AMC ADVANCE MARKET COMMITMENTS *for vaccines*

# ADVANCE MARKET COMMITMENT FOR PNEUMOCOCCAL VACCINES

## ANNUAL REPORT
## 12 JUNE 2009 – 31 MARCH 2010

*Prepared by the GAVI Alliance Secretariat*

The AMC Secretariat would like to thank the Governments of Italy, the United Kingdom, Canada, the Russian Federation, Norway and the Bill and Melinda Gates Foundation for their commitment to the pneumococcal AMC.

BILL & MELINDA GATES *foundation*

The AMC Secretariat would also like to thank the following GAVI Alliance partners for their dedication and contribution to the development and implementation of the pneumococcal AMC: UNICEF, WHO and the World Bank.

AMC ADVANCE MARKET COMMITMENTS for vaccines

## CONTENTS

## ABBREVIATIONS

| | |
|---|---|
| ADIP | Accelerated Development and Introduction Plan |
| AMC | Advance Market Commitment |
| AVI | Accelerated Vaccine Introduction |
| CGD | Center for Global Development |
| DFID | Department for International Development (United Kingdom) |
| EEG | Economic Expert Group |
| EMEA | European Medicines Agencies |
| EPI | Expanded Programme on Immunization |
| FDA | Food and Drug Administration (United States) |
| FOC | Firm Order Commitment |
| GAVI | GAVI Alliance |
| GNI | gross national income |
| GSK | GlaxoSmithKline |
| IAC | Independent Assessment Committee |
| IRC | Independent Review Committee |
| IWG | Implementation Working Group |
| M&E | monitoring and evaluation |
| MDG | Millennium Development Goal |
| NORAD | Norwegian Agency for Development Cooperation |
| OECD | Organisation for Economic Cooperation and Development |
| PATH | Program for Appropriate Technologies for Health |
| PCV | pneumococcal conjugate vaccine |
| PneumoADIP | Pneumococcal Vaccine Accelerated Development and Introduction Plan |
| PRG | Procurement Reference Group |
| PSA | Provisional Supply Agreement |
| PSF | Product Summary File |
| SCIH | Swiss Centre for International Health |
| SDF | Strategic Demand Forecast |
| TPP | Target Product Profile |
| UK | United Kingdom |
| UNICEF | United Nations Children's Fund |
| WHO | World Health Organization |

## FIGURES



## TABLES



## BOXES

# FOREWORD

*Dear colleagues,*

*It is with great pleasure that I hereby present this donor report on the pilot Advance Market Commitment (AMC) for pneumococcal vaccines. This report summarises the achievements of the first months of implementation of this innovative initiative: a promise to children around the world that we are working together to protect them from diseases that currently threaten their lives and cut short their hopes for the future.*

*The signature of the legal agreements on 12 June 2009 in itself represented an unprecedented yet very successful collaboration between a wide range of stakeholders. Now, as the programme enters its implementation phase, the accomplishments continue: following the issuance of a first call for AMC supply offers, we have received four offers from manufacturers, and we have been able to enter into long-term agreements with two companies to supply large quantities of vaccines at a fraction of the price in rich countries. As a result of the AMC, the pneumococcal vaccine will be introduced in GAVI-eligible countries concurrently with developed countries.*

*Pneumococcal disease claims the lives of 1.6 million people each year – including up to one million children under the age of five years. More than 90% of these deaths occur in developing countries. Pneumonia, the most common form of serious pneumococcal disease, accounts for one in every four child deaths, making it the leading cause of death among young children. By helping to stimulate industry investment, the pneumococcal AMC is intended to accelerate development and production of pneumococcal vaccines in the appropriate formulation, presentation and quantities and at the right price to meet the needs of children in developing countries. We expect that the pneumococcal AMC will save seven million lives by 2030, thereby contributing enormously to the achievement of Millennium Development Goal 4.*

*This is happening thanks to the close partnership between all GAVI partners and AMC donors. I would like to thank the governments of Italy, the United Kingdom, Canada, the Russian Federation and Norway, together with the Bill and Melinda Gates Foundation, for their commitment, as well as UNICEF, WHO, the World Bank and the various experts from academia, think tanks, developing countries, international organisations, civil society and the pharmaceutical industry whose input has been invaluable to the design of the pneumococcal AMC.*

*While it will take years to assess the final impact of this initiative, progress to date shows the magnificent potential of the pneumococcal AMC, enhancing GAVI and partners' trust in this and similar innovative mechanisms to accelerate uptake of underused and new vaccines to benefit the poorest of the poor. A comprehensive monitoring and evaluation plan will allow us to carefully check progress and learn lessons from this pilot which can be applied to other novel mechanisms in the future.*

*Dr Julian Lob-Levyt*
*Chief Executive Officer*
*GAVI Alliance*

## BACKGROUND

Advance Market Commitments (AMCs) for vaccines aim to encourage the development and production of affordable vaccines tailored to the needs of developing countries. Through a forward-looking binding contract from donors and international agencies guaranteeing a viable market for target vaccines, AMCs encourage vaccine makers to develop or build manufacturing capacity for urgently needed vaccines. The binding contract guarantees a pre-agreed price for the first doses of vaccines sold to developing countries, so that companies can re-coup their investment costs. In exchange, participating companies must guarantee to supply vaccines for the long term at a pre-agreed sustainably low price that developing countries can afford.

An AMC for vaccines first gained attention in April 2005 with the publication of a report by the Center for Global Development entitled, "Making markets for vaccines"[1]. This publication stimulated the interest of donors such that the World Bank, at its Spring Meetings in 2005, was asked to convene a meeting for the G7 officials with vaccine manufacturers. This led to the AMC being discussed by the G7 Finance Ministers in June 2005. In December 2005, the Government of Italy, with the support of the World Bank, presented a report to the G8 Finance Ministers outlining how such a scheme could move forward[2].

Following this meeting, the World Bank and the GAVI Alliance were asked to co-lead a project to design a pilot AMC. To this end, an Advisory Group of key stakeholders and experts was formed to consider the technical and structural options for the pilot. A Disease Expert Committee comprising developing and industrial country experts in public health, epidemiology, industry economics, vaccine development and law was also convened to provide an independent recommendation on which vaccine would be most suitable for the AMC pilot (Paris, February 2006). The Expert Committee recommended pneumococcal vaccines as the target for a pilot late-stage AMC. The pneumococcal AMC pilot was then announced in February 2007 in Rome by the Governments of Italy, the United Kingdom, Canada, the Russian Federation, Norway and the Bill and Melinda Gates Foundation, who collectively pledged a total of US$ 1.5 billion to fund the programme.

As a first step, the AMC donors convened an independent advisory body, the Economic Expert Group, to review and assess key AMC terms to provide guidance on the principal design features of the pneumococcal pilot. The group brought together experts in public health, health economics and contract law. In March 2008, the Expert Group recommended a number of enhancements to the structure of the AMC and suggested follow up work to refine key terms. Subsequently, the AMC donors created the Implementation Working Group to make specific recommendations for key terms and features of the AMC. Selected representatives from GAVI, the World Bank, UNICEF and the Economic Expert Group constituted this group. The work of the Implementation Working Group was concluded and published in July 2008[3].

At the same time, a basic Target Product Profile (TPP) for pneumococcal vaccines was developed by an ad hoc group set up by the World Health Organization (WHO) and approved in December 2007 by the WHO Director-General after endorsement by WHO's Strategic Advisory Group of Experts (SAGE). The Target Product Profile defines the minimal technical criteria that pneumococcal vaccines must meet in order to be eligible for AMC funding.

A final phase was dedicated to setting up the required governance structures, such as the AMC Secretariat and the Independent Assessment Committee (IAC), to establishing a monitoring and evaluation plan for the programme, and to translating detailed terms into appropriate legal agreements. The agreements were executed in Lecce, Italy, on 12 June 2009, on the eve of the meeting of the G8 Finance Ministers.

Throughout the AMC establishment phase, consultations were undertaken with different stakeholders including GAVI-eligible countries, civil society organisations, vaccine suppliers and independent experts[4].

The overarching goal of the pilot AMC is to reduce morbidity and mortality from pneumococcal diseases, preventing an estimated 7 million childhood deaths by 2030. The objectives of the pneumococcal AMC are:

1. **to accelerate the development of pneumococcal vaccines** that meet developing country needs (e.g. in terms of serotype composition and vaccine presentation) as specified in the Target Product Profile;

2. **to bring forward the availability of effective pneumococcal vaccines** for developing countries by guaranteeing the initial purchase price, for a limited quantity of the new vaccines, that represents value for money and incentivises manufacturers to invest in scaling-up production capacity to meet developing country vaccine demand;

3. **to accelerate vaccine uptake** by ensuring predictable vaccine pricing for countries and manufacturers, for example through binding commitments by participating companies to supply vaccines at low, long-term and sustainable prices after the AMC finances are depleted;

4. **to test the effectiveness of the AMC mechanism** as an incentive for supplying much needed vaccines and to learn lessons for developing possible future AMCs for other vaccines.

