childhood immunisation: issues and options* (April 2001). The "options paper" underwent rigorous external review and became the centrepiece of a June 2001 workshop organised by WHO, the Children's Vaccine Program at PATH (USA) and the United States Agency for International Development (USAID), with representatives from four GAVI-eligible countries: Bangladesh, Benin, Ukraine, and Zimbabwe. This workshop helped achieve consensus on a definition of financial sustainability and outlined a set of guidelines on planning financial sustainability. Following this workshop, the GAVI Board accepted the following definition of financial sustainability:

Although self-sufficiency is the ultimate goal, in the nearer term sustainable financing is the ability of a country to mobilise and efficiently use domestic and supplementary external resources on a reliable basis to achieve current and future target levels of immunisation performance.

This definition moved towards the idea that financial sustainability:

- is a shared concern and a shared responsibility of governments and their development partners;
- requires that countries and donors match financing with evolving programme objectives;
- includes the concepts of adequate and reliable financial resources, focusing not only on the quantity of funds but on how well they reach the levels at which they are needed; and
- is related to both mobilisation and efficient use of financial resources.

With this board-approved definition of financial sustainability and the recommendations of the June 2001 workshop in hand, the FTF put plans in motion to support countries in achieving financial sustainability.

⁸ See <http://www.phrplus.org/Pubs/Sir40.pdf> for a complete list of references

FSP guidelines and approach

With a great deal of work already behind them, the FTF created guidelines on financial sustainability. The guidelines specified what a FSP was, what data were needed, and what steps were required. The “options paper” provided a broad outline of what the plan should include. Meetings in Cambodia and Ghana, involving national planning officials, members of the FTF, consultants and staff from GAVI partner organisations, helped define the process. These meetings also highlighted the need to accumulate standardised data on national immunisation financing. Thus, the guidelines defined an essential data set and format, which later formed the basis for an immunisation financing database (described in this document), which allowed GAVI to quantify and compare country data (see Box 3 and Box 4).

FSP content

A country's FSP had to include an assessment of the key financing challenges of the national immunisation programme within broader health financing. Countries were also asked to describe the government's approach to mobilising and effectively using financial resources to support the country's medium- and long-term immunisation programme objectives. The plan was intended to link with existing plans, such as sector-wide approaches and medium-term expenditure frameworks.

FSP development process

Responsibility for developing the plan lay with the national immunisation programme and officials from ministries of health and finance, in collaboration with members of the inter-agency coordinating committee (ICC) or other relevant donor groups.

BOX 3

FSP Guidelines

The guidelines describe the purpose, suggested content, format, and process for preparing a FSP. The goal in preparing plans is to improve a country's prospects for reliable and sufficient long-term financing of its national immunisation programme by:

- Serving as a source of information that can be used for health sector planning;
- Generating a clear picture of the costs of the program, financing situation, and challenges, based on quantitative information and careful analysis;
- Developing relevant, realistic, and specific strategies and actions that are likely to lead to financial sustainability;

- Identifying process and outcome indicators to measure progress toward the objectives set for financial sustainability; and
- Serving as an advocacy tool – a framework for discussion between the ministry of health, ministry of finance, non-governmental organisations, private businesses, and development partners about how well the current and future financing arrangements meet program objectives for expansion and quality improvement.

The full text of the guidelines is available at: http://www.who.int/immunization_financing/tools/en/

Once FSPs had been endorsed by the appropriate groups in a country, they were pre-reviewed for content, consistency and feasibility of implementation against certain criteria by a subgroup, before being passed to the Independent Review Committee (IRC) for full review and approval.

The expectation was that governments would use the FSP when planning the financial health of the immunisation programme and in seeking support from national and development partners for planned and agreed programme expansion and improvement.

Annex 2 gives a comprehensive list of the tools and guidelines for financial sustainability prepared by the FTF.

National and regional capacity building

Recognising that FSPs would only be effective in countries where government staff and partners understood the details of the plan and felt a sense of ownership toward it, the FTF developed a comprehensive approach for building national and regional capacity in several areas, including budgeting, costing and financing.

The FTF organised a series of capacity-building activities, including workshops, regional meetings, and technical assistance to countries. Assistance was directed at staff working in ministries of health, planning, and finance, national partners, and donors.

Workshops

GAVI partners, including WHO, Children's Vaccine Program at PATH (USA), World Bank, UNICEF, Agence de Médecine Préventive (AMP), Department for International Development (DFID), United Kingdom, and United States Agency for International Development (USAID) conducted nine regional workshops on financial sustainability planning for 69 countries in GAVI Phase 1. Workshops were conducted in Cotonou, Benin; Cairo, Egypt; Nairobi, Kenya; Kathmandu, Nepal; Moscow, the Russian Federation; Dakar, Senegal; Bangkok, Thailand; and Kampala, Uganda. A list of workshops is given in Annex 1.

The workshops brought together representatives from ministries of health, planning and finance and their technical partners to increase countries' understanding of the key components of a FSP, assist them in preparing a work plan, and assist them in implementing the plan.

At each workshop, participants worked through several main topic areas, including:

- financial sustainability planning in the context of the health sector;
- financial sustainability planning for immunisation programmes as defined by GAVI;
- basic economic concepts of costing and financing;
- data analysis using Microsoft Excel, with adaptation to country situations; and
- approaches for advocacy.



Steve Landry, Co-chair of the FTF with workshop participants at the financial sustainability plan training workshop, Kampala, Uganda, May 2003



Daniel Kress, FTF member, with workshop participants from Senegal at the Financial sustainability plan orientation workshop, Dakar, Senegal, July 2002

The workshops aimed to help countries examine sustainability in a comprehensive way, so that immunisation FSPs would accurately reflect each country's health systems as a whole. In many cases, workshops included country teams that were at different stages in the development of their FSP. As a result, countries that had already prepared FSPs were able to share information with those that were embarking on them.



Ruth Levine (FTF core member), Patience Kuruneri (African Development Bank), Victor Maziwisa (FSP Consultant), at the financial sustainability planning workshop, Nairobi, Kenya, July 2002

Technical support

To augment support given in workshops, various partners in the FTF also provided direct technical assistance to countries based on the relative strengths of each partner agency (Annex 4):

- AMP provided support for workshops and direct country support to Benin, Côte d'Ivoire and Togo.
- DFID through the HLSP consultancy firm, provided support for workshops, evaluated lessons learnt, and conducted country consultations on bridge financing.
- Norwegian Agency for Development Cooperation (NORAD) evaluated lessons learnt and conducted country consultations on bridge financing.
- Children's Vaccine Program at PATH provided support for workshops, designed training materials, and provided direct support to Cambodia, China, Eritrea, India, Indonesia, Mongolia, and Viet Nam.
- World Bank provided support for workshops, conducted country consultations on bridge financing, designed training materials, and provided direct support to Albania, Bosnia and Herzegovina, China, Congo, the Democratic Republic of the Congo, Ethiopia,

Georgia, India, the Republic of Moldova, the Sudan, Tajikistan, Uganda, Ukraine, and Uzbekistan.

- USAID through Basic Support for Institutionalising Child Survival (BASICS) provided support for workshops, designed training materials, pilot tested guidelines for financial sustainability planning, conducted country consultations on bridge financing, and provided direct support to Cambodia, Ghana, Indonesia, Rwanda, and Uganda.
- WHO provided support for workshops, conducted country consultations on bridge financing, designed training materials, and provided direct support to Armenia, Burundi, the Comoros, Eritrea, the Gambia, Guinea, Guyana, Haiti, Kenya, Kyrgyzstan, the Lao People's Democratic Republic, Madagascar, Malawi, Mozambique, Pakistan, Rwanda, Sierra Leone, the United Republic of Tanzania, and Zambia.
- UNICEF provided support for workshops, conducted country consultations on bridge financing, and offered technical support on preparing and implementing FSPs .

The GAVI secretariat also played a critical advocacy role by inviting ministers of health and finance from more than 60 of the 75 GAVI-eligible countries to attend its annual Partners Meeting in Dakar, Senegal, in November 2002. Here, representatives of ministries of health and finance from Cambodia, Côte d'Ivoire, Ghana, Guyana, Kenya, Kyrgyzstan, Madagascar, Malawi, Mali, Mozambique, the Lao People's Democratic Republic, Uganda, and the United Republic of Tanzania signed the Declaration of Dakar (Annex 3), committing themselves to the concepts of financial sustainability and financial sustainability planning and requesting the assistance of GAVI partners to achieve this.

In April 2003, as more countries required assistance than could be realistically provided by the FTF members, WHO organised and hosted an inter-regional consultant training workshop in Geneva to promote interaction with representatives of regional working groups and train 11 consultants in preparing, monitoring and implementing FSPs. Between 2003 and 2006, nine of the 11 consultants subsequently provided technical assistance and support to countries.

Country support: China, India, Indonesia ('the big three')

In some instances, technical support based on the agreed standards and FSP guidelines was not applicable given the country context.⁹ From the outset, GAVI partners recognised that financial sustainability planning in China, India and Indonesia should be customised to best serve the needs of each of these large countries. The way in which the partners supported these countries is a good example of partner cohesion and cooperation within the FTF.

In March 2004, representatives from the World Bank, PATH and WHO reached agreement with the Government of China and national partners on the need for and relevance of a financing assessment and policy review. After implementing its FSP, China was able to transfer fully from GAVI support to self-funding of hepatitis B vaccine and autodisable syringes.

A joint mission of representatives from the Children's Vaccine Program at PATH and the World Bank visited India in March 2004 and, with the government and national partners, outlined a FSP tailored to the needs of the country. India submitted the plan to GAVI and, based on feedback from GAVI, initiated a comprehensive multi-year plan.

Indonesia's size and decentralised health system presented unique challenges to financial sustainability planning. Accounting for the economic status of different provinces, the Ministry of Health, in consultation with Inter-agency Coordinating Committee partner agencies (including PATH, the World Bank, WHO, and USAID), collected costing data from six representative provinces. PATH coordinated the inputs from partner agencies and provided its own financial and technical contributions on behalf of GAVI partners. Through this partnership, the Ministry of Health drew up a FSP, primarily using local staff. Despite a diversion of resources for tsunami relief in 2004, polio eradication activities, and avian influenza outbreaks, the Ministry of Health was able to collect data from four of the six provinces. When GAVI phased out FSPs in favour of cMYPs, the Ministry of Health used the costing data collected for the FSP to develop its cMYPs.

Regional support

To further support plan preparation at regional and sub-regional levels, the FTF invited partners involved in the regional working groups to coordinate and serve as focal points for financial sustainability. In 2004, the FTF circulated a terms of reference asking regional partners to bid for funding support by explaining how they planned to help countries prepare and implement FSPs. In April 2004, the FTF reviewed and endorsed proposals from East and Southern Africa (WHO), West and Central Africa (WHO), Europe (WHO and the World Bank), Asia Pacific (WHO and the World Bank) and South-East Asia (WHO). The FTF then appointed regional focal points in East and Southern Africa (hosted by WHO), South-East Asia (WHO), Asia Pacific¹⁰ (PATH and WHO) and Europe (WHO and the World Bank). In 2005, the FTF recruited additional regional focal points in West and Central Africa (WHO) and the Eastern Mediterranean Region (WHO).

BOX 4

FSP guidelines and approach – Lesson learnt

- A systematic approach was helpful in launching financial sustainability planning. The FSP guidelines formed the basis of guidelines developed later for cMYPs.
- Use of standards in preparing FSPs made quality control possible.
- The existence of a partnership allowed institutional representatives to take risks and to pledge institutional funds.
- Financial sustainability planning came too late in the GAVI cycle. National multi-year plans were drawn up more than two years before the FSPs, resulting in two separate documents in each country. This problem was addressed to a certain extent by cMYP; however, many national immunisation programmes were reluctant to abandon their FSPs, which had required significant time and effort.