The purpose of the report is to provide an update on AMC implementation activities, including procurement activities, activities to facilitate vaccine introduction, identified key industry and country indicators, the work of the IAC, monitoring and evaluation activities, media and communications work, and all financial activities.

This progress report present an overview of the activities linked to the implementation of the pneumococcal AMC since the signature of the legal agreements on 12 June 2009 up until 31 March 2010[a]. It was developed by the AMC Secretariat at GAVI, in collaboration with the World Bank and UNICEF's Supply Division, and was approved by the Independent Assessment Committee on 13 April 2010[b].

## *1. SIGNATURE OF LEGAL AGREEMENTS*

Representatives of the Governments of Italy, the United Kingdom, Canada, the Russian Federation and Norway, the Bill and Melinda Gates Foundation, the GAVI Alliance, the World Bank, WHO and UNICEF met on 12 June 2009 in Lecce, Italy, to formally launch the first Advance Market Commitment (AMC) designed to accelerate access to vaccines against pneumococcal disease. This event, which was made possible thanks to the collaborative effort of all parties involved, underlined the importance and recent successes of partnerships in global health.

The ceremony, chaired by Professor David Fleming – one of the chief architects of the AMC concept and model – included the participation of Giulio Tremonti, host of the ceremony and Italy's Minister of Economy and Finance; Alistair Darling, the British Chancellor; James Michael Flaherty, Minister of Finance of Canada; Alexey L. Kudrin, Minister of Finance of the Russian Federation; Einar Bull, Norway's Ambassador to Italy; and Laurie Lee, Deputy Director of External Affairs at the Bill and Melinda Gates Foundation. In addition, GAVI Alliance Chief Executive Officer Julian Lob-Levyt, was present at the ceremony along with Robert B. Zoellick, the World Bank Group President, Shanelle Hall, Director of UNICEF's Supply Division and Andrew Cassels, Director of Strategy at WHO. Dr Richard Sezibera, Minister of Health of Rwanda and GAVI Board Member, represented the first African country to have introduced pneumococcal vaccines on a nationwide scale.

The ceremony took place on the eve of the June 2009 G8 Ministers of Finance Meeting. It received considerable coverage in the Italian and international media, as documented by the AMC Secretariat.

In Lecce, the following documents were signed:

- **Stakeholders Agreement**: This is a framework agreement between donors, the World Bank and the GAVI Alliance governing the general interaction and duties among the parties.
- **Offer Agreement**: This agreement is a conditional offer from the GAVI Alliance and the World Bank, reflecting how funding is made available to vaccine suppliers that meet all the terms and conditions of the offer.

---

a. As key industry and country indicator data are still being finalised and data collection as part of the AMC Baseline Study is ongoing, this information is not included in this first progress report but will be published at a later date.

b. Note that as a public document, this report does not include any confidential information.

- **Bilateral Grant Agreements**: Bilateral grant agreements are between each donor and the World Bank committing to AMC grant payments and a schedule, amounting to a total of US$1.5 billion.

In addition, the following documents were formally agreed upon by the donors, GAVI, the World Bank and UNICEF:

- **AMC Registered Manufacturer Agreement**: To express an interest to participate in the AMC and to create a contractual nexus between suppliers and the World Bank and the GAVI Alliance on the basis of the Offer Agreement, suppliers may be eligible to become "AMC Registered Manufacturers".
- **Pro Forma Supply Agreement**: An AMC Registered Manufacturer can enter into a Supply Agreement with UNICEF. The template specifies the elements of the AMC agreement and cannot be negotiated to maximise transparency and equal treatment for all suppliers.
- **Independent Assessment Committee Charter and Bylaws**: The Independent Assessment Committee Charter and Bylaws set out the roles and responsibilities of the IAC.
- **AMC Procedures Memorandum**: This document contains all the process and procedural guidelines that would be applicable to the IAC, the AMC (GAVI) Secretariat, vaccine suppliers and eligible countries.

## The AMC process: an overview

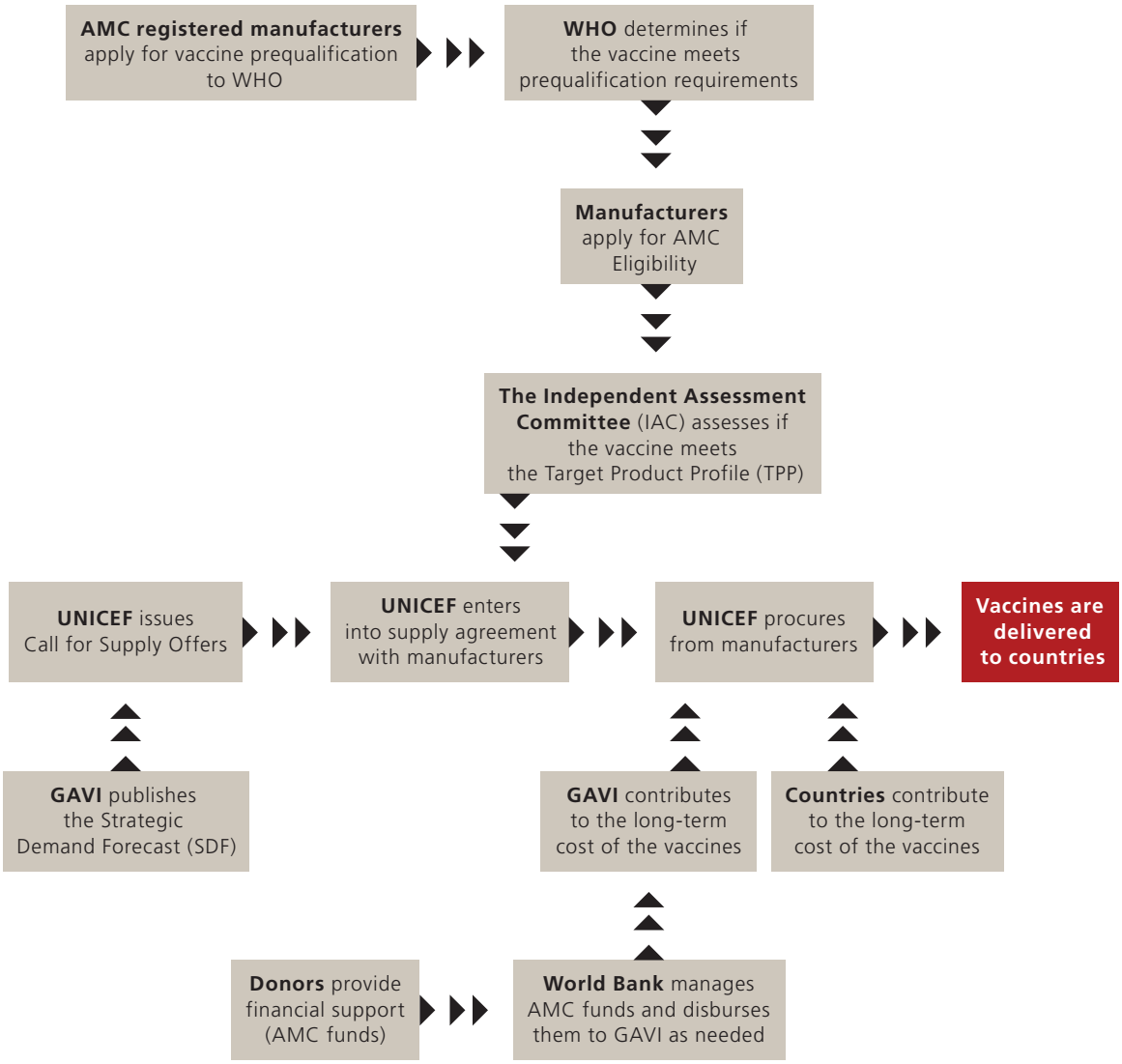
Figure 1 provides an overview of the AMC process that stakeholders are required to follow as set by the above-mentioned AMC legal agreements.

In essence, donors make grant payments to the World Bank, in accordance with its specific schedule or through an agreed demand-based payment arrangement. The World Bank holds donor payments on its balance sheet. These are designated assets with a corresponding liability and are paid to GAVI according to AMC terms and conditions.

Based on a 15-year Strategic Demand Forecast (SDF), which GAVI updates on a semi-annually basis, UNICEF issues Calls for Supply Offers. Suppliers willing to participate must sign a registration agreement, binding them to the AMC terms and conditions. Offers must have a start date for committed supply of no later than five years into the future. Awards cannot be higher than the forecasted demand for the year in which suppliers propose to initiate deliveries.

UNICEF assesses all offers received from AMC Registered Manufacturers and enters into supply agreements with those manufacturers whose products are AMC eligible. The IAC establishes if the product meets the Target Product Profile (TPP) developed for the pneumococcal AMC.

*Figure 1. The pneumococcal AMC process*




*Source*: GAVI Alliance Secretariat

Manufacturers who take part in the AMC sign legally-binding commitments to supply their vaccine for 10 years at a price no higher than US$ 3.50 per dose (paid for by GAVI with a co-financing contribution from the recipient country governments, in accordance with GAVI's standard co-financing policy). Companies will receive an additional payment of US$ 3.50 per dose for approximately 20% of the doses they provide (paid for with the AMC donors' commitments).