⁹ This was the case for some of the large countries and countries with decentralised governments including India, China, and Indonesia.

¹⁰ The WHO Western Pacific regional grouping with additional countries from the equivalent World Bank region

Results

Financial sustainability planning, initially supervised by the FTF, became the responsibility of a global coordinator, based at WHO, in collaboration with GAVI partners at regional and national levels. The coordinator conducted pre-reviews for 21 countries in 2004 and 20 countries in 2005. By the end of 2006, 55 countries had completed FSPs (see Table 1).

The remaining 20 countries were unable to draw up plans because their governments could not provide long-term direction or commitment to the immunisation programme owing to, for example, political instability or civil unrest. The decision not to draw up a plan was usually

based on discussions with the regional working group representative and national immunisation programme staff and communicated to the GAVI working group. In some cases (e.g., Djibouti, Sri Lanka, Togo, and Turkmenistan) plans were prepared but not submitted to the IRC because cMYPs were subsequently prepared.

GAVI partners not only ensured global coordination in the preparation and implementation of FSPs in Phase 1, but also initiated mechanisms and structures to provide longer-term support in immunisation financing in six regions.

TABLE 1

Financial sustainability plans drawn up during GAVI Phase 1 (2000-2005)

Region ¹	Countries with financial sustainability plans
Africa (East & Southern) [14]	Burundi, the Comoros, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Rwanda, Uganda, the United Republic of Tanzania, Zambia, Zimbabwe
Africa (West & Central) [13]	Benin, Burkina Faso, Cameroon, the Democratic Republic of the Congo, Côte d'Ivoire, the Gambia, Ghana, Guinea, Mali, Mauritania, the Niger, Senegal, Sierra Leone
Americas [2]	Guyana, Haiti
Eastern Mediterranean [4]	Afghanistan, Pakistan, the Sudan, Yemen
Europe [10]	Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kyrgyzstan, the Republic of Moldova, Tajikistan, Ukraine, Uzbekistan
South-East Asia [8]	Bangladesh, Bhutan, India, Indonesia, the Democratic People's Republic of Korea, Myanmar, Nepal, Sri Lanka
Western Pacific [4]	Cambodia, China, the Lao People's Democratic Republic, Viet Nam

Countries without FSPs include Angola, Bolivia, the Congo, the Central African Republic, Chad, Djibouti, Guinea-Bissau, Honduras, Liberia, Mongolia, Nigeria, Sao Tome and Principe, Somalia, Togo, and Turkmenistan. China, India and Indonesia were not required to draw up FSPs because of their size and other characteristics; however, they drew up their own plans with partners.

¹ WHO regional groupings

² FSPs were drafted mainly with help from Chulalongkorn University (Thailand) and the Institute of Economic Growth (India).

Impact at national level

In many ways, FSPs had a significant positive impact in countries that developed and implemented them. They improved the ability of ministries of health to negotiate with ministries of finance and influence health sector budgets. They also provided a clear picture of financing that would be necessary to sustain immunisation activities to governments and partners, therefore guiding their planning allocations in the medium term.

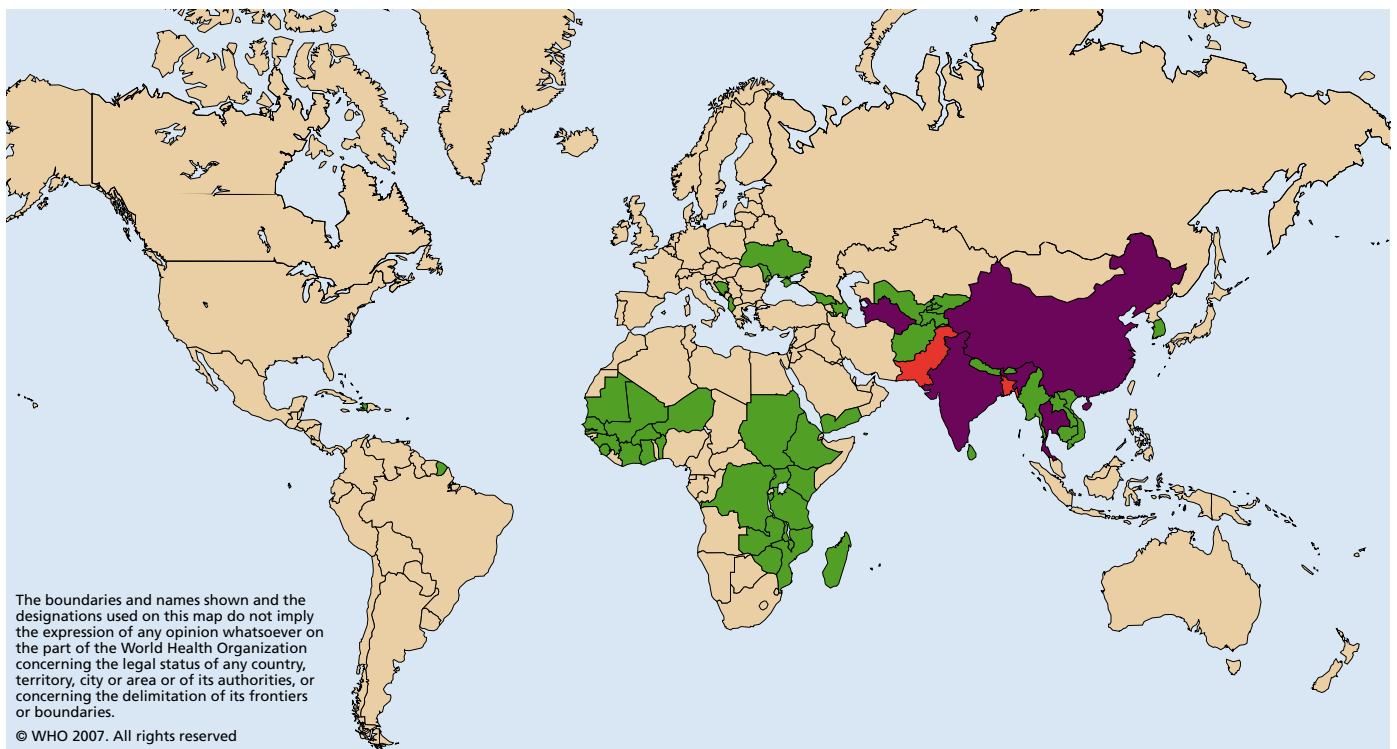
There were also many areas in which the planning process fell short of expectations.

- Because FSPs were required after a country's original application for funding, they could not be used in decision-making. Instead, they helped countries deal with the consequences of those decisions.

- The plans required countries to describe how they would mobilise and use financial resources to sustain new initiatives funded by GAVI, but did not require an evaluation of other programme options.
- Although ministries of both health and finance were meant to sign the plan to ensure national ownership, this often did not occur because the work was not set into a larger framework linking results to plans and budgets.
- The rigidity of GAVI application and review meant that a country's planning schedule could not always be accommodated. Perhaps the difficult timing and lack of integration led some countries to view it as a one-time requirement.

FIGURE 2

Countries that prepared financial sustainability plans for GAVI



- Countries that adapted financial sustainability plans for their purposes
- Countries that submitted financial sustainability plans to GAVI and were included in the analysis
- Countries that submitted financial sustainability plans to GAVI but were not included in the analysis

- Although the FSPs did suggest indicators for monitoring success, these were not always used in their design.
 - The FSPs were prepared at different times and with different costing methods from other country strategy documents. These different documents were difficult to combine, reducing the number of areas the plan could support.
 - The FTF was somewhat naive about national budgets, the economic world and the life cycle of projects, which hindered implementation. When exhaustive debates on additional funding were held, the maintenance of macroeconomic stability became a serious problem. The different sectors were unable to absorb the resource implications of the FSP into their sector budget, as fixed spending ‘ceilings’ meant that adding the cost of the immunisation programme would have led to significant displacement of already available resources. It was therefore considered safer to maintain the key national immunisation programme resources, especially for new vaccines, apart from the national budget. While this avoided the displacement of existing resources and activities, it meant that resource gaps for immunisation could not be included in broader discussions on closing financing gaps in the sector.
 - It is impossible to predict vaccine prices, and therefore difficult to define the funding gap and to devise methods to deal with this moving target.
 - There was no consistent method of allocating immunisation costs that were shared with other programmes.
- As a capacity-building exercise, planning financial sustainability proved difficult and time-consuming for countries and for GAVI partners. Although the model was resource intensive, some effort was economised by working in regional groups. When consultants were used, they often produced high-quality documents that were approved by the IRC, but did not necessarily engage national decision-makers, regional donors, or regional development banks.
- As a result, the quality and comprehensiveness of a country’s approach to financial

BOX 5

Building national capacity – Lessons learnt

- GAVI’s financial sustainability initiative was the first global programme to openly discuss and attempt to address the need to build national capacity in this area.
- GAVI’s collaborative model worked well at the international level. However, agencies have different methods of working at the national level and translating policy into donor commitment has proven difficult. Additional nongovernmental and non-GAVI financing has been limited.
- GAVI’s sustainability efforts were poorly coordinated with broader trends in health financing and donor practices.
- National immunisation programme staff were usually not in a place to advocate for additional resources for immunisation.
- National champions who are informed, but independent from the health ministry and high-ranking enough to influence decision-makers may be more effective, perhaps as advisors to the national plan.
- Although regional workshops effectively involved representatives from ministries of health and finance and provided a context for discussion, the efficacy of the groups depended on the strength of the focal points, which varied among regions.
- Gaps in the data, such as future vaccine prices, and inconsistencies, such as how to allocate shared costs, made financial sustainability planning difficult at the country level.

sustainability depended on the levels of interest and initiative to follow up the issues. Most personnel of national immunisation programmes, like those of many other public health programmes, do not consider resource mobilisation one of their roles. In most countries, the national immunisation programme is considered to be several levels lower than other programmes in the hierarchy of the ministry of health and therefore not well-placed to contribute to sectoral financing decisions.

The lessons learnt in building national capacity are summarised in Box 5.

Implementation of financial sustainability plans

With FSPs developed in most of the countries receiving GAVI support, the FTF turned its attention toward the provision of support for implementation. In September 2004, three years after the start of the financial sustainability project, a coordinator for this purpose was recruited by the World Bank and hosted by WHO. Unfortunately, this

delay in recruitment resulted in a loss of momentum for implementation, compromising the support originally foreseen in the project. The coordinator resigned in June 2005, and the position was never refilled. The global coordinator assumed some implementation responsibilities, and regional focal points took on other responsibilities. However, there was no coherent, comprehensive plan to guide implementation.

The FTF knew that generic guidelines to facilitate implementation, highlighting areas of focus, with a clear process for monitoring and review would have provided the basis for coherent advocacy as part of implementation of financial sustainability. However, the FTF felt that implementation could not be adequately supported from the global level, and support from the regional level was unsatisfactory because it depended on the relative efficiency of the regional focal point. To complicate matters, the national and regional offices of partner organisations had insufficient health sector presence.



World Bank and WHO workshop on health sector reform and sustainability for countries of Europe and Central Asia, Budapest, Hungary, August 2004

Limited technical support

When requested by countries, GAVI partners provided technical support directly to countries needing assistance with the implementation of FSPs.

Cambodia, Kenya, Guyana, Mozambique, Rwanda, Uganda and Zambia each received technical assistance in the form of country visits by partners and regional working group members, assistance with advocacy to national inter-agency coordinating committees and national health partners, and assistance in updating costing and financing information for resource mobilisation. All the countries that were supported raised additional national resources for their immunisation programmes as a result of the financial sustainability project.

Peer-to-peer consultations

In 2004, the FTF held two consultations for eight African countries to allow for an open exchange of experiences, progress, issues, and challenges. Participants included national immunisation programme managers, WHO and UNICEF focal points, a WHO health economist, a representative of a ministry of health planning and budgeting section, and the person in charge of the health desk at the ministry of finance. The meetings were designed to encourage open, frank debate on aspects of financial sustainability. Each country presented its experiences in preparing the FSP and progress, issues, and challenges.

Country teams then worked further with resource persons to identify priorities and areas needing support. Financial sustainability was discussed from the point of view of financial options, planning

and integration of activities into the broader health system, programme efficiency, and human resources.

The consultations highlighted some of the major concerns around costs, affordability, and sustainability of introducing new vaccines in less developed countries and resulted directly in a commitment by GAVI to increasing the time-span for support in Phase 2 from 5 to 10 years, and in requiring country co-financing of new vaccines in Phase 2.

International workshop

In April 2005, the FTF organised a workshop on implementing FSPs in Geneva. All partners supporting the activity attended, including AMP, Children's Vaccine Program at PATH, GAVI Secretariat, Immunisation BASICS (USAID), World Bank, UNICEF, and WHO. The objective of the workshop was to provide a forum to exchange of information on the challenges of financial sustainability planning in countries receiving GAVI support. The workshop called attention to several priority areas of work, including the need to:

- identify trends and issues in supporting financial sustainability from the regional and global levels;
- define the roles and responsibilities of GAVI partner agencies at global, regional, and country levels to help countries achieve financial sustainability;

BOX 6

FSP Implementation – Lessons learnt

Countries were supported to develop and refine strategies for financial sustainability, but received limited support for actual implementation and follow-up. Without adequate regional structures in place, implementation could not be managed effectively from the global level.

- Direct in-country follow-up is required to support implementation, but the right structure to provide this has not yet been identified. The GAVI Alliance partners are currently working through an immunisation and financial sustainability task team, which is following up the implementation of the current co-financing policy.

- revise options and means for regional and country support for implementing FSPs;
- agree on priority countries for 2005, the focus of support, timetables, and resource requirements for implementation of FSPs; and
- make recommendations on the nature, direction, and scale of GAVI support for implementation of financial sustainability beyond 2005.

The lessons learnt about implementation of FSPs are summarised in Box 6.

Immunisation financing database

One of the most valuable outputs of the financial sustainability planning process was the development of a comprehensive global financing database. Early in the process, the FTF recognised that a comprehensive database on immunisation financing could provide insight into donor and government financing for immunisation and strategies for long-term financial sustainability. Baseline data on immunisation expenditure and financial flows could contribute to understanding the influence of the GAVI funds on financial sustainability at national, regional and global levels. Moreover, such a database could support policy-making by the GAVI Alliance and reflect programme performance and efficacy.

Setting up the database

The idea of setting up an immunisation financing database originated in May 2000 at an informal meeting among WHO and the FTF members on the need for data on immunisation expenditure, costing, and financing. Among the conclusions of the meeting were that GAVI applications and implementation data could provide invaluable information for monitoring expenditure and financial flow for immunisation over time, and that a publicly-accessible database on immunisation expenditure and financing should be set up and housed at WHO. Following the annual forum of the FTF

in September 2000, a WHO health economist was hired to explore the feasibility of setting up such a database. In June 2001, a meeting was held in Geneva to review progress and determine future prospects. While satisfactory progress was reported, considerable work would still be needed to ensure that the data were compiled, analysed, and presented in such a way as to yield comparable, accurate, reliable results. Furthermore, several methodological issues had been identified. The June 2001 meeting recommended that a "database development team" be established with representatives from GAVI partner institutions to advise on methods, definitions, standardisation, extrapolation, data consolidation, and analysis.

Members of the FTF participated in two meetings at the World Bank in Washington DC (USA) in November and December 2001 to define the scope of the database, decide on the terms of reference for the team, and constitute the team. These issues were finalised at a meeting in January 2002 and endorsed by the FTF at its forum later in the month.

The objectives of the database were to:

- monitor trends in expenditure and financial flow at country, regional, and global levels;
- monitor GAVI financial flow for immunisation and its impact on the financial sustainability of national immunisation programmes;
- make strategic planning and resource mobilisation possible for immunisation; and
- provide a reference for answering questions relevant to policies for expenditure and immunisation financing.

The broad terms of reference of the team were to:

- provide technical guidance on obtaining prospective data on immunisation financing;
- provide technical guidance on obtaining valid existing (“retrospective”) data on immunisation programme financing and expenditure; and
- finalise, make recommendations on, and disseminate information on immunisation programme financing and expenditure.

The database development team included experts from a broad range of backgrounds and institutions. During November 2001, technical experts from the World Bank, USAID’s Partnership for Health Reform, the Centre for Global Development, WHO, Bill & Melinda Gates Foundation, Children’s Vaccine Program at PATH, UNICEF, and the Pan American Health Organization (PAHO) met to design methods for the database, review progress, and provide technical supervision. The experts were selected on the basis of their training and experience and their ability to interpret and generalise data critically and to translate them into estimates of immunisation expenditure and financing.

The team acted as a steering committee for the WHO-based health economist through periodic meetings and electronic and telephone contact. Between 2000 and 2005, the team met twice a year, on average. Core members were expected to attend all meetings, and specialists were invited to address specific issues.

The team was ultimately responsible for producing estimates of immunisation programme expenditure and financing, documenting methods, and preparing regular, publicly-available reports for the FTF. The final product was to be a publicly-available database of immunisation expenditure and financing estimates, including detailed documentation of data and an explanation of assumptions made and methods used to reach the estimates, and a detailed documentation of key findings.

While the team’s initial work consisted of collecting and analysing existing data from a variety of sources (such as project reports and published articles on immunisation costing and financing), the challenge was to address the quality and comparability of the information available from the wide variety of sources. The team identified limitations in the data.

- There was a lack of consistency in the way the original sources defined spending categories.
- Original sources defined the boundaries of immunisation programmes differently; some included shared health system costs and others were more restrictive.
- Methods used for estimating expenditure, when described, were inconsistent.
- Few sources explained how they estimated expenditures.
- Information describing sources of funding for immunisation programmes was inconsistent or incomplete.
- Data were missing on countries, years, and expenditure categories.



Immunisation costing and financing session at the financial sustainability plan orientation workshop for countries of the Eastern Mediterranean Region, Cairo, Egypt, June 2004

From the outset, the team viewed country applications to GAVI as key sources of information on expenditure and financing. A review of the information in the proposals, however, revealed the same issues listed above, so that the data could be used to only a limited extent. After a careful review of all the retrospective data available, the team decided that there was no reasonable way to address the issue of comparability and that modelling or other statistical methods could not be used to adjust for the lack of comparability in the original sources. Efforts were therefore directed to ensuring that all data on financing and expenditure collected in the future under GAVI auspices would be obtained by standard methods and reporting systems.

Progress on the immunisation financing database was presented to the GAVI Board in June 2002, at its eighth meeting, in Paris, France. The Board members welcomed the initiative, praised the report, and encouraged the team to continue its efforts. The FTF emphasised that the database team should strengthen both national and regional capacity to continuously update and report information from financial sustainability planning. The team therefore focused on methods for designing a costing and financing tool to supplement the FSP guidelines. Use of the tool by over 50 GAVI Fund recipient countries generated a wealth of comparable data.

Creating costing and financing tools

Having the skills to estimate the costs and financing of a national immunisation programme is essential to planning financial sustainability. One of the most important skills in financial sustainability planning is the ability to estimate the costs and available financing for a national immunisation programme. Developing skills in costing, financing, planning and budgeting at regional and country level would build long-term capacity and provide a reliable source of information from GAVI-eligible countries for the immunisation financing database. To meet both requirements, the database team designed tools that were annexed to

the FSP guidelines on immunisation costing, financing, and gap analysis. A user's guide explained how to use them. (See www.who.int/immunization_financing/tools/annexes)

The database team developed the tool in Microsoft Excel for easy access, and on spreadsheets, users could enter past costs and financing and projections of future costs, resource requirements and financing needs to achieve the programme objectives. These data allowed users to see and analyse the financing gaps. The user's guide provided an overview of immunisation costing and financing concepts, methods and definitions, and step-by-step instructions on using the costing and financing tool, including data analysis.

During workshops on financial sustainability planning, technical experts provided training and capacity-building in programme planning, costing, budgeting, immunisation financing and financial sustainability planning with various training materials. Regional and national immunisation programme managers learned how to use the FSP costing and financing tool in hands-on, practical group exercises with computers.

Launching the web site and database

In the spirit of transparency, the FTF decided to make the immunisation financing database publicly available by putting it onto a web site designed by WHO's department of Immunisation, Vaccines and Biologicals, with guidance from the database team, the FTF and many GAVI Alliance partner agencies. The GAVI Alliance continues to provide financial support for the web site (See www.who.int/immunization_financing)

The web site is an online resource for country-specific information on immunisation financing and uses an online version of the database to provide data and indicators on immunisation expenditure and financing in GAVI-eligible countries. The data are derived from the GAVI FSPs of 50 countries

and can be retrieved by five search types or by viewing key indicators. Each search type generates a table that displays information according to various dimensions of the data (country, year, cost category, and funding source). Complete documentation of the data and methods is available on the web site. The site also includes “country pages” which summarise information from each country’s FSP. The documents, accompanying annexes, and other relevant information can be downloaded from the web site.

Institutionalising the database

By the end of 2005, running the immunisation financing database was becoming more routine, requiring less supervision by its development team. The work of the FTF was also waning. Since part of its time-limited

mandate was to institutionalise its work, the FTF agreed to integrate the database into WHO’s Immunisation, Vaccines, and Biologicals Department, with continued support from the GAVI Alliance.

Also during this period, national immunisation strategic planning streamlined the financial sustainability planning process, resulting in cMYPs. These plans are based on costing and financing tools and methods developed in the financial sustainability guidelines, which allow the data from multi-year planning to be entered into the immunisation financing database.

Despite the success of this work, no mechanism was set up for regularly updating information on expenditure and financing for immunisation, and no monitoring system is in place to provide regular new information for the database.¹¹

The lessons learnt from the immunisation financing database are summarised in Box 7.

BOX 7

Immunisation financing database – Lessons learnt

The immunisation financing database team generated three important outputs: the database and website, the costing and financing tool, and comprehensive analyses of the data.

- common method with input from a broad range of technical experts, has provided up-to-date information on the costs of routine immunisation programmes from a range of countries. It also shows the cost of incorporating new vaccines such as those against hepatitis B and *Haemophilus influenzae* type b into national immunisation programmes and the implications for financial sustainability.
- The database seamlessly bridges costing studies undertaken in the 1980s and late 1990s with costing information today.
- The database has been a useful source of strategic information for guiding GAVI policies on immunisation financing, particularly at the end of Phase 1 and for shaping Phase 2.
- The tools that the database team developed and the analyses they provided have resulted in improved immunisation costing and financing methods.
- While the objective of setting up a publicly-available immunisation financing database was reached, there is still no mechanism for updating the information regularly and no monitoring system to provide new information for the database.
- The database should be analysed systematically to provide insight into the financial sustainability planning process: such as what works in countries, what does not work, and what are the key indicators.

Analysing the data

After gathering the data, a series of analyses was conducted, one after each round of submissions of FSPs, in 2003, 2004, and 2005. The database team reviewed and validated the analyses to determine the financial sustainability of immunisation in GAVI-eligible countries. They then made recommendations to the FTF about using the findings to derive lessons about the GAVI model of immunisation financing that could be presented to the GAVI Board. Annex 5 gives the chronology and highlights of the work of the immunisation financing database team.