Participating manufacturers must make a 10-year commitment to supply a share of the target demand of 200 million doses annually. In return, each manufacturer will receive a share of the committed AMC Funds of US$ 1.5 billion in proportion to their supply commitment.

Countries apply to GAVI for support for introduction of pneumococcal vaccines in accordance to GAVI procedures. Based on the recommendation of an Independent Review Committee, the GAVI Board approves the budget for vaccine introduction and annually reviews country progress. As indicated above, GAVI-eligible countries contribute to the cost of vaccines, according to GAVI's standard co-financing policy.

# 2. PROCUREMENT AND INTRODUCTION ACTIVITIES

This section reports on the procurement process and the activities linked to the introduction of pneumococcal vaccines.

## 2.1. Manufacturer registration

Since the signature of the legal agreements on 12 June 2009 manufacturers can enter into AMC Manufacturer Registration Agreement[5]. In order to do so, interested manufacturers must submit an AMC Registered Manufacturer Application Package to the AMC Secretariat (see Box 1).

*Box 1. The AMC Registered Manufacturer Application Package*

Manufacturers wishing to participate in the pneumococcal AMC must first submit an AMC Registered Manufacturer Application Package, which requires prospective manufacturers to provide the following information:

(i) details of an applicant's legal status and registration/corporate incorporation information;

(ii) particulars of an applicant's licence and/or registration from the relevant national regulatory authority;

(iii) relevant data regarding vaccine production, supply and delivery activity undertaken by an applicant (if any), including an overview of any existing vaccine portfolio, number of years of production and supply of such vaccine, quantities supplied annually for the past three years and the number of countries in which such vaccine has obtained the requisite licensing and in which they are currently marketed;

(iv) an estimated timeline for making an application for AMC eligibility, if any.

*Source*: AMC Procedures Memorandum[6]

In signing the AMC Manufacturer Registration Agreement, a manufacturer formally agrees to the pneumococcal AMC terms and conditions; accepts to provide an annual update on the expected timing of an application for AMC eligibility and for WHO prequalification; and recognises the role of the IAC in the determination of AMC eligibility.

While this registration does not imply any commitment from a manufacturer to participate in the AMC, it is a prerequisite for an offer to be reviewed in response to UNICEF's Calls for Supply Offers. Information about the number and names of registered manufacturers is confidential, unless the manufacturer requests its information to be made public. GlaxoSmithKline (GSK) Biologicals, Pfizer Inc., the Serum Institute of India and Panacea Biotech Ltd have publicly disclosed their AMC registration.

## 2.2 Strategic Demand Forecasts

According to the terms of the AMC legal agreements[7], GAVI is required to publish an updated SDF outlining estimated demand for pneumococcal vaccines and estimated supply two times a year and at the latest one month after each GAVI Board meeting,. The SDF should also delineate the unmet demand for which Calls for Supply Offers can then be issued.

The objective of the SDF is to determine the expected demand in GAVI-eligible countries for a given vaccine, based on demographic, programmatic and various other factors. It attempts to predict when demand will effectively materialise in countries by taking into account, inter alia, the earliest time of introduction in each country as well as a country's time to reach peak coverage once the vaccine is introduced. The SDF includes the entire demand generated in one country irrespective of the source of financing. Local constraints, such as cold

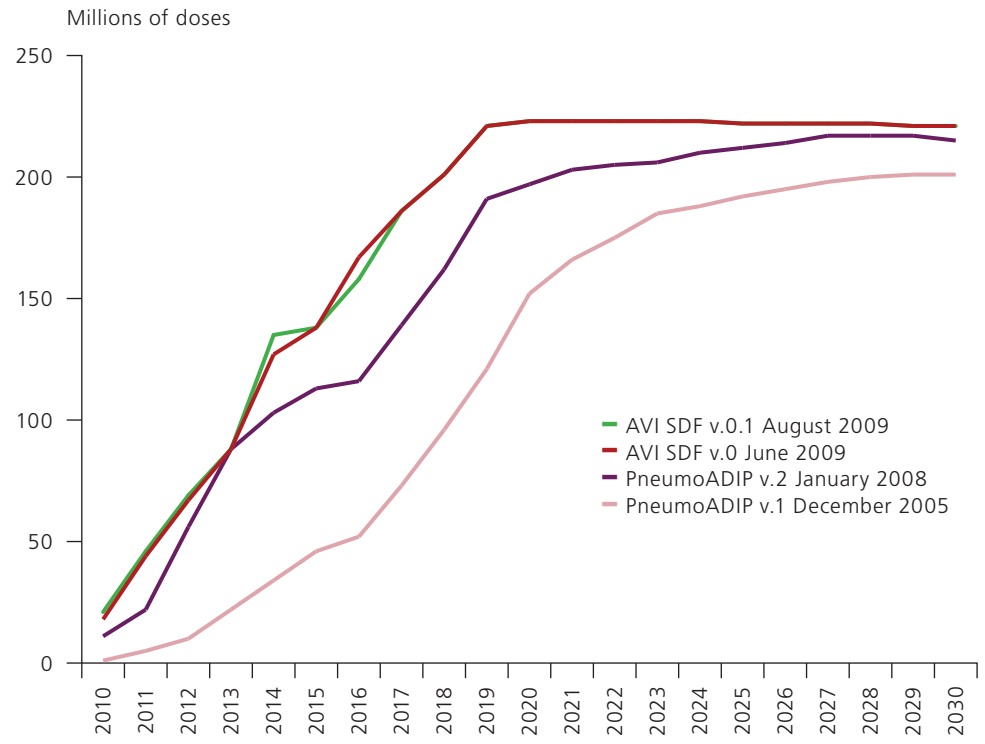
chain requirements, are reflected in the SDF but general constraints, such as GAVI financial resources or supply availability, are not considered.

In 2003, the GAVI Alliance funded the Pneumococcal Vaccines Accelerated Development and Introduction Plan (PneumoADIP), which was carried out by the Johns Hopkins Bloomberg School of Public Health. One of the goals of the PneumoADIP was to find ways to ensure an affordable and sustainable supply for pneumococcal vaccines in GAVI-eligible countries. In order to demonstrate the potential country demand and impact in terms of lives saved, demand forecasts, based on a transparent set of assumptions, were developed for use by donors, manufacturers and partners to support and inform their decision-making. PneumoADIP launched its first strategic demand forecast in 2005, PneumoADIP SDF version 1.0, and followed this with version 2.0 in 2007. Both forecasts have proved to be invaluable tools for shaping the design of the pneumococcal AMC.

As the PneumoADIP project ended, GAVI set up its Accelerated Vaccine Introduction (AVI) initiative with a view to accelerating the introduction of pneumococcal and rotavirus vaccines during the period 2009–2015 (Also see section 2.7). Through its Strategic Vaccine Supply Work Group, the AVI programme supports GAVI by coordinating and harmonising all GAVI strategic demand and supply forecasting activities, including those for pneumococcal vaccines.

GAVI published its first AVI SDF (v.0) on the AMC website on 12 June 2009. Due to significant changes in country vaccine introduction dates before the issuance of a Call for Supply Offers from UNICEF, a new AVI SDF (v.0.1) was published on 7 August 2009. The latter forecast formed the basis of the first pneumococcal AMC Call for Supply Offers. Figure 2 charts the evolution of the SDF between 2003 and 2009.

*Figure 2. Development of the Strategic Demand Forecast for pneumococcal vaccines, 2003–2009*




*Source*: GAVI Alliance Secretariat

A new version of the forecast will be published prior to the next Call for Supply Offers.

In collaboration with AVI and UNICEF, the AMC Secretariat has been updating interested manufacturers over the course of 2010 on developments in the strategic demand forecast since the publication of the SDF v.0.1.Meetings have been held for this purpose with Biological E, Bharat Biotech Int. Ltd., GlaxoSmithKline, Panacea Biotech Ltd, the Serum Institute of India and Shantha Biotechnics Ltd. Additional meetings are planned in future months with Merck, Pfizer, Novartis and Sanofi.

## 2.3. Entry into supply agreements

Following the publication of the most-up-to date SDF by GAVI, UNICEF issues a Call for Supply Offers. All AMC registered manufacturers can submit offers to UNICEF, but offers must be submitted within a month of the issuance of the call. Moreover, according to AMC terms and conditions, UNICEF can only enter into supply agreements with those manufacturers whose vaccines are AMC eligible, i.e. prequalified by WHO and approved by the IAC. However, UNICEF can enter into provisional supply agreements with manufacturers as soon as their vaccine is accepted for review by WHO's prequalification team; the agreement remains provisional until the product is prequalified and deemed AMC eligible by the IAC.

Following the publication of the AVI SDF v.0.1 on the AMC website on 7 August 2009, UNICEF organised a pre-tender meeting on 26 August 2009 in Copenhagen to inform manufacturers about the AMC concept and the requirements for the forthcoming call for offers to supply AMC pneumococcal vaccines. The meeting attracted eight companies who requested further information on registration and call for offer procedures as well as on the mechanics of the pneumococcal AMC. GAVI was also present at this meeting.