The analyses allowed the FTF to review past and future trends in immunisation expenditure and financing and answer critical questions such as, “how much is being spent on immunisation?” and, “what is the composition of spending and how does it vary among countries?”. They also allowed the FTF to see the financial impact of introducing hepatitis B and *Haemophilus influenzae* type b vaccines. Using the analyses, the FTF could explore past and future trends in immunisation financing, sources of financing, how the sources have changed with new investments through GAVI, and expected financing shortfalls to aid decisions on adding new vaccines. The analyses provided insights into donor and government financing patterns for immunisation and strategies for long-term financial sustainability. The data on immunisation expenditure and financial flow contributed to understanding the influence of the GAVI funds on financial sustainability of immunisation at national, regional and global levels.

The immunisation financing analysis in 2003, comprising data from 10 countries, can be found at: http://www.gavialliance.org/resources/11_board_fsp_exsumm.doc. The 2004 analysis, with data from 22 countries, is presented at: http://www.who.int/entity/immunization_financing/countries/fsp_analysis_vs1_5.pdf, and the most recent, for 2005, based on data from 50 countries, is available at: http://www.who.int/entity/immunization_financing/countries/fsp_analysis_dec-2006.pdf. The 50 countries that had submitted FSPs by September 2005 were: Afghanistan, Albania, Armenia, Azerbaijan, Benin, Bhutan, Bosnia and Herzegovina, Burkina Faso, Burundi, Cambodia, Cameroon, the Comoros, Côte d’Ivoire, the Democratic People’s Republic of Korea, the Democratic Republic of the Congo, Eritrea, Ethiopia, the Gambia, Georgia, Ghana, Guinea, Guyana, Haiti, Kenya, Kyrgyzstan, the Lao People’s Democratic Republic, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, the Niger, the Republic of Moldova, Rwanda, Senegal, Sierra Leone, Sri Lanka, the Sudan, Tajikistan, Uganda, Ukraine, the United Republic of Tanzania, Uzbekistan, Viet Nam, Yemen, Zambia, and Zimbabwe.

Findings and success stories

In 2006, to close the phase of development of FSPs, the FTF commissioned a complete analysis of the full dataset. The data obtained with the costing, financing and gap analysis tool were extracted into the immunisation financing database, processed, and presented according to the methods defined by the database development team. The key findings are presented below.

Findings of the analysis

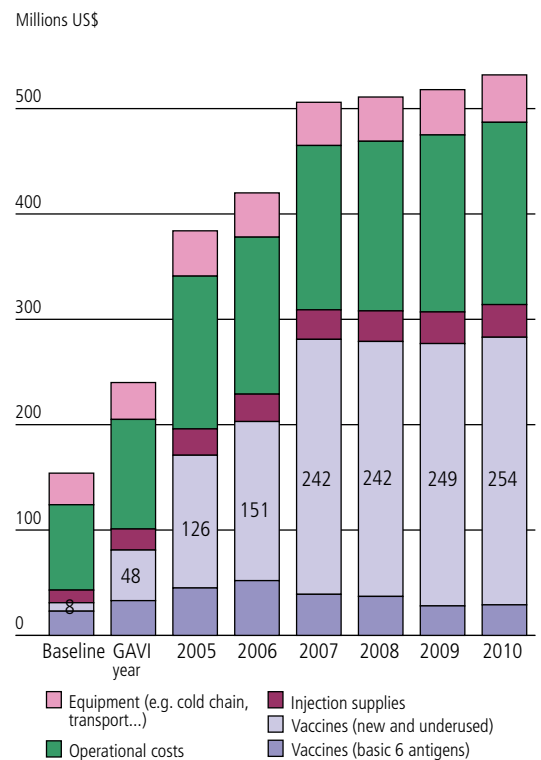
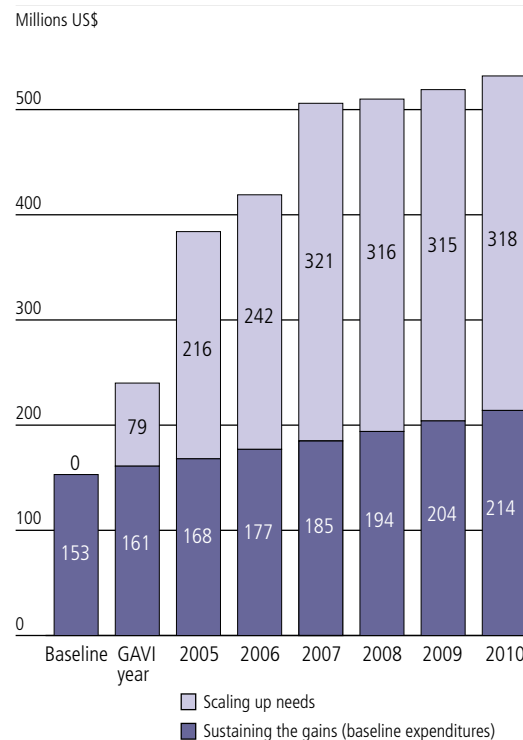
Immunisation expenditures are on the rise

Whereas the total baseline expenditure of the 50 countries was US\$ 153 million, by 2010 the amount needed to sustain the gains and scale up will exceed US\$ 500 million (Figure 3). In other words, the resource requirements to scale up immunisation in 2005-2010 must increase beyond the baseline investment in immunisation by a factor of at least three, which represents a doubling of current investments, including GAVI support.

The average annual expenditure per infant was US\$ 6.0 in the baseline year. This increased to US\$ 9.2 per year with GAVI support, and is projected to reach an average of US\$ 17.5 per infant between 2005 and 2010, in order to scale up immunisation coverage, including new vaccines.

FIGURE 3

Trends in immunisation expenditures and future resource requirements



The cost profile of immunisation is changing

An analysis of the composition of expenditure provides insight into the cost categories that are driving the increase. New, GAVI-supported vaccines account for most of the increase. When related injection equipment is included, vaccines are the single largest driver of costs in routine delivery systems. Their importance in overall expenditure will increase in the future to account for at least 50% of overall resource requirements. This contrasts to the baseline cost profile, in which the largest item of expenditure is operational costs, most of which are for human resources. This changing cost profile for immunisation will require greater annual funding to guarantee the provision of vaccines and injection materials to countries.

The cost profile of immunisation can vary

Overall trends differ from one country to another, particularly when flows other than aggregate expenditure are analysed. The variation in cost profiles for immunisation becomes clear when countries are grouped by vaccination schedule. The average total cost per infant in countries that expanded their immunisation programme beyond the traditional vaccines to include monovalent hepatitis B vaccine is approximately US\$ 13, in contrast to the US\$ 20 per infant in countries that introduced pentavalent vaccine. The share of new vaccines in the total cost ranges from US\$ 4 per infant in countries using monovalent hepatitis B vaccine to US\$ 11 per infant in countries using pentavalent vaccine. Thus, the cost profile can vary dramatically between countries.

The cost implications of new vaccines go beyond the vaccines themselves. Overall, recurrent non-vaccine expenditures rose by 22% during the period analysed, due mainly to increases for cold-chain equipment and maintenance, training, additional human resources, vehicles, transport, and surveillance. It is difficult to reach a firm conclusion about these trends without knowing which increases would have occurred in the absence of new vaccines.

It is clear, however, that support from GAVI to strengthen immunisation services has contributed to their rise, as have the US\$ 100 000 introduction cash grants for new vaccines. On average, GAVI funds for strengthening immunisation services account for 11% of overall non-vaccine expenditure; in some countries, they account for more than 30%.

While variations in expenditure flows are largely driven by differences in immunisation schedules and human resource costs, the data show evidence of further variability in cost per infant linked to economic development, demographics, and performance and delivery strategies. The analysis suggests that expenditure on immunisation will tend to be positively correlated with level of development, income, and coverage. In addition, many countries rely on supplementary immunisation activities to reach more children, thus responding to epidemiological needs or eradication initiatives. While mass campaigns, national immunisation days, mop-up activities, and outbreak responses are becoming an integral part of national immunisation programmes, the amounts being spent to support these activities are high and can sometimes exceed the resources available for routine delivery.

Immunisation financing is also on the rise

Increasing costs require increased financing. In the past few years, funding from all sources to support routine immunisation has increased (Figure 4), which would suggest that, overall, GAVI Phase 1 support has been supplemental and existing investment for immunisation has been replaced to only a limited extent. The overall increase in immunisation financing, however, hides variations among countries. Of the 50 countries in the analysis, five saw a decrease in overall funding, even with GAVI resources.

Without GAVI Phase 1 support, 17 countries would have shown a decrease in immunisation financing. It is difficult to ascertain, however, whether this trend is simply cyclical or indicates a real drop in financing, and it is difficult to conclude that these trends would have been seen in the absence of GAVI resources.

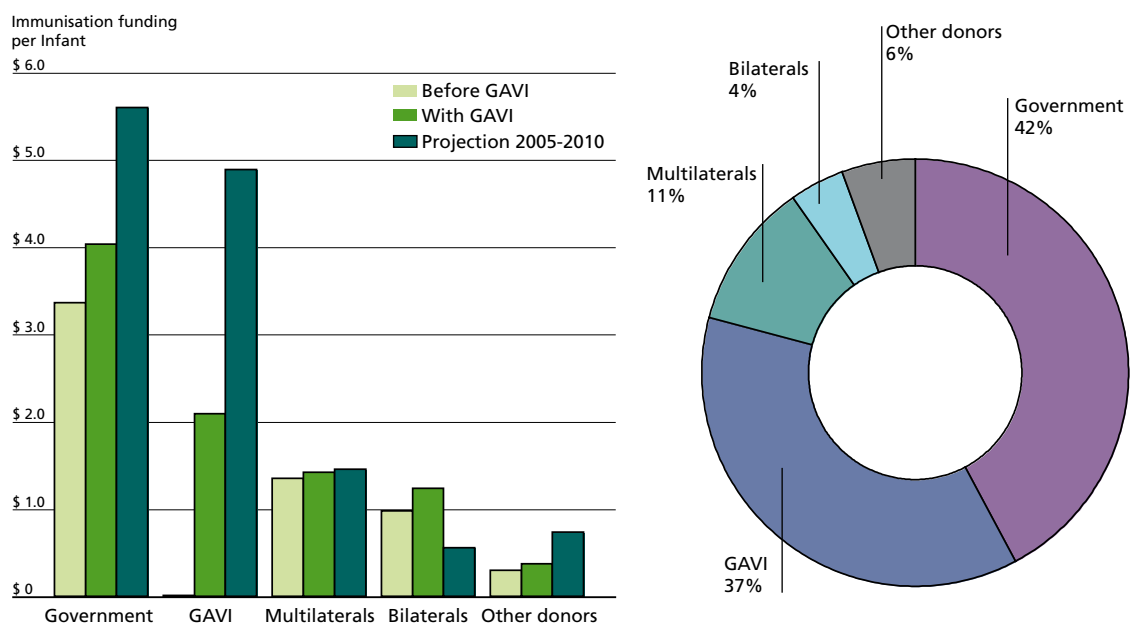
Financing trends are quite different when funding for campaigns is included, as the resources provided for campaigns sometimes exceeds the resources provided for routine delivery and often exceeds that for routine immunisation provided by multilateral donor agencies. When campaign funding is included, financing from multilateral donors represents 30% of overall financing, corresponding to approximately US\$ 4 per infant. Although substantial funding for immunisation is dedicated to

supplementary immunisation activities, campaigns continue to play a significant role in reaching the objectives and targets of immunisation programmes.

Financing trends and profiles vary by country, particularly by source of funding. On average, government financing for immunisation is increasing from US\$ 3.4 to US\$ 4.0 per infant between the baseline and the first year of GAVI support and is projected to be about US\$ 5.6 per infant per year between 2005 and 2010. In relative terms, in the baseline year, 24 countries funded 50% or less of their total needs for immunisation from government funds, and 12 funded less than 25%. While the overall trend in government funding is positive, there was a drop in government funding in 16 countries between the baseline and the first year of GAVI support. The analysis showed that the ability of national governments to finance immunisation increases with income and development status. Regardless of the grouping, some countries continue to be entirely dependent on donors for funding their programmes.