Subsequently, UNICEF published a first Call for Supply Offers on 4 September 2009, and received four offers by the closing date, 2 October 2009.

As per the Memorandum of Understanding with UNICEF, GAVI and UNICEF jointly determined the composition of a pneumococcal AMC Procurement Reference Group. With five members (see Table 1), the role of the group is to provide advice to UNICEF throughout the procurement process, including on the evaluation of bids, the structuring of awards and the allocation of supply, as well as on the monitoring of key indicators of relevance to pneumococcal AMC objectives. With the input of the Procurement Reference Group, who met in Copenhagen on 9–10 November 2009, UNICEF made award recommendations based on the received offers.

*Table 1. Membership of the pneumococcal AMC Procurement Reference Group*

| Name | Affiliation |
|---|---|
| *Members* | |
| **Carsten Mantel** (Chair) | Medical Officer, Group Leader for the New and Underutilized Vaccines, WHO |
| **Stefano Malvolti** | Director of Strategic Vaccine Supply, PATH |
| **Mariatou Tala Jallow** | Team Leader, Voluntary Pooled Procurement and Capacity Building Services, Pharmaceutical Procurement Unit, The Global Fund |
| **Raja Rao** | Senior Program Officer, Bill and Melinda Gates Foundation |
| **Paul Wilson** | Assistant Professor, Global Health Program, Columbia University |
| *Observers* | |
| **Tania Cernuschi** | Senior Manager, AMC, GAVI |
| **Jon Pearman** | Head, Accelerated Vaccine Introduction, GAVI |
| **David Crush** | Senior Financial Officer, Multilateral Trusteeship and Innovative Financing for the World Bank |
| **Ibrahim El-Ziq** | Chief of the Vaccine Center, UNICEF Supply Division |

*Source*: UNICEF Supply Division/GAVI Alliance Secretariat

By early February 2010, GlaxoSmithKline (GSK) Biologicals and Pfizer Inc had agreed in principle to enter into agreement with UNICEF and Provisional Supply Agreements (PSA) were subsequently entered into on 23rd March.

Under the terms of GlaxoSmithKline (GSK) Biologicals' agreement, GSK will supply 30 million doses annually (Annual Supply Commitment) starting in January 2012 for a period of up to 10 years. Consequently, 15% of AMC funds are allocated to this manufacturer under this first contract according to AMC terms and conditions (see section 1). The tail price for this agreement is US$ 3.50 per dose. This agreement remains provisional until the candidate vaccine is deemed AMC eligible by the IAC.

On the same day, Pfizer Inc. also entered into a PSA with UNICEF. Under the terms of this agreement, Pfizer will supply 30 million doses annually (Annual Supply Commitment) starting in January 2013 for a period of up to 10 years. Consequently, 15% of AMC funds are allocated to this manufacturer under this first contract according to AMC terms and conditions. The tail price for this agreement is also US$ 3.50 per dose. This agreement remains provisional until the candidate vaccine is deemed AMC eligible by the IAC ( see Table 2).

In addition to the above-mentioned PSAs, GSK and Pfizer have agreed to provide in total 7.2 million, 24.2 million and 20 million doses in 2010, 2011 and 2012, as part of the AMC Capacity Development Period. The capacity development period is defined as the period during which suppliers develop dedicated manufacturing capacity to serve GAVI-eligible countries.

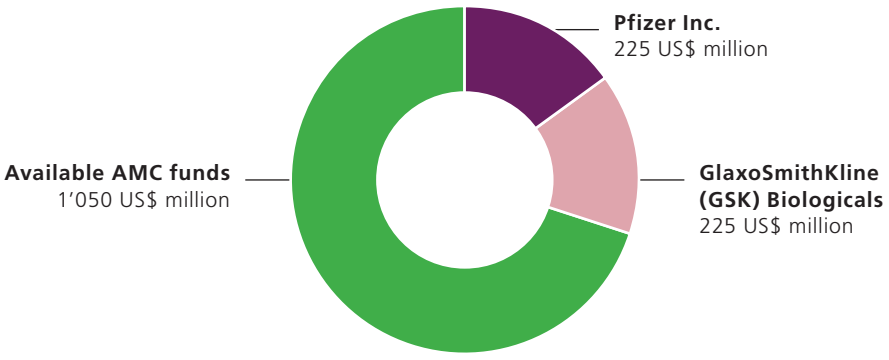
*Table 2. Provisional Supply Agreements – allocation of doses by year*

| Year | 2010 | 2011 | 2012 | 2013-2021 | 2022 |
|---|---|---|---|---|---|
| Number of doses contracted (millions) | 7.2 | 24.2 | 50 | 60 | 30 |

*Source*: GAVI Alliance Secretariat

UNICEF has opted not to award the full quantities indicated by the GAVI SDF for 2014 in response to this first tender. In order to incentivise manufacturers to accelerate the development of new vaccines, to contribute to the creation of a healthy market with multiple suppliers, and to enhance the possibility to access lower long-term prices through future offers, quantities have been reserved for award at a later point in time. Thus, at this time, 70% of AMC funds remain unallocated and will be available for successive rounds of Calls for Supply Offers (see Figure 3).

*Figure 3. Status of allocation of AMC funds, as of 31 March 2010 (US$ millions)*[c.]




Overall AMC Funds: 1.5 US$ billion

*Source*: GAVI Alliance Secretariat

c. Assuming vaccines will be deemed AMC eligible by the IAC.

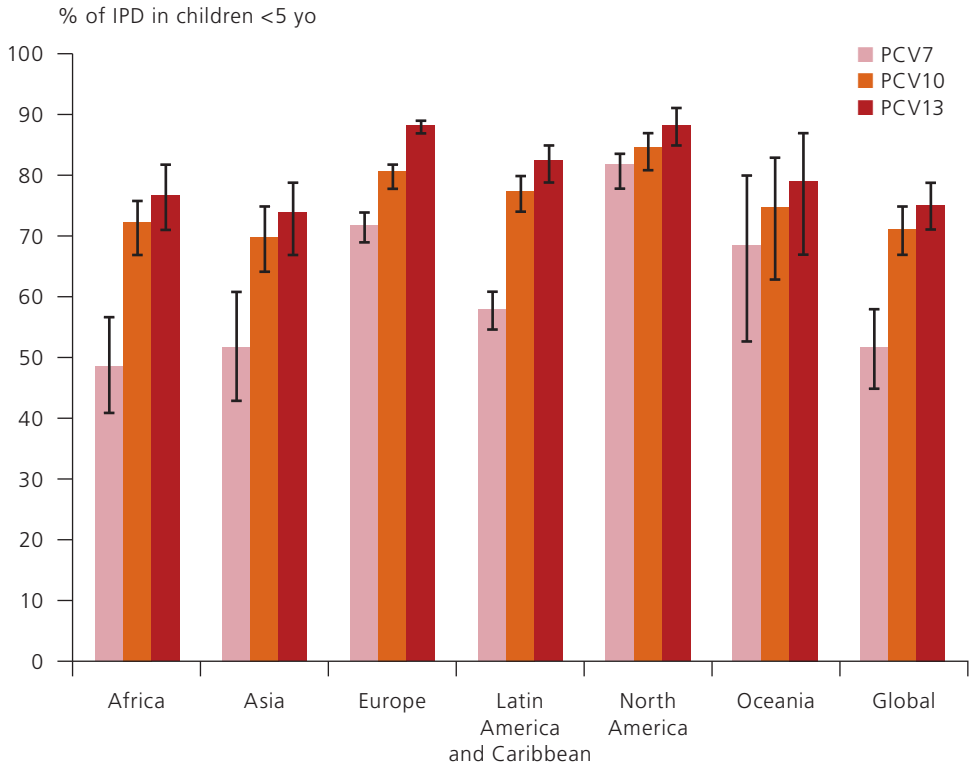
## 2.4. Effectiveness of pneumococcal vaccines

The pneumococcal bacterium exists as over 90 different "serotypes", all of which have varying potential to cause disease. Each one requires its own "serotype" vaccine. Fortunately, most pneumococcal disease in children is due to a handful of these serotypes and so vaccines that include between 6 and 13 of the leading serotypes can prevent the majority of disease worldwide.

The first generation of pneumococcal conjugate vaccines (PCVs) contained seven important serotypes. However, the serotypes in this generation of vaccines were optimised for their impact on disease in richer countries, and did not include some of the serotypes that are more prevalent in developing countries. The result was that, while this vaccine included serotypes that accounted for more than 80% of disease in Europe and the United States, its serotype coverage was reduced to 50% in poorer regions of the world, such as sub-Saharan Africa.

The above-mentioned GSK and Pfizer pneumococcal conjugate candidate vaccines expand the protection afforded to children by including 10 and 13 of the serotypes, respectively, that cause 70–88% of all serious pneumococcal disease in developing country children (see Figure 4 and Table 3). Unlike the 7-valent vaccine, both vaccines include serotypes 1 and 5 and thereby reduce the regional variability in impact associated with the 7-valent vaccine.

*Figure 4. Projected PCV serotype coverage, by world region*[d.]




*Source*: Johnson HL, Deloria-Knoll M, Levine OS et al. Serotype distribution of invasive pneumococcal disease among children globally: Pneumococcal Global Serotype Project. Submitted.

d. Expressed as proportion of invasive pneumococcal disease (IPD) in children <5 years of age due to the serotypes in existing pneumococcal conjugate vaccine (PCV) formulations assuming serotype 6A/6B cross-protection, globally and by region. Error bars indicate the 95% confidence intervals. PCV7 serotypes include: 4, 6B, 9V, 14, 28C, 19F and 23F. PCV10 adds serotypes: 1, 5, and 7F. PCV13 adds serotypes: 3, 6A and 19A.

*Table 3. Serotypes included in licensed pneumococcal conjugate vaccines (PCVs)*

| Formulation | Serogroup/serotype 1 | 3 | 4 | 5 | 6A | 6B | 7F | 9V | 14 | 18C | 19A | 19F | 23F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCV7 | | | ■ | | ■ | ■ | | ■ | ■ | ■ | | ■ | ■ |
| PCV10 | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ |
| PCV13 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

■ Serotype included in the vaccine ■ Cross-protection expected from serotype 6B

*Source*: International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health

## 2.5. Delivery of pneumococcal vaccines

GAVI-eligible countries wishing to introduce pneumococcal vaccines can receive GAVI financial support by applying through GAVI's standard application procedures. Applications are reviewed by the Independent Review Committee who, in turn, will make a recommendation to the GAVI Board. The GAVI Board then reviews the Committee's recommendations and makes a decision on financial support.

Following GAVI Board approval, delivery of vaccines to countries can only commence after manufacturers have entered into a supply agreement with UNICEF and their vaccines have been deemed AMC eligible. Suppliers can apply for AMC eligibility of their vaccine as soon as the Product Summary File has been accepted for prequalification assessment by WHO. Once the product has obtained WHO prequalification, the IAC will determine, within approximately six weeks, if the product meets the Target Product Profile requirements to be AMC eligible. If deemed eligible, UNICEF will procure the vaccine to GAVI eligible countries.

The following country applications have been approved by the GAVI Board as of June 2009: Cameroon, the Central African Republic, the Congo, the Democratic Republic of the Congo, the Gambia, Guyana, Honduras, Kenya, Mali, Nicaragua, Rwanda, Sierra Leone and Yemen.

## 2.6. Availability of pneumococcal conjugate vaccine products

Wyeth (now Pfizer Inc.) launched its 7-valent pneumococcal conjugate vaccine PCV7 (Prevenar) in 2001. This particular formulation contains serotypes 4, 6B, 9V, 14, 18C, 19F and 23F. Pfizer will be introducing a 13-valent formulation, Prevenar 13, which will contain six additional conjugate serotypes (i.e. 1, 3, 5, 6A, 19A and 7F) and which will protect against the majority of the remaining pneumococcal infections (Table 2). On 25 September 2009, Pfizer obtained a positive opinion from the European Medicines Agencies (EMEA) for Prevenar 13, and US Food and Drug Administration approval on 25 February 2010. The product is currently under review by WHO's prequalification team. Pfizer submitted an application for AMC eligibility on 15 January 2010. The IAC will be ready to assess this application as soon as the product obtains WHO prequalification. (Also see section 3.2)

Synflorix is produced by GSK. It is a decavalent vaccine, meaning that it contains 10 serotypes of pneumococcus (1, 4, 5, 6B, 7F, 9V, 14, 18C, 19F and 23F) which are conjugated to a carrier protein (Table 2). Synflorix received a positive opinion from the European Medicines Agencies for use in the European Union in January 2009. Subsequently, in March 2009, GSK received European Commission authorisation to market Synflorix. In addition, the one-dose presentation product obtained WHO prequalification on 6 November 2009, and the two-dose presentation achieved the same status on 12 March 2010. GSK applied for AMC eligibility for Synflorix two dose presentation vaccine on 9 March 2010; this application will be assessed by the IAC on 16 April 2010.

At the time of writing, the IAC has not yet deemed any vaccine AMC eligible, so no pneumococcal vaccines have been delivered to countries through the AMC. Based on agreements with the two contracted manufacturers, and if both vaccines will be deemed AMC eligible, it is estimated that the first in-country delivery will take place in the third quarter of 2010. To date, only two GAVI-eligible countries have received pneumococcal vaccines. Wyeth donated a total of three million doses of Prevenar to GAVI in 2009 allowing the introduction of the 7-valent pneumococcal conjugate vaccine (PCV7) in Rwanda in April and in the Gambia in August. These two countries will switch to AMC vaccines once the two-year donation comes to an end.

## 2.7. The Accelerated Vaccine Introduction (AVI) initiative

Through the AVI initiative, the GAVI Alliance is working to accelerate the introduction of pneumococcal and rotavirus vaccines, as well as establish a platform for introducing future vaccines. The objective of AVI is to drive the introduction and sustained use of the rotavirus vaccine and the pneumococcal conjugate vaccine in all GAVI-eligible countries. The management of AVI is led by the GAVI Secretariat and work is largely conducted through the AVI's Management Team of representatives from WHO, UNICEF's Supply Division, UNICEF's Programme Division and AVI's Technical Assistance Consortium (AVI TAC), a consortium of the Program for Appropriate Technologies for Health (PATH), the Johns Hopkins University and the US Centers for Disease Control and Prevention and the primary partners Aga Khan University, Pakistan's International Vaccine Institute, the Norwegian Institute of Public Health and the University of Bergen, Norway and the Republic of South Korea.

AVI activities are grouped into five high-level streams:

### (i) Informing country decisions

Country decisions are driven by several factors, including disease burden data, vaccine characteristics, WHO prequalification, supply status, health system status, global policy guidance, finance, local awareness (i.e. advocacy) and technical support. One of AVI's principal tasks is to generate and disseminate the information required by local policy-makers to support evidence-based decision-making.

In particular, work is under way to extend the information base in the following areas, identified as being vital for addressing specific policy-related questions:

- *optimisation of dosing-delivery schedules* (includes landscape analysis of pneumococcal vaccine dosing schedules);
- *effectiveness studies* (includes development of a pneumococcal vaccine impact assessment manual and a generic case-control study protocol);
- *measuring costs and benefits* (includes demonstration projects on economic impacts of rotavirus/pneumococcal vaccine introduction in Bolivia, Peru and South Africa);
- *cost–benefit analysis and acceptability* (includes the creation, maintenance and country training on use of web-based tools to enable country-derived cost-effectiveness analyses).

Communication of information for decision-making at the country level is another key AVI task. Much of this work takes place through WHO and UNICEF Programme Division global, regional and in-country activities. Recent activities are summarised in Table 4.

*Table 4. Activities linked to the dissemination of information at country level*

| Topic | Country/region | Activity | Status | Timing |
|---|---|---|---|---|
| Disease burden | Sudan | National surveillance workshop | Completed | Q2 2009 |
| | Kiribati, Mongolia, Papua New Guinea | 3 surveillance workshops on pneumococcal disease | Planned | Q4 2009 |
| | All countries | Publication of global Hib and pneumococcal disease burden estimates | Completed | Q3 2009 |
| Surveillance | All regions | Setting up of core sites, regional reference laboratories<br>Standardised global guidelines for data collection and reporting agreed to | Ongoing<br>Completed | 2009–2015<br>Q1 2009 |

| Topic | Country/region | Activity | Status | Timing |
|---|---|---|---|---|
| Applications and reporting | 31 African countries | 2 peer review workshops for application writing | Completed | Q3 2009 |
| | 45 countries | WHO country and regional support in submission of Annual Progress Reports | Completed | Q2 2009 |
| National Immunization Technical Advisory Groups | All regions | Supporting the establishment and strengthening of National Immunization Technical Advisory Groups through country consultations and workshops | Ongoing | 2009–2015 |

*Source*: AVI Technical Assistance Consortium

### (ii) Ensuring sufficient supply

AVI's Strategic Vaccine Supply sub-team is responsible for long-term strategic forecasting of country demand (i.e. countries by year of introduction) and of the corresponding supply necessary to meet that projected demand. The near-term information on the intention of countries to apply for GAVI support status, together with AVI's assessments of country willingness and preparedness to launch, are used by the Strategic Vaccine Supply sub-team to develop and update strategic forecasts of vaccine demand. The forecasts are made public and are updated twice a year, or for exceptional demand variation (+/– 20%), and are used partly for operational planning purposes by the Management Team and partly for donor information (see also section 2.2).

### (iii) Securing financing

In 2009, the GAVI Alliance strengthened its External Relations Office in order to expand its donor relations and advocacy activities, and also consolidated its Resource Mobilisation Strategy in response to the new challenges posed by downward trends in Official Development Assistance. AVI is directly supporting the External Relations Office in achieving the objectives of GAVI's Advocacy and Communication Strategy, which is closely aligned with GAVI's goal to address the resources necessary to roll out pneumococcal vaccines. As the introduction of pneumococcal and rotavirus vaccines by GAVI-eligible countries represents the best opportunity that GAVI has to significantly contribute to realising Millennium Development Goal 4, messages about the opportunity to have a significant public health impact and reduce under-five mortality are critical to GAVI's Resource Mobilisation Strategy.