FIGURE 4

Trends in sources of financing for routine immunisation 2005-2010



Funding gaps persist

Despite positive trends in immunisation financing, expected available funds as reported in the FSPs will be insufficient to sustain the gains or allow all countries to introduce hepatitis B and *Haemophilus influenzae* type b vaccine. Based on data from countries' FSPs, the overall funding gap in 2005-2010 will be US\$ 4.26 per infant per year. The largest gaps are found in Africa, where shortfalls for attaining programme objectives exceed US\$ 5.0 per infant per year (Figure 5). The size of the gaps reflects the different capacities of and opportunities available to countries to mobilise the resources necessary for their programmes in the short and medium term.

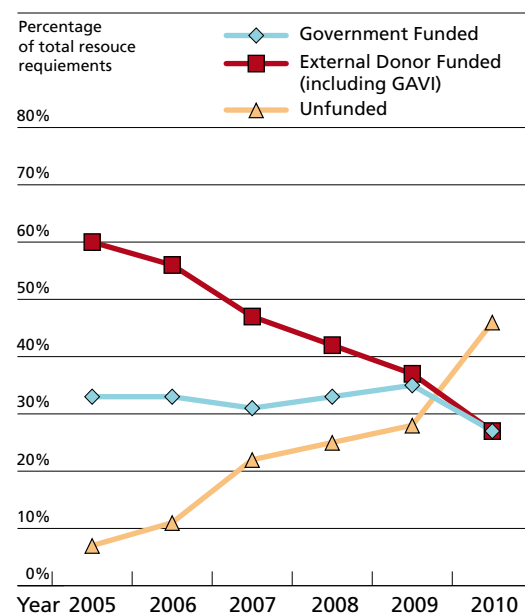
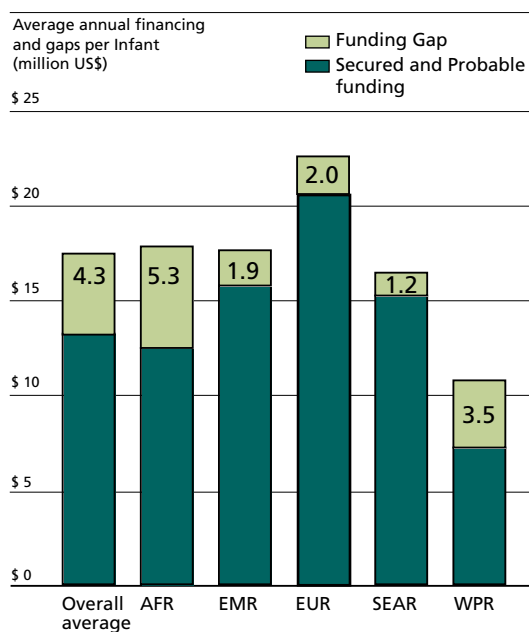
Despite the favourable context of immunisation financing, the GAVI Phase 1 model, with the funds it provided, did not succeed in fully catalysing the support necessary to ensure financial sustainability within five years. Most of the funding gaps were for new vaccines, highlighting the challenge of future co-financing with countries.



Countries with larger amounts of financing from external donors experience more volatile financing for their programmes. Consequently, the funding gaps are larger, and financial transition to other sources of funding after the GAVI commitment ends is uncertain. Instruments must therefore be in place to enable development partners to make multi-year funding commitments, thereby increasing predictability of funds.

FIGURE 5

Trends in sources of financing for routine immunisation 2005-2010¹²



¹² AFR – African Region;
EMR – Eastern Mediterranean Region;
EUR – European Region; SEAR – South-East Asian Region;
WPR – Western Pacific Region

Financial sustainability is still not assured

FSPs during the first phase of GAVI were based on optimistic assumptions that vaccine prices would drop and become more affordable within the first five years of GAVI's existence. However, with the exception of monovalent hepatitis B vaccine, the prices of GAVI-supported products either stagnated or rose in the first years of GAVI's existence. Only after Phase I did more competitors enter the market, and the prices are now coming down.

Moving from GAVI support for new vaccines towards financial sustainability depends on the ability of countries to support the financial burden of new vaccines and related costs. The general trends in government financing presented above are mirrored by government financing for vaccines and injection supplies. Yet, of the 50 countries, only 31 were financing all or part of their needs for vaccines, injection supplies or both. Future trends are a concern, as only 14 countries are projecting government financing for vaccines in their FSPs.

In the context of overall health financing, immunisation represented an

average of 2.4% of government health expenditure in the baseline year. Between 2005 and 2010, immunisation is expected to account for 3.7% of that expenditure. When campaigns and shared health system expenditures are included, total immunisation expenditure will represent more than 5% of all government health expenditure.

Stratifying the analysis by vaccine introduced gives a sense of the relative affordability of different vaccination schedules. During 2005-2010, when full introduction of GAVI Phase 1-supported new vaccines is expected, the data suggest that, in countries that opted for monovalent hepatitis B vaccine, a 1.1% allocation of the government health budget will be sufficient to cover all future needs for scaling up immunisation. The corresponding figures for the countries that introduced DTP-hepatitis B or pentavalent vaccines are 6.0% and 9.2%. If the benchmark figure is considered to be 3.7% of estimated health budgets, the data suggest that the pressure on health budgets will be significant in countries that choose to introduce combination vaccines with *Haemophilus influenzae* type b. This raises concern about the affordability of these vaccines in the medium term at current prices.

BOX 8

Immunisation financing analyses – Lessons Learnt

The analyses provided new insight into donor and government financing patterns for immunisation and strategies for long-term financial sustainability.

The data on immunisation expenditure and financial flows helped people understand the influence of the GAVI Fund on financial sustainability for immunisation at national, regional, and global levels.

- Although the data indicate that GAVI funds did not displace existing resources for immunisation, the model did not succeed in fully catalysing additional support from development partners. The cost implications of introducing hepatitis B and *Haemophilus influenzae* type b vaccine were higher than expected.

- The analyses were a useful source of strategic information to guide GAVI policies for immunisation financing, particularly at the end of Phase 1 and for shaping Phase 2.
- The analyses resulted in changes in national funding patterns, and some countries that used FSPs to leverage funds have been successful: government allocation increased in most of these countries, and, in some cases, more donors were recruited to fund various aspects of the national immunisation programme.

Assumptions have been challenged

The analysis of data from 50 countries made it possible to test some of GAVI's original assumptions about immunisation financing against reality in a variety of countries. The assumptions were:

- that the prices of new and underused vaccines would decline during the period of the initial GAVI grant, so that the recurrent cost would be relatively modest;
- that 2.5 years would be sufficient for governments and partners to mobilise new resources and thus permit phase-out of GAVI resources while adequately covering programme costs, regardless of the starting point or macroeconomic conditions.

The analysis allowed the GAVI Board to assess the extent to which these initial assumptions had been borne out and to highlight the main issues and implications for future immunisation programmes. Several factors that were not anticipated in the GAVI model hindered the ability of countries to achieve financial sustainability. The most important was the optimistic assumption about decline in vaccine prices. The second was the realisation that, beyond GAVI, the framework for multi-year

commitments from the usual immunisation donors is inadequate. Third, 2.5 years was not long enough to plan a transition. Thus, widening funding gaps are expected in the future, mainly for new vaccines.

Closing the funding gaps for immunisation and ensuring financial sustainability will require several conditions that favour greater funding for immunisation at the country level: a larger public-sector budget resulting from economic growth; greater government commitment to immunisation and greater donor multi-year commitments; a reduction in vaccine prices; and, in any scenario, major sustained support by the Alliance in Phase 2.

The lessons learnt from the analyses are summarised in Box 8.

Success stories

While many factors prevented countries from assuming the cost of vaccines at the end of GAVI's support, some countries began to assume government financing of vaccines that were previously financed by GAVI: these were Cambodia, Ghana, Guyana, Malawi, Rwanda, the United Republic of Tanzania, and Zambia. Three sources of information were used to explore the factors that might have contributed to these successes: an analysis of the strategies outlined in their FSPs;¹³ an analysis of best practises in preparing the plans, provided by the IRC;¹⁴ and anecdotal information from a variety of sources.¹⁵

The situations in the countries that achieved success are summarised at: http://www.who.int/immunization_financing/countries/en/ (accessed 7 October 2007) and in Box 9.

BOX 9

Country FSP success stories – Lessons learnt

In general, countries with stronger plans tended to move towards financial sustainability. In the "successful" countries, financial sustainability planning appeared to play a key role in successful implementation.

- A key factor appears to be the involvement of high-level staff in the ministries of finance and health.
- Despite huge and widening funding gaps for new vaccines in some countries, successful countries were able to mobilise increased resources for immunisation.
- Countries that are not among the "successes" lacked "evidence-based" decisions.

¹³ Kamara L, Milstein JB, Patyna M, Lydon P, Levin A, Brenzel L. Strategies for financial sustainability of immunization programs – a review of the strategies from 50 national immunization program financial sustainability plans. *Vaccine* 26 (2008) 6717-6726

¹⁴ Ganhita R, Makinen M. *Best practices in financial sustainability plans for immunization programs*. 2005 (unpublished).

¹⁵ Centre for Health and Social Development (HeSo, Norway). *Financial sustainability planning process evaluation. Volume II: Evaluation tools and country reports, analysis for GAVI*, 28 February 2003; *A synthesis of the FS implementation process in East and Southern Africa*, anonymous and undated document; *Support to immunisation financial sustainability implementation*, anonymous document, March 2005; Ahun M. personal communication, 2007; Kamara L. personal communication, 2007.

Cambodia

In its first year of GAVI support in 2001, Cambodia spent about US\$ 2.8 million on routine immunisation. In 2002, with additional GAVI support, that amount increased to US\$ 3.2 million, representing 42% government financing. In 2005 and 2006, the government allocated an additional US\$ 800 000 for basic immunisation. Cambodia designed a fact sheet to communicate key information on financial sustainability to decision-makers and donor agencies. Although the projected requirement during and beyond the GAVI funding period rose to US\$ 6.5 million per year, a funding gap of about US\$ 1 million was projected during the period of GAVI funding, and no gap was projected after GAVI funding.

Ghana

In 2000, before GAVI support, Ghana spent about US\$ 2.1 million on routine immunisation and an additional US\$ 3.2 million on supplementary immunisation services. The government contributed 23% in 2001. In the first year of GAVI support, in 2002, spending on immunisation increased to US\$ 20.1 million, with introduction of the pentavalent vaccine. Ghana employs the sector-wide approach for health. In 2004, the government contributed 25% of the new vaccine requirement. The trends in vaccine wastage have been favourable. It is projected that total annual immunisation expenditure will be about US\$ 17 million, with a small funding gap before GAVI support ends, when the gap is projected to increase to about US\$ 6 million. Nevertheless, there will be a large increase in domestic fund mobilisation. Two factors in the success of Ghana are the timing of financial sustainability planning, which coincided with the National Health Strategic Plan, and the fact that the planning brought together representatives of the Ministry of Health and the Ministry of Finance at a level high

enough to take decisions on the benefits of financing immunisation services. A further factor was that the country, with some technical assistance, was able to prepare the FSP itself, thus ensuring national ownership.

Guyana

In 2000, Guyana spent about US\$ 1 million per year on immunisation. With the introduction of the pentavalent vaccine, spending rose to about US\$ 2 million per year with GAVI support. Guyana is a heavily-indebted-poor-country (HIPC). Although it made no contribution in 2003, by 2004 the government allocated funds to cover 20% of total vaccine costs, and it covered 65% of these costs in 2005. By increasing the allocations from the government budget by 1.5% per year, Guyana was the first country to become independent of support after GAVI Phase 1 by fully taking on the cost of pentavalent vaccine.