### (iv) Facilitating country introductions

The lessons learned from the introduction of pentavalent vaccines and from post-introduction evaluations are continually being incorporated into both AVI planning and resource allocation, as well as into country-level preparedness. Immunisation system strengthening is required, especially in terms of disease and adverse events surveillance, health-care worker training, vaccine logistics and cold chain management. This is being addressed through a series of activities carried out by WHO and UNICEF's Programme Division. These activities include:

- *launch support* (in particular the launch and associated PR campaign to publicise the first PCV introduction which took place in Rwanda);
- *cold chain management* (specific activities include updating a global cold chain database, conducting cold chain assessments in Cambodia, Pakistan and the Solomon Islands, with further studies planned in Kiribati, Mongolia and Papua New Guinea, and evaluating the results of vaccine supply management/vaccine management assessments in Afghanistan, Eritrea, Ethiopia, Ghana, Guinea, Kenya, Madagascar, Malawi, Mozambique, Niger, Nigeria, Uganda, the United Republic of Tanzania, Viet Nam, Yemen and Zambia);
- *waste management* (improvements to health centre waste management practices are being made through training, production of a video, distance learning, translation of modules and increased funding);

- *vaccine management* (improvements are being made through provision of training for mid-level EPI staff in 18 African countries (francophone), Indonesia and Timor Leste), while assessment of vaccine supply management/vaccine management is ongoing in 16 countries worldwide (see above)
- *training* (based on the study of health-care workers in seven states in India).

Cold chain capacity remains a priority issue for AVI. Activities to address this are being carried out by AVI and as part of WHO's Optimize project (funded by the Bill and Melinda Gates Foundation) which is piloting a new cold chain evaluation methodology and various vaccine management tools, as well as systems that use mobile phone technology for vaccine store management.

**(v) Establishing a platform for sustained use**

The AVI Management Team and its various sub-teams have established operational processes which will serve as models for future vaccine introduction programmes. For example, the AVI Technical Assistance Consortium is engaged in a series of activities designed to accelerate access to a range of vaccines (e.g. building strong in-country advocacy coalitions, creation of a strategic demand forecast tool, developing a launch readiness dashboard). These tools, together with a proactive approach to extracting lessons learned from the introductions of the pneumococcal and rotavirus vaccine, will improve GAVI's future ability to rapidly introduce new vaccines.

# 3. THE AMC MANAGEMENT STRUCTURE

## 3.1 The AMC Secretariat

As per the AMC Master Definitions Schedule, the AMC Secretariat hosted by GAVI is responsible for providing operational, administrative and financial support to the pneumococcal AMC. This role includes coordinating with (and the contracting of) implementation agencies, the World Bank, UNICEF's Supply Division and WHO, and liaising with and supporting the IAC. The AMC Secretariat also liaises with AMC donors, and organises the annual AMC donor meetings and any special meetings as necessary, as defined in the AMC Stakeholders' Agreement. In addition, the AMC Secretariat is responsible for communication with AMC stakeholders. The AMC Secretariat provides industry partners with regular updates, such as the latest demand forecasts and progress reports on implementation and other issues as necessary, and also acts as the interface between vaccine manufacturers and the IAC. The AMC Secretariat monitors the project environment, identifies potential risks and proposes risk mitigating measures while conducting monitoring and evaluation activities. Fund-raising activities linked to GAVI's financial participation in the pneumococcal AMC are another aspect of the AMC Secretariat's work. The AMC Secretariat also manages the overall payment mechanism, in accordance with the terms of the AMC supply agreements, which includes implementing GAVI's co-financing and default policy according to usual GAVI practice.

During the first year of implementation, the AMC Secretariat has been staffed by a cross-functional team comprising 11 GAVI staff members (see Table 5). The team meets every two weeks to ensure good coordination of activities linked to the pneumococcal AMC.

*Table 5. Composition of the AMC Secretariat, as of 31 March 2010*

| Division | Staff members |
|---|---|
| **Policy and Performance** | Nina Schwalbe, Managing Director |
| | Tania Cernuschi, Senior Manager, AMC |
| | Johanna Fihman, Senior Programme Assistant, AMC |
| | Peter Hansen, Head, Monitoring and Evaluation |
| | Jon Pearman, Head, Accelerated Vaccine Introduction |

| Division | Staff members |
|---|---|
| **Programme Delivery** | Santiago Cornejo, Senior Programme Manager, Country Finance<br>Raj Kumar, Senior Programme Manager |
| **External Relations** | Marina Krawczyk, Communications Manager, Media and Communications<br>Ana Stefanovic, Senior Manager, Donor Relations, Programme Funding Team |
| **Finance** | Minzi Lam, Senior Manager, AMC Finance |
| **Corporate Services** | Tim Nielander, General Counsel |

*Source*: GAVI Alliance Secretariat

## 3.2 The Independent Assessment Committee

The Independent Assessment Committee was created as an impartial oversight body of the AMC. It is the cornerstone of the AMC with the mandate to review and approve the minimum technical requirements (i.e. the Target Product Profile) that vaccines must meet in order to be eligible for AMC funding. In particular, the IAC is responsible for determining whether a candidate vaccine meets the minimally acceptable profile in terms of vaccine serotypes, target population/target age group, dosage schedule, route of administration and product formulation[8].The Target Product Profile is designed to ensure that AMC vaccines meet developing country needs.

In its monitoring role, the IAC appraises information and endorses annual progress reports. In addition, the IAC establishes when and if an adjustment of the pre-set long-term price of vaccines is necessary. Finally, the IAC has a dispute resolution function.

### IAC membership

The IAC membership reflects a balance of significant expertise in the following areas: public health, health economics, vaccine business development, vaccine industry economics, contract law, public-private finance and clinical performance and delivery systems. The composition of the IAC, in terms of required areas of expertise, was decided upon by the AMC stakeholders during the design phase (see Background).

The IAC Selection and Oversight Panel, a group of international experts (see Table 6), is charged with the task of selecting and appointing IAC members (see Box 2) as well as with reviewing claims of potential or declared conflicts of interest involving IAC members.

*Table 6. Composition of the IAC Selection and Oversight Panel, as of 31 March 2010*

| Name | Affiliation |
|---|---|
| **J. Clifford Frazier** | Chief Counsel, Finance, World Bank<br>*Replaced Scott White on 15 October 2009* |
| **Mahima Datla** | Secretary, Developing Countries Vaccine Manufacturers Network<br>*Replaced Dr Subhash Kapre on 27 March 2009* |
| **Marie Paule Kieny** | Director, Initiative for Vaccine Research, WHO |
| **Ryoko Krause** | Director, Biologicals and Vaccines, International Federation of Pharmaceutical Manufacturers & Associations<br>*Replaced Dr Alicia Greenidge on 14 October 2009* |
| **Nina Schwalbe**<br>(non-voting Chair) | Managing Director, Policy and Performance Division, GAVI Alliance<br>*Replaced Julian Lob-Levyt on 2 November 2009* |

*Source*: GAVI Alliance Secretariat

*BOX 2. The IAC membership evaluation and selection process*

The IAC Oversight and Selection Panel evaluates potential IAC members on the basis of their submitted application. Each application is scored individually by the selection panel members according to the following criteria:

(i) the candidates' years of experience in their respective field(s);

(ii) the candidates' record of publications and academic or professional affiliations in their respective field(s);

(iii) the candidates' letter explaining their understanding of the issues covered by the IAC and how they will contribute to the functions and responsibilities of the IAC;

(iv) the candidates' overall contribution to the balance of expertise deemed necessary to carry out the duties of the IAC.

Panellists meet to review the final scores and make a decision on membership.

*Source*: GAVI Alliance Secretariat

In February 2009, the AMC Secretariat published the third call for IAC nominations, seeking three additional members in the areas of public health, public–private finance and vaccine industry economics. The call for nominations, distributed widely and posted on key websites, came to a closure on 31 March 2009. The AMC Secretariat received 28 applications which were reviewed and assessed by the IAC Selection and Oversight Panel on 14 April 2009. Two candidates were selected to serve in the areas of expertise of public health and public–private finance. Due to the lack of appropriate candidates with key competencies/expertise in vaccine industry economics, the panel did not select any member in this area and requested the AMC Secretariat to renew the call for nominations IAC membership. The IAC Selection and Oversight Panel did however agree to develop a "pool of candidates" who could be drawn upon in the future to replace members wishing to resign or whose term is due to expire. At this round, three candidates were identified for the pool.

The AMC Secretariat issued a fourth call for nominations which ended on 9 October 2009. At this time, 23 applications were received. The IAC selection panel subsequently met on 11 November 2009 and successfully selected a member with expertise in vaccine industry economics, bringing the membership of the IAC up to a total of 11 members (see Table 7). Three candidates were added to the pool of candidates, which currently comprises six experts.