Malawi

Malawi is a country that employs both the sector-wide approach and has qualified for funding for heavily-indebted-poor-countries under the World Bank HIPC initiative. In 2000, before GAVI support, Malawi spent about US\$ 1.5 million on immunisation. This amount increased by 82% in 2002, with 30% government financing. During the first year of GAVI support, total expenditure rose to US\$ 8 million per year, with a gap of less than US\$ 1.5 million. This gap is projected to increase once GAVI support ends, but secured funding has also increased.

Rwanda

Rwanda spent about US\$ 1.2 million for routine immunisation in 2000, and the government contribution in 2001 was 58%. In 2002, total immunisation financing increased to US\$ 2 million. For the remainder of the GAVI support period, the total annual immunisation expenditure was projected to increase to US\$ 7 million, with 98% of the required resources secured. The gap is projected to increase to US\$ 2-3 million per year once GAVI support ends.

United Republic of Tanzania

This country, which employs a sector-wide approach to health, spent US\$ 1.6 million on routine immunisation and US\$ 3.3 million on supplementary immunisation in 2001, before GAVI support. In 2002, the amount spent on routine immunisation increased to US\$ 13.6 million, 44% of which was provided by the government. During the GAVI support period, immunisation expenditure was projected to be US\$ 15 million per year with a gap of US\$ 5 million. It is anticipated that in GAVI Phase 2, expenditure will increase to US\$ 32 million, with introduction of another new vaccine; the gap is projected to be US\$ 7 million annually. The resources required are thus about five times those spent in 2001.

Zambia

Zambia, also a country employing the sector-wide approach, spent US\$ 1.7 million on routine immunisation and US\$ 1.3 million on supplementary immunisation in 2000, before GAVI support. In 2002, the amount for routine immunisation increased to US\$ 2.4 million, with 14% government financing. On the basis of arguments for efficiency, the government increased its funding to 25%, and immunisation funding was included in the current medium-term expenditure framework, increasing the likelihood of reliable financing. It is projected that through 2012, during which time Zambia will still be receiving GAVI funds, expenditure on

routine immunisation will be US\$ 9.5 million per year, with an annual funding gap of US\$ 1.2 million, indicating a large increase in mobilised funding.

Common strategies

Of the seven countries considered here, six were included in an analysis of financing strategies that covered 22 countries.¹⁶ Possible strategies were classified as those that had been successful for mobilising additional resources, those that increased the reliability of funding, and those that improved the efficiency of service delivery.

With regard to resource mobilisation, four of the six 'successful' countries chose to increase the allocation from their ministry of finance, four proposed increasing funding through mechanisms for sector-wide approaches or heavily indebted poor countries, four planned to increase funding from current donors, five planned to increase funding from new donors, and four decided to use advocacy to increase funding. These strategies were proposed for use in all 22 countries, but 12 chose to depend on increasing allocations from their ministry of health. This approach was selected by three of the six 'successful' countries.

For increasing the reliability of funding, 11 of the 22 countries chose to strengthen budgeting as the main strategy, and this approach was selected by three of the six 'successful' countries. For improving the efficiency of service delivery, all six countries proposed to reduce vaccine wastage and five to improve service delivery. In the group of 22 countries, 17 and 13 chose these options, respectively.

Thus, the types of strategies proposed in the FSPs were similar among the 'successful' countries and the group of 22 countries, except in decisions to approach the ministry of finance rather than the ministry of health for increased allocations, and increased attention to programme efficiency.

FSP consultant and participants from the Islamic Republic of Pakistan at the financial sustainability plan training workshop, Kampala, Uganda, May 2003



¹⁶ http://www.gavialliance.org/resources/14brd_abuja_fsp_analysis.pdf

Best practices in financial sustainability planning

The IRC evaluated FSPs in nine areas: involvement of the ICC, plans for advocacy, planning ahead, scenarios, gap analysis, overall quality, response to recommendations of the IRC, strategic plans and costing of strategies. The IRC employed criteria to assess whether the FSPs represented “best practices” for each of the assessment categories. They



were classified by whether they had used an established practice, a better practice, or a best practice. None of the FSPs were classified as best practice, and none fell into the last two categories. Table 2 shows, however, that Guyana was nominated in three categories, the United Republic of Tanzania in one and Zambia in one. Thus, three of the seven countries nominated for best practices in FSPs were among the six ‘successful’ countries listed in the previous section, suggesting that one factor in attaining financial sustainability is the strength and output of the plan.

Another factor appeared to be the involvement of both ministries of finance and ministries of health at high levels. Despite huge and widening funding gaps for new vaccines in some countries, progress was made in mobilising resources for immunisation when high-level representatives from ministries of health and finance were involved.

A key gap was a lack of ‘evidence-based’ decisions in countries that were not among those that were successful.

TABLE 2

FSPs nominated as ‘best practice’

<i>Criterion</i>	<i>Country nominated</i>	<i>“Successful” countries</i>	<i>Type of best practice</i>
Involvement of Inter-agency Coordinating Committee	Burkina Faso, Guyana, Pakistan	Guyana	Established
Plans for advocacy	United Republic of Tanzania and Zanzibar	United Republic of Tanzania	Established
Planning ahead	Gambia		
Scenarios	Zambia	Zambia	Better
Gap analysis	Guyana	Guyana	Better
Overall quality	Uganda		
Response to recommendations of the Independent Review Committee	Guyana	Guyana	Better
Strategic plans	None		
Costing of strategies	None		

Influence in Phase 2

Feedback from the FSP and various consultations led to a consensus that, while GAVI Phase 1 was largely successful in accelerating the introduction of new vaccines, many improvements could be made in vaccine financing.

Lessons learnt included the following:

- Countries should employ evidence-based decision making to understand the costs and financing implications of introducing new vaccines. Support should be provided in such a way as to enable a gradual transition of financial responsibility from GAVI to national governments and their partners. Experience of GAVI's Phase 1 demonstrates that the original assumption that five years would be sufficient time to ensure financial sustainability was too optimistic. This is because (i) even if a given vaccine is not a national priority, an offer of free vaccine for five years is difficult to refuse; thus, initial country uptake does not necessarily prove long-term commitment or ownership. Some countries adopted new vaccines without due consideration of the long-term costs and the priorities of their broader health programmes; (ii) much more government and donor financing will be needed to fill the financing gap, especially as vaccine prices have declined at a slower rate than originally predicted;¹⁷ and (iii) the mechanics of the offer should encourage a gradual transfer of financial responsibility from GAVI to the government and its partners.
- Predictability of vaccine expenditure is important for planning and budgeting, both to countries and to the GAVI Alliance.
- Analyses of costs and financing should include both costs and benefits of immunisation, as the cost and long-term financing implications of adding a new vaccine may seem high when seen in isolation. The focus has been almost exclusively on estimating current and future costs and financing, whereas countries need means to estimate the economic benefits.

- Countries should consider costing and immunisation financing within a country's cMYP, which in turn should be included as one element of a national health sector plan and not as a separate exercise for GAVI. The development and implementation of financial sustainability planning had many strengths, but the required integration of GAVI documents into national planning and budgeting was difficult and rarely successful.
- Financial sustainability expectations should be linked to a clear vaccine supply strategy and a healthy vaccine market.

Following are three major policy changes adopted by GAVI in Phase 2 to address some of the lessons learnt in Phase 1.

Comprehensive multi-year plans

One limitation of FSPs was that they were often detached from national multi-year plans for immunisation, and the two processes were rarely synchronised with broader strategic planning and budgeting in the health sector, even though it was a key assumption during GAVI Phase 1 that this would occur. As a consequence, sustainable vaccine financing was often not integrated into national plans and budgets. In many countries, immunisation planning activities proliferated at the national level, leading to duplication of effort, high transaction costs and lack of alignment with national systems. By the end of 2005, there was no evidence that any of the 55 FSPs had been integrated into multi-year plans.



¹⁷ GAVI dynamics are creating an environment in which the prices of new vaccines will decline more rapidly than has been the case to date.

Recognising this weakness, WHO and UNICEF, with GAVI Alliance partners, published guidelines for preparing a comprehensive multi-year plan (cMYP) for immunisation in late 2005. These guidelines now include the costing and financing elements of FSPs and programme planning in one strategic plan for immunisation. cMYPs have been recommended for all 193 WHO Member States and were not designed as a GAVI requirement.

In 2005, the GAVI Board agreed that countries would prepare and submit fully costed multi-year plans as part of their applications for GAVI Phase 2 and that the plans should be part of national health sector plans. In December 2006, the GAVI Board endorsed the principle that future applications for GAVI support would be assessed as part of cMYPs for immunisation and, where appropriate, broader health sector planning.

Bridge financing

In setting up the GAVI Alliance, the founders assumed that the funds provided would stimulate investments by manufacturers, which would allow economies of scale in vaccine production, accelerate competition, and drive prices downward to levels that would facilitate full transfer from GAVI support to national governments and partners. However, vaccine prices declined more slowly than expected, and the initially-planned five years of support were therefore insufficient for countries and partners to meet the increased costs. It was also too short to allow the vaccine industry to react to the increased demand.

As a result, the FTF developed the bridge financing concept in 2005 to address the financing challenges faced by the 26 countries that had introduced the higher-priced combination vaccine products under GAVI Phase 1. Bridge financing was meant

to give early-adopter countries more time to allow vaccine prices to decline and to allow countries to identify necessary financing. The three main principles of bridge financing for the 26 eligible countries were:

- “flat line support”, in which 100% support was given through 2007, affecting 11 countries;
- a “working” price, which was the possible future market price of a vaccine as a basis for calculating levels of co-financing; and
- “co-financing”, to allow countries to make a commitment to increase non-GAVI contributions gradually to finance the vaccine(s) in question through 2015.

Co-financing vaccines

Bridge financing was the first step in defining a new GAVI policy of co-financing new vaccines, which was introduced under Phase 2 after endorsement by the GAVI Board in July 2006. The objective of co-financing is to enhance evidence-based decision making and help countries achieve eventual financial sustainability for their immunisation programmes. With co-financing, countries and their partners are expected to make greater investments in immunisation, putting countries on a path to financial sustainability. In requiring countries to co-finance, GAVI is unique among international development partners. The co-financing policy was developed with input from the GAVI Immunisation and Financial Sustainability Task Team, which supports country implementation of this policy.

Under the co-financing policy, countries have been divided into four groups, according to their expected ability to pay: poorest, intermediate, least poor, and fragile. Countries are required to contribute a set sum, according to the country group, for the first vaccine. For each additional vaccine awarded, the co-financing amount will increase by US\$ 0.15 per dose.

In 2010, GAVI plans to evaluate the structure and operation of the co-financing policy and, based on the results of the evaluation, may revise the co-financing levels.

Conclusion

GAVI has played a pioneering role in making financial sustainability a centerpiece of its work of introducing new vaccines and supporting countries' health systems. To date, GAVI remains the only global partnership to have tackled and made financial sustainability at the country level a priority.

Through its collaborative structure, the FTF was able to leverage organisational change in participating organisations, in the countries supported by the GAVI Alliance, and in the policies of GAVI itself. These achievements, along with areas where the desired outcome was not achieved, are summarised with lessons that may be useful to other multi-partner health alliances. Although there were flaws in the financial sustainability process, particularly regarding implementation and monitoring at country level, the results have shown that the impact of the FTF as a collaboration in the area of financial sustainability has been significant. The FTF was a vibrant, dynamic, innovative, and productive structure in its assigned role, which was to assess the immunisation financing situation, identify issues, and devise ways to address them. There will continue to be areas in health financing that will need this kind of approach, and the FTF provides an excellent reference model.

By 2006, more than 50 of the world's poorest countries receiving support from GAVI had developed FSPs. Despite some country successes and the magnitude of planned financial sustainability strategies, huge funding gaps remain for these countries due to the initial underlying assumptions of the GAVI and FSP model. In progressing towards the Global Immunisation Vision and Strategy (GIVS) and the 2015 Millennium Development Goals (MDGs), countries will not only need to sustain the vaccines introduced with support from phase 1 of the GAVI Alliance, but also accelerate the introduction of newer life saving vaccines such as those against rotavirus and pneumococcal diseases. New vaccines will increase program costs for countries in the medium to long term. Budgetary and fiscal space constraints for absorbing these increasing costs and changing health priorities will lead to increasing competition for health resources.

In Phase 2, countries receiving GAVI funding have begun co-financing new vaccines and the GAVI Alliance continues to support the integration of financial sustainability efforts into broader strategic planning processes of the health sector. Also, at this point in the GAVI life cycle, large amounts of funding for vaccine purchase are assured. Vaccines for the developing market are proliferating, manufacturers increasingly have individually agreed to mechanisms that can assure accessible prices to countries under conditions where the market has been quantified, sufficient production capacity has been installed from the outset, and competition from emerging suppliers is a foreseen eventuality. Leveraging GAVI's significant resources of US\$ 1.2 billion on the vaccine market was a critical step in making vaccines more affordable to the poorest countries.

Now that GAVI has leveraged substantially more resources for its second wave of (around US\$ 4.0 billion), GAVI will need to continue capitalising on its unique ability to engage in long-term planning to mitigate the demand risks for new vaccines through improved forecasting and ensure it can obtain the best possible prices for new vaccines. In the meantime, infants in the poorest countries are being vaccinated and protected by life saving vaccines.

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- Annexes**

Annex 1

Key activities of the Financing Task Force

	<i>Event</i>	<i>Participation</i>
2001		
June 2001	Definition of financial sustainability and preparation of guidelines, Geneva, Switzerland	Bangladesh, Benin, Ukraine, Zimbabwe, Financing Task Force, others
2002		
March 2002	Financing Task Force lessons learnt and revision of financial sustainability plan guidelines, London, England	Financing Task Force member, consultants
July 2002	Financial sustainability plan orientation workshop, Nairobi, Kenya	Eastern and southern African countries
July 2002	Financial sustainability plan orientation workshop, Dakar, Senegal	West and Central African countries
2003		
April 2003	Inter-regional consultants training workshop on financial sustainability plans, Geneva, Switzerland	11 financial sustainability plan consultants from WHO regions
May 2003	Financial sustainability plan orientation workshop, Douala, Cameroon	Francophone countries in West and Central Africa
May 2003	Financial sustainability plan evaluation meeting, London, England	Consultants, countries, Financing Task Force
May 2003	Financial sustainability plan training workshop, Kampala, Uganda	East and southern African countries
June 2003	Financial sustainability plan orientation workshop, Moscow, Russian Federation	Countries of Europe and Central Asia
2004		
March 2004	Inter-country financial sustainability implementation consultation, Gaborone, Botswana	East and southern African countries
March 2004	Inter-country financial sustainability implementation consultation, Nairobi, Kenya	East and southern African countries
May 2004	Two financial sustainability plan orientation workshops, Bangkok, Thailand, and Kathmandu, Nepal	Countries of the South-East Asian Region
May 2004	Financial sustainability plan orientation workshop, Pretoria, South Africa	East and southern African countries
June 2004	Financial sustainability plan orientation workshop, Cairo, Egypt	Countries of the Eastern Mediterranean Region
July 2004	Two financial sustainability plan orientation workshops, Cotonou, Benin	Francophone countries in West and Central Africa
August 2004	World Bank and WHO workshop on health sector reform and sustainability, Budapest, Hungary	Countries of Europe and Central Asia
2005		
April 2005	Financial sustainability implementation meeting, Geneva, Switzerland	Regions, partners and financial sustainability plan consultants
2006		
November 2006	World Bank and WHO workshop on health sector reform and sustainability, Istanbul, Turkey	Countries of Europe and Central Asia

Annex 2

Financing Task Force guidelines and documents

Tools and guidelines

The GAVI FTF prepared tools and guidelines to support countries in achieving financial sustainability. These were updated on the basis of country experience, have been widely disseminated, and have been used by regions and countries in preparing and implementing FSPs...

They include:

Guidelines for preparing a financial sustainability plan for a national immunisation programme (GAVI, 2004)

These guidelines are intended to assist countries in preparing a financial sustainability plan for their national immunisation programme. They provide detailed information about the elements required. They are available in English, French, Portuguese, and Russian.

AIM e-learning (Children's Vaccine Program at PATH, 2004)

PATH (USA) and Stanford University Medical Media and Information Technologies prepared the AIM e-learning tool, which provides interactive, self-guided training on immunisation financing, available on the Internet or CD-ROM.

Making a comprehensive multi-year plan for immunisation WHO-UNICEF comprehensive multi-year plan guidelines and tools (2005)

These guidelines are intended to assist country programme managers in preparing cMYPs for their national immunisation programmes according to the new immunisation planning approach of WHO and UNICEF, in the context of the Global Immunisation Vision and Strategy (GIVS). They provide detailed information about the elements required for strategic planning for immunisation at country level and are designed to fit into health sector planning and budgeting, including costing and financing. They are supplemented by a costing and financing tool and a user guide.

Immunisation costing and financing: a tool and user guide for comprehensive multi-year planning (cMYP) (WHO, 2006)

Estimating the costs and financing of immunisation programmes is a key step in preparing a cMYP. This tool and user's guide gives an overview of immunisation costing and financing concepts, methods and definitions, and step-by-step instructions on using the tool, including the analysis of data and findings.

Immunisation essentials: a practical field guide (USAID, 2004)

This guide was prepared to help public health personnel in developing countries achieve and sustain immunisation objectives and targets. It provides technical and operational information on vaccines and vaccine-preventable diseases, including: immunisation programme management; service

delivery; monitoring, evaluation and information management; vaccine supply and quality; the cold chain and logistics; injection safety; disease surveillance; behaviour change; costs and financing; and new vaccines and technologies.

All these tools are available at: http://www.who.int/immunization_financing/tools/en/.

Publications on the economics of immunisation

WHO Bulletin

Responding to the FTF's request for wider dissemination of information on the economics of immunisation, 30 experts from 20 organisations took part in a technical workshop on the economics of vaccination in low- and middle-income countries, hosted by the London School of Hygiene and Tropical Medicine, England. The aim of the workshop was to bring together technical experts working independently on the economics of vaccination to screen and review papers for a special issue of The WHO Bulletin on the economics of immunisation. The special issue was published in September 2004 and included papers on:

- cost effectiveness of vaccines and immunisation programmes;
- issues of equity in immunisation programmes;
- issues of demand in immunisation programmes; and
- financing of immunisation programmes.

A copy of the special issue of the bulletin can be downloaded from: <http://www.who.int/bulletin/volumes/82/9/en/index.html>.

Immunisation Financing Options

These are short briefing sheets that outline options for financing national immunisation services. Principally intended for policy-makers in ministries of health, finance and planning, the briefing sheets provide up-to-date knowledge on the advantages and drawbacks of available financing options. They were published by the FTF in English, French and Russian, and can be downloaded from: http://www.who.int/immunization_financing/options/en/.

Economics of immunization: a guide to the literature and other resources (WHO 2004)

This annotated, 87-page document provides background information on immunisation financing, summarises 87 key articles, lists 345 relevant documents and gives a directory of contacts and websites. Costing, cost-benefit analyses, financing, policy issues, tools, and other related topics are covered. It is available at: http://whqlibdoc.who.int/hq/2004/WHO_V&B_04.02.pdf.

Annex 3
Dakar Declaration



In November 2002, at the GAVI Partners meeting in Dakar, Senegal, representatives of Ministries of Health and Finance from the governments of 13 countries signed the Dakar Declaration

Annex 4

Partner strengths and contributions

World Health Organization

- technical expertise in immunisation
- epidemiological expertise, including analysis of disease burden
- analysis of immunisation costing and financing
- expertise in development and health systems financing
- high-level access to ministries of health
- global network of regional and country offices

UNICEF

- technical expertise in immunisation
- expertise in global supply of vaccines and injection equipment
- high-level access to national political and civil society leaders
- capacity for child rights-based global advocacy
- global network of regional and country offices

World Bank

- access to ministries of health on policies for resource allocation and priority setting
- cross-sectional dialogue on policy with ministries of health, finance and planning
- support for analyses of costing, cost-effectiveness, fiscal impact, impact on equity and performance
- widespread capacity-building and training in client countries with development partners (e.g., the Global Development Learning Network and the World Bank Institute)

Bill & Melinda Gates Foundation

- transformation-directed funding support

Children's Vaccine Program at PATH (USA)

- expertise in country-level technical support
- development of innovative advocacy and training tools
- global capacity for online training

Organisations providing bilateral support

- support to programmes in selected countries
- in-house technical and financing expertise for immunisation
- links to a wide range of government agencies, including finance and planning ministries, specifically for poverty reduction strategies
- support for improving public expenditure management systems
- contributions to health sector programmes and approaches

GAVI Financing Task Force

- global coordination and supervision of financial sustainability and related initiatives
- technical expertise in immunisation financing and vaccine markets

GAVI Alliance secretariat

- development of overall country support modalities
- high-level advocacy with national leaders
- funding for achievement of financial sustainability
- review and endorsement of financial sustainability plans

Annex 5

Immunisation Financing Website News

About this website

The immunisation financing website is intended to be an online resource on immunisation financing and contains various sections related to immunisation financing analyses; country profiles; databases; indicators; tools; options and resources.

Featured Updates

Over the course of 2008, major developments have been made to the WHO Immunisation Financing Website. These updates are now live in January 2009. www.who.int/immunization_financing

The major features highlighted in this newsletter are the new:

- cMYP Financing Database
- cMYP Country Pages
- Immunisation Financing Indicators
- Immunisation Planning Indicators
- Analyses and Publications
- Website Statistics

Note that other updates have been made that are not featured in the newsletter.

Acknowledgements

The immunisation financing site is being developed by the Immunisation, Vaccines and Biological department (IVB) at WHO with financial support from the GAVI Alliance.



cMYP Financing Database

(Go to the cMYP database)

Since 2006 a number of countries have developed national strategic plans for immunisation in line with the GIVS. These cMYPs include elements of costing and financing which were extracted into a database.

The immunisation financing database is populated with country level data generated through the costing and financing sections of national multi-year plans for immunisation (cMYP). Currently there are 51 countries represented in the database.

<http://extranet.who.int/ifdb>

Note that this database is currently password protected for non-WHO users who can request access and password by emailing to: immunizationfinancing@who.int (subject: Request for ifdb password)

Searching the database

To search the database you first need to click on the "Reports" tab. From the tab the data from the immunisation financing database can be retrieved using 2 search type of reports: financing by source and expenditure by type.