*Table 7. Membership of the IAC, as of 31 March 2010*

| Name | Membership | Affiliation |
|---|---|---|
| **Robin Biellik** | 2009–2013 | Retired from PATH, WHO consultant, Switzerland |
| **Claire Broome** (Chair) | 2007–2013 | Adjunct Professor Division of Global Health Rollins, School of Public Health Emory University Atlanta, USA |
| **Ingrid Callies** | 2007–2013 | Adviser to the Vice-President for Medical Affairs, Institut Pasteur, France |
| **Arthur Elliot** | 2007– 2010 | Senior Program Manager, Vaccines and Anti-Viral Agents, United States Department of Health and Human Services, USA |
| **Bernard Fanget** | 2009–2012 | Chief Executive Officer, Bernard Fanget Consulting; and Vice-President, R&D and Pharmaceutical Development, Neovacs, France |
| **Shahnaaz Kassam Sharif** | 2007–2010 | Chief Medical Specialist, Senior Deputy Director Medical Services, Head of Preventive and Promotive Health Services, Ministry of Health, Kenya |
| **Mary Kitambi** | 2007–2011 | Public–Private Partnership Coordinator, Ministry of Health and Social Welfare, United Republic of Tanzania |

| Name | Membership | Affiliation |
|---|---|---|
| **Soonman Kwon** (Vice-Chair) | 2009–2013 | Director, Brain Korea Centre for Aging and Health Policy, Republic of Korea |
| **Tracy Lieu** | 2007–2011 | Director, Center for Child Health Care Studies, Harvard Medical School, USA |
| **Halvor Sommerfelt** | 2007–2013 | Professor of Epidemiology, Center for International Health, University of Bergen, and Senior Consultant, Norwegian Institute of Public Health, Oslo, Norway |
| **Vitaly Zverev** | 2007–2010 | Director, I.I. Mechnikov Institute of Vaccine Sera under the Russian Academy of Medical Science, Russian Federation |

*Source*: GAVI Alliance Secretariat

Members of the IAC serve in their personal capacities and have signed confidentiality forms and a declaration of conflict of interests. Committee members can serve for an initial term of up to six years, their term of appointment being renewable only once. To ensure continuity, membership is staggered in line with expressed member preferences (see Table 6).

## IAC meetings

IAC members are kept informed by the AMC Secretariat on progress in project implementation. Since mid-2008, the IAC has met a total of six times (by teleconference); four of these meetings have taken place since the signature of the legal agreements[9].

*14 July 2009 and 10 August 2009.* Following the signature of the legal agreements in June 2009, the AMC Secretariat organised two induction calls, one on 14 July 2009 and another on 10 August 2009, in order to give all IAC members the opportunity to clarify any outstanding issues relating to the Committee's roles and responsibilities and procedures, as well as matters pertaining to the functioning of the AMC programme. The IAC is now fully operational.

*16 February 2010.* On 16 February 2010, the IAC met by teleconference following Pfizer's application for AMC eligibility. The purpose of this meeting was to allow the IAC the opportunity to request clarifications from WHO regarding the candidate vaccine (Prevenar 13) and its prequalification process, as well as to determine whether the Committee would require technical assistance from WHO in undertaking its own review and assessment of the candidate vaccine. It is intended that WHO will address the IAC's questions in a report to the Committee at the time of product prequalification and that an AMC Eligibility Determination Meeting will be held within 30 business days of the prequalification of Prevenar 13.

*30 March 2010.* The IAC met by teleconference on 30 March to ask questions to WHO regarding the application for AMC eligibility received from GSK on 9 March 2010 with respect to its Synflorix two-dose presentation vaccine. In accordance with the AMC legal agreements, copies of this application were sent to the IAC. An AMC Eligibility Determination Meeting is scheduled for 16 April 2010 (i.e. within 30 business days of WHO prequalification) to review the application and determine if the candidate product meets the minimum requirements of the Target Product Profile.

# 4. MONITORING AND EVALUATION PROCESS

The AMC Monitoring and Evaluability Study[10], prepared by the Monitoring and Evaluation Subgroup of AMC donors and published in November 2008, has recommended a monitoring and evaluation framework, which the AMC Secretariat is currently implementing. In accordance with the recommendations of the Sub-group, the AMC Secretariat has assumed responsibility for managing both the monitoring activities and the independent contractors required for conducting the external evaluations. Box 3 provides an overview of both the ongoing and planned AMC monitoring and evaluation activities.

*BOX 3. Summary of the pneumococcal AMC monitoring and evaluation activities*

Ongoing and planned monitoring and evaluation activities include the following:

- **Annual monitoring (ongoing)**
  Collection of data from various sources reflecting the key issues linked to the implementation of the pneumococcal AMC, changes in pre-identified industry and country indicators.
- **Baseline Study (results expected end June 2010)**
  The aim of the Baseline Study is to characterise the environment for the pneumococcal AMC at the beginning of the intervention. This study will collect both industry and country level data to establish the baseline for the AMC. It will also include the development of counterfactuals.
- **Process evaluation (scheduled 2012)**
  The first evaluation will focus on the AMC implementation processes, in particular, on evaluating the extent to which AMC implementation is as planned and whether the complementary activities to support the introduction and demand of conjugate vaccines are occurring. This evaluation will also assess the efficiency and effectiveness of the AMC design.
- **Impact evaluation (scheduled 2014)**
  The impact evaluation will focus on the achievement of AMC outcomes and will assess causality between the AMC intervention and its results through the comparisons with the counterfactual.

*Source*: GAVI Alliance Secretariat

In 2008, and following the publication of the findings of the AMC Monitoring and Evaluability *Study*, the AMC Secretariat undertook the development of an AMC Baseline Study. The goal of this study is to establish the environment prior to the implementation of pneumococcal AMC, and to provide a starting point for monitoring and evaluation of the pilot AMC intervention starting in 2005. These data will be used to monitor progress and to assess the impact of the AMC programme. The study addresses both the situation with respect to the pneumococcal vaccine industry and the status of immunisation and health in GAVI-eligible countries. The study also aims to develop a model for quantification and comparison of the AMC with two counterfactuals.

On 15 December 2008, and subsequent to the issuing of a formal Request for Proposal for the AMC Baseline Study, the GAVI Secretariat commissioned the Swiss Centre for International Health (SCIH), to conduct the study on its behalf. The UK Department for International Development and the Norwegian Ministry of Foreign Affairs kindly attributed a grant to GAVI to fund the AMC Baseline Study.

Tables 8 and 9 describe the composition of the SCIH team responsible for carrying out the AMC Baseline Study and the AMC Baseline Study Committee charged with the task of providing oversight of the study, respectively. The role of the latter time-limited largely advisory committee is to ensure that the scope of the AMC Baseline Study is well defined; that the study outcome is of maximum relevance to AMC stakeholders; and that the evaluation is conducted in a thorough and independent manner. To date, the committee has held a series of meetings, both teleconferences and in-person meetings, in order to provide regular feedback on the milestones delivered by the SCIH. Input from external experts in health economics, vaccine development, and monitoring and evaluation has also been collated and used to shape the study.

Work on the AMC Baseline Study is currently under way. The list of indicators has been finalised and data collection has commenced. Next steps include the development of the counterfactual model. The final report is scheduled for publication in the summer of 2010.

*Table 8. Composition of the SCIH team responsible for conducting the AMC Baseline Study*

| Core team member | Affiliation |
|---|---|
| **Xavier Bosch-Capblanch** | Project Leader/Deputy Head, System Performance and Monitoring Unit, Swiss Centre for International Health, Switzerland |
| **Rebecca Hanlin** | Lecturer in Development Policy and Practice, Open University, UK |
| **Ebnezer Tetteh** | Health Economist, Office of Health Economics, UK |
| **Adrian Towse** | Director, Office of Health Economics, UK |
| **Karin Wiedenmayer** | Project Leader, Swiss Centre for International Health, Switzerland |
| **Kaspar Wyss** | Associate Professor and System Performance and Monitoring Unit Head, Swiss Centre for International Health, Switzerland |

*Source*: GAVI Alliance Secretariat

*Table 9. Composition of the AMC Baseline Study Committee*

| Name | Affiliation |
|---|---|
| **Jeffrey Tudor** | Policy Manager, Global Funds and Development Finance Institution Department, Department for International Development, UK<br>*Replaced Seb Ling on 13 August 2009* |
| **Abdallah Bchir** | Senior Specialist Evaluation, Policy and Performance, GAVI Alliance, Switzerland |
| **Lene Lothe Gomez Palma** | Senior Advisor, Department for Global Health and AIDS, Norwegian Agency for Development Coordination (NORAD), Norway<br>*Replaced Ann Bergh on 17 March 2010* |
| **Javier Guzman** | Director of Research, The George Institute for International Health, UK<br>*Joined on 13 March 2009* |

*Source*: GAVI Alliance Secretariat

## 5. MEDIA AND COMMUNICATIONS

This section provides a summary of the media and communications activities, messages and significant results achieved during the first year of implementation of the pneumococcal AMC pilot.

The GAVI Alliance considers the promotion of the pneumococcal AMC as part of GAVI's wider communications work on innovative financing, which includes the International Finance Facility for Immunisation (IFFIm). However, because the AMC is a new mechanism and 2009 represented a pivotal year in its development, special efforts were made to uniquely promote the pneumococcal AMC at key moments. Communications activities are undertaken in partnership with the AMC donors, the World Bank and UNICEF.