- Financing by source reports provides users with the option to generate a table by country or region of the financing sources (in rows) over time (in columns)
- Expenditure by type reports provides users with the option to generate a table by country or region of the expenditure categories (in rows) over time (in columns)

Other databases

Data on immunisation financing can be retrieved through 2 other databases:

- **The FSP immunisation financing database**

Populated with country level data generated through the GAVI Financial Sustainability Planning process

[Go to database](#)

- **The JRF immunisation financing indicators database**

Populated with country level data generated through the WHO-UNICEF joint annual monitoring system

[Go to database](#)

The screenshot displays the 'cMYP Immunization Financing Database' interface. At the top, there is a navigation bar with 'Home', 'Reports', 'Upload data', 'Users', and 'Reference data'. Below this is the 'Reports parameters' section. It includes a 'Select report' dropdown menu with options 'Financing by source' and 'Expenditures by type'. The 'Report by' dropdown is set to 'Country'. A list of countries is shown, including Myanmar, Armenia, Azerbaijan, Bangladesh, Benin, and Bhutan. The 'From' and 'To' date fields are set to 2008 and 2010, respectively. The 'Display report' button is visible at the bottom right of the form.

cMYP Country Pages

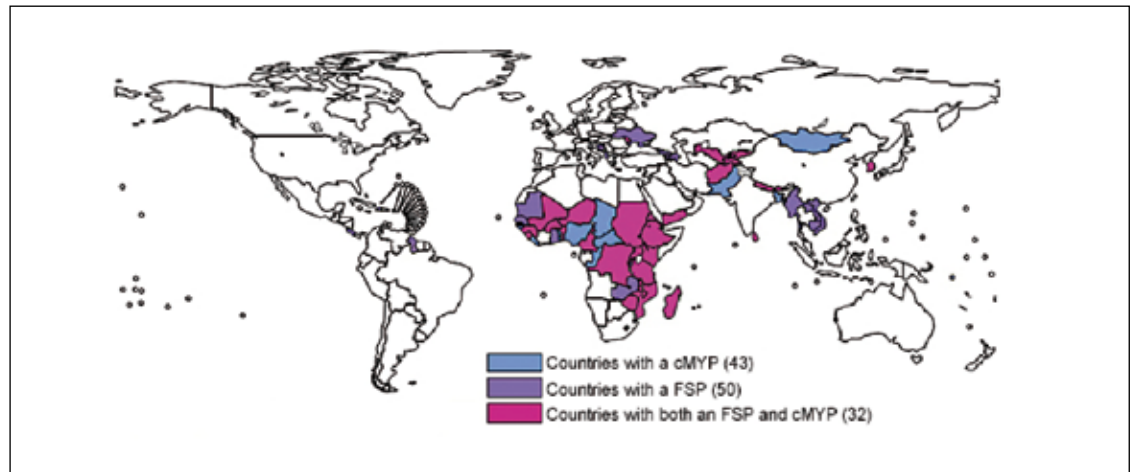
(Go to the country pages)

Since 2006 a number of countries have developed national strategic plans for immunisation in line with the GIVS. These cMYPs were developed according to the WHO-UNICEF guidelines *(available on www.who.int/immunization_financing/tools/cmyp)*

The cMYP country pages on the immunisation financing website summarise the key information, data and indicators provided in available national multi-year plans for immunisation. These individual country pages offer the possibility to download the

original cMYP and the costing tool. Currently there are over 40 cMYP countries pages.

To view the country pages, use the search and filtering options available on the page. Make sure to select to document type to cMYP. Every country page presents key indicators and statistics, a summary of the objectives that the country has established in its multi-year plan for immunisation, financing profile and composition of the funding gaps pie charts.



Immunisation Financing and Planning Indicators

(Go to the country pages)

A new section of the immunisation financing website has been created specifically on indicators. Immunization financing and planning indicators are available from 3 separate sources of information.

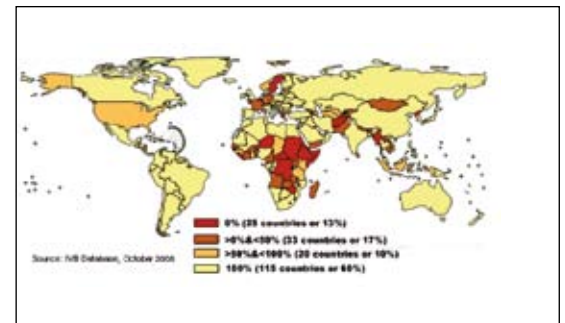
A first series of indicators are available from the WHO-UNICEF annual monitoring system for all member states. Since 1998, the WHO and UNICEF Joint Reporting Form (JRF) mechanism has been collecting data on immunisation planning financing indicators as part of a set of immunisation indicators designed to measure system performance and trends in WHO Member States.

The full set of 6 immunisation financing indicators available through the JRF mechanism are the following :

- Is there a line item in the national budget for the purchase of vaccines used in routine immunisation? (Yes-No)
- Is there a line item in the national budget for the purchase of injection supplies (such as syringes, needles and safety boxes) used in routine immunisation? (Yes-No)
- What amount of government funds were spent on vaccines used in routine immunisation? (US\$ or Local Currency)
- What percentage of all spending on vaccines was financed using government funds? (%)
- What amount of government funds were spent on routine immunisation? (US\$ or Local Currency)
- What percentage of all spending on routine immunisation was financed using government funds? (%)

The screenshot shows the WHO Immunisation Financing website interface. It features a navigation menu on the left with options like 'Home', 'About WHO', 'Features', 'Health Equity', 'Publications', 'Data and Statistics', 'Indicators', 'Partners', 'Collaborators', 'News', 'Contact', and 'Disclaimer'. The main content area is titled 'Indicators' and lists several indicators with their descriptions and data availability. A table below the text lists the indicators and their corresponding data sources.

Indicators	JRF data	sJRF data
Existence of a line item in the national budget for the purchase of vaccines used in routine immunisation (Y/N)	Downloadable	Downloadable
Amount of government funds spent on vaccines used in routine immunisation (US\$ or local currency)	Downloadable	Downloadable
Percentage of all spending on vaccines financed using government funds (%)	Downloadable	Downloadable
Amount of government funds spent on routine immunisation (US\$ or local currency)	Downloadable	Downloadable
Percentage of all spending on routine immunisation financed using government funds (%)	Downloadable	Downloadable



View analysis of JRF immunisation financing indicators
www.who.int/immunization_financing/analyses/jrf_analysis

The subset of the immunisation planning and management indicators available through the JRF mechanism are the following:

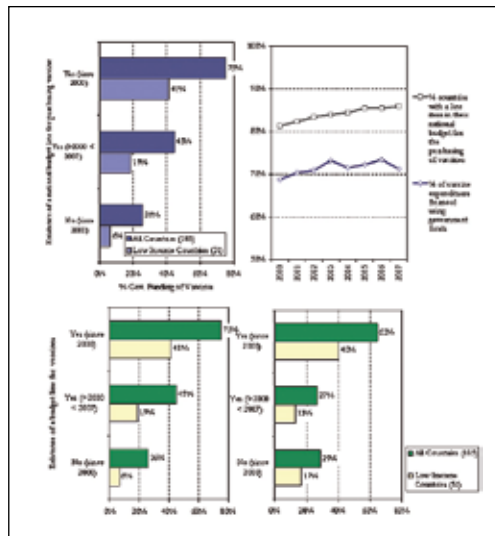
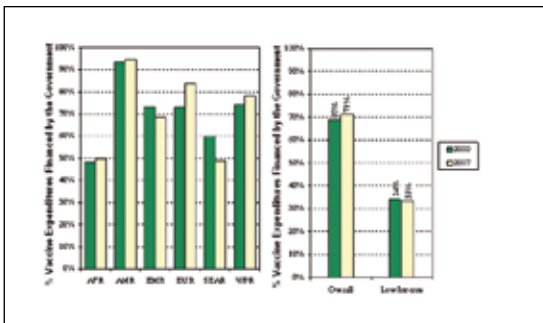
- Does the country have a multi-year plan (MYP) for immunisation? (Yes-No)
- What years does the MYP cover? (Years)
- Is MYP costing included? (Yes-No)
- Is the MYP for immunisation integrated into the broader health sector plan? (Yes-No)
- Was there an annual work plan for immunisation services? (Yes-No)
- If yes, was costing included (Yes-No)

View analysis of JRF immunisation planning indicators
http://www.who.int/immunization_financing/analyses/myip_indicators/

Consult the full JRF database

A second series of indicators are available from the both the FSP and cMYP immunisation financing database for a limited set of low and lower middle income countries. The following table summarises the key immunisation financing indicators available. Note that the indicators and data have been calculated in ways that improve cross-country comparisons.

View FSP and cMYP data analyses
 Consult the FSP or cMYP immunisation financing database



Contact

For more information please send an email to:
immunizationfinancing@who.int

Annex 6

Analyses on immunisation financing

PUBLISHED ARTICLES

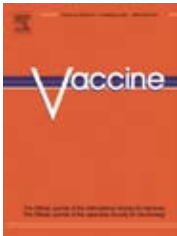


*Julie B Milstien, Lidija Kamara,
Patrick Lydon, Violaine Mitchell,
Steve Landry*

The GAVI Financing Task Force: One model of partner collaboration

This paper describes the innovations and outputs of the FTF, which worked in three areas: country support to sustainably finance vaccines and immunisation

programs in the context of introducing new vaccines; vaccine supply and demand issues as they impact vaccine choice, production costs and price/dose; innovative financing mechanisms for vaccines and immunisation programs through, for example, capital markets. This analysis particularly focuses on the FTF's work on financial sustainability.

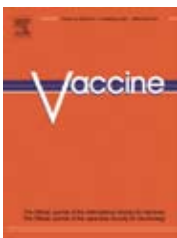


*Lidija Kamara, Julie Milstien,
Maria Patyna, Patrick Lydon,
Ann Levin, Logan Brenzel*

Strategies for Financial Sustainability of Immunization Programs – A Review of the Strategies from 50 National Immunisation Program Financial Sustainability Plans

Financial sustainability plans (FSPs) were developed by over 50 of the world's poorest countries receiving funding support from GAVI to introduce new and underused vaccines, injection safety and immunisation service support between

2000 and 2006. These plans were analysed with respect to the strategies selected to promote financial sustainability, allowing classification of FSP strategies in three areas: (1) mobilising additional resources, (2) increasing the reliability of resources, and (3) improving program efficiency. Despite some country successes and the magnitude of planned financial sustainability strategies, huge funding gaps remain for these countries due to the initial underlying assumptions of the GAVI and financial sustainability plan model.



*Patrick Lydon, Pa Lamin Beyai,
Irtaza Chaudhri, Niyazi Cakmak,
Alexis Satoulou, Laure Dumolard*

Government financing for health and specific national budget lines: The case of vaccines and immunisation

A long standing question related to immunisation financing and sustainability has been whether the existence of a specific line item for vaccines purchasing within the national health budget can contribute significantly to increasing

national government financing of vaccines and routine immunisations. Based on immunisation financing indicators from 185 countries collected through the joint WHO and UNICEF monitoring system, this paper attempts to answer this policy question. The study will present findings related to the status of countries that have such specific budget lines for purchasing vaccines and the levels of national budgetary allocation to the financing of vaccines and immunisations, particularly in low income countries.



*Patrick Lydon, Ruth Levine,
Marty Makinen, Logan Brenzel,
Violaine Mitchell, Julie Milstien,
Lidija Kamara, Steve Landry*

**Introducing New Vaccines
in the Poorest Countries – What did
we learn from the GAVI experience
with financial sustainability?**

This paper reviews the experience
of GAVI in introducing hepatitis B and
Haemophilus influenzae type b vaccines

in the poorest countries, and explores
how financing for immunisation has
changed since GAVI Fund resources were
made available during its first wave of
support between 2000 and 2006. The
analysis of FSPs in 50 countries allowed
for some of the original funding assump-
tions of the GAVI approach to be tested
against the realities in a wide set of
countries, and to highlight implications
for future immunisation efforts.



**WHO Bulletin:
Theme Issue on the Economics
of Immunisation**

In an effort to make information more
readily available on the economics
of immunisation a special theme issue of
the WHO Bulletin was developed in
coordination with the GAVI FTF. It is
intended to draw together the latest
research of several economists and other
technical experts working in this field
and across a range of academic and

policy settings. Initiated at the tech-
nical workshop on The Economics of
Vaccination in Low and Middle Income
Countries: 29th & 30th October 2003
at the London School of Hygiene and
Tropical Medicine (LSHTM), this special
issue of the WHO Bulletin reflects the
current state and main trends in research
and perspectives on the economics of
immunisation.