In 2009, GAVI's **communication objectives** for the pneumococcal AMC were to:

- inform and educate target audiences about the AMC;
- increase the promotion of the AMC as an innovate market-based approach;
- mitigate criticism of the AMC in the press from opponents.

In line with the objectives stated above, GAVI identified its **target audiences** as:

- informed stakeholders in global health, immunisation and development;
- selected influential journalists who regularly cover the AMC;

- other stakeholders who are unfamiliar with the AMC;
- GAVI partners and donors;
- "natural allies" who support the AMC;
- AMC opponents.

The following tactics were employed to achieve the communication objectives:

- **Materials development:** update and design new communication materials that are adequate for all target audiences continuously manage on-going communications with key stakeholders about the pilot AMC and its advantages.
- **Media relations:**
  - develop and promote AMC stories in key media outlets;
  - strengthen relationships with key reporters to keep them informed;
  - develop proactive strategies for specific publications and reporters who require increased understanding of the mechanism;
  - respond to criticism in the press;
  - continually monitor the media for positive opportunities to leverage and challenges to react to.
- **Online communications:** revamp the content on the AMC website to reflect progress and a long-term plan and keep target audiences informed.
- **Multimedia:**
  - work with the BBC to produce an internationally-broadcast film that highlights the AMC;
  - produce banners and other materials for key events.
- **Events:**
  - identify conferences and events where GAVI can increase the visibility of the AMC;
  - implement key events to mark and celebrate key moments in the AMC process.

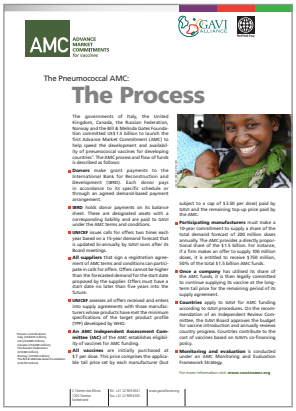
## Materials development

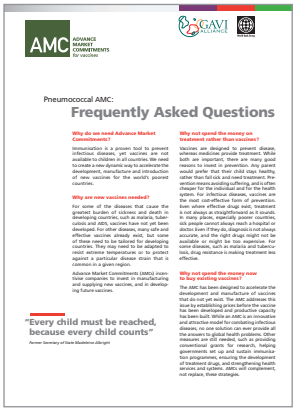
Several existing communication materials were updated and re-designed in 2009 in order to provide a suite of materials tailored to the needs of various target audiences and also provide an ongoing means of managing communication with key AMC stakeholders. These materials are available both on the AMC website[e.] and in hard copy, and include:

- **AMC General Fact Sheet:** provides general information about the AMC funding mechanism, including the pilot AMC.
- **Frequently Asked Questions:** provides the answers to the most commonly asked questions about AMCs and the pilot.
- **AMC Process Sheet:** provides more detailed information about the AMC process and the key stakeholders involved in the pilot.
- **Fact Sheet for Countries:** provides advice and guidance to developing countries seeking to speed up access to new and affordable vaccines.

e. http://www.vaccineamc.org

All AMC communications materials are currently available in English and French, and will be available in Italian and Spanish by early 2010.


The Pneumococcal AMC:
The Process


Pneumococcal AMC:
Frequently Asked Questions


Speeding up access to new and affordable vaccines for developing countries


An innovative way to make vaccines available for children

## Media relations

GAVI's Media and Communications team works proactively not only to develop and strengthen media relations with key reporters and to promote AMC stories in key media outlets, but also to identify and address any potential misunderstandings about how the AMC mechanism works before they arise. In addition, the team provides support to AMC stakeholders to respond to questions from journalists, and provides donors with appropriate communications materials.

Media monitoring is used to capture news articles relating to GAVI (including those in which the AMC is highlighted) and also to identify further opportunities for leverage. Published articles are captured on a daily basis and are distributed both internally and externally, according to their relevance. GAVI works with its partners to respond promptly to critical articles that may create confusion or misunderstanding.

During the period covered by this report, more than 400 articles featuring or citing the AMCs and/or the AMC pilot were published[f]. Many key outlets conveyed the key messages that the AMC Secretariat promoted through the AMC website, communications materials, press releases and specific interviews. The media coverage largely reflects the outlets that GAVI routinely tracks during and after key events. Between June 2009 and March 2010, three specific events featured the AMC, namely the signature of donor commitments, World Pneumonia Day and the announcement of AMC supply agreements.

Overall, the coverage was positive and relatively widespread. Criticism in a few outlets was systematically responded to.

## Online communication

To mark the beginning of the implementation phase of the project, the pneumococcal AMC website was re-designed to reflect the progress made and to provide target audiences and stakeholders with direct access to key documents relating to the pneumococcal AMC.

The website re-design work included:

- a new homepage, designed to be in line with GAVI branding;
- improved and continual content management;
- creation and maintenance of an AMC mailing list (created to maintain ongoing communication with key stakeholders and to provide regular updates on the progress of the pneumococcal AMC);
- inclusion of press releases and statements.

f. Printed copies of media coverage reports are available upon request. Please contact the AMC Secretariat at: mkrawczyk@gavialliance.org


## Multimedia

To improve the visibility of the pneumococcal AMC, GAVI has developed a number of short films featuring the pilot, which have been broadcast at several high-profile events. The films have included:

- *GAVI Pneumo AMC* (an introductory AMC film), presented at the signature event, held in Lecce, Italy on 12 June 2009[11];
- *Moving Forward with Innovative Financing*, broadcast on BBC World (as part of its Kill or Cure Series) on 4 August 2009[12].
- *GAVI's Innovative Financing*, presented at the Partners Forum in Hanoi, Viet Nam in November 2009[13].

## Events

In order to strengthen advocacy efforts and to increase the visibility of the AMC mechanism among target audiences, GAVI has participated in a wide range of conferences and events worldwide. GAVI has also organised several special events to mark and celebrate key milestones in the AMC process. Some of these are listed in Table 10.

*Table 10. Increasing the profile of the AMC: key events (12 June 2009–31 March 2010)*

| Date | Event |
|---|---|
| 12 June 2009 | Signature of the AMC legal agreements, Lecce, Italy |
| 28–29 July 2009 | Planning roundtable for a tri-nation collaboration on reduction of child deaths from pneumonia in high-risk populations, Sydney, Australia (as part of GAVI visit to the Solomon Islands, 4–10 July 2009) |
| 6–9 July 2009 | ECOSOC Innovation Fair Innovative Finance Stand (IFFIm and AMC), Geneva, Switzerland |
| 31 August–2 September 2009 | Joint retreat civil society delegations UNAIDS, Global Fund, UNITAID, GAVI, IHP+, Roll Back Malaria, Stop TB and partnership for maternal, newborn and child health, Amsterdam, The Netherlands |

| Date | Event |
|---|---|
| 7 September 2009 | 6th European Congress on Tropical Medicine and International Health (poster presentation), Verona, Italy |
| 21 September 2009 | Making Partnerships Work for Health, focusing on low-income countries: The role of the private sector, Berlin, Germany |
| 8 October 2009 | Pneumococcal AMC, presentation at Boccioni University, Milan, Italy |
| 13 October 2009 | SAGE meeting, Geneva, Switzerland |
| 29–30 October 2009 | Discussion of Working Groups 1&2 reports, Taskforce on Innovative International Financing for Health Systems, London, England |
| 18 November 2009 | GAVI's Partners Forum: Innovative Finance Briefing Session, Hanoi, Viet Nam |
| 16–20 November 2009 | Global Forum for Health Research (annual meeting), Havana, Cuba |
| 28–29 January 2010 | Leading Group on Innovative Financing for Development, Santiago, Chile |
| 28–28 January 2010 | Advanced Market Commitments for Low Carbon Technology: Creating Demand in Developing Countries, London, England |
| 4–5 March 2010 | Marketplace on Innovative Financial Solutions for Development, jointly organised by the Bill and Melinda Gates Foundation, the World Bank and the French Agency for Development, Paris, France |

*Source*: GAVI Alliance Secretariat

## 6. FINANCIAL ACTIVITIES

The financial structure of the AMC involves a number of stakeholders: the six AMC donors, the World Bank, GAVI, UNICEF, GAVI-eligible countries and eligible vaccine manufacturers.

The AMC donors have entered into grant agreements totalling US$ 1.5 billion with the World Bank. The donors are categorised into two groups. The first group, known as "fixed payment donors" (Italy, the Russian Federation and the Bill and Melinda Gates Foundation) makes annual payments to the World Bank in accordance with predetermined payment schedules set out in the individual grant agreements. The second group of donors, known as "on-demand donors" (the United Kingdom, Canada and Norway), makes payments in response to requests from the World Bank based on forecasts received from GAVI to meet specific funding needs. In addition, these "on-demand" donors have agreed, within certain limits, to accelerate their grant payments to meet any temporary cash shortfalls should they occur. Once AMC funds are received by the World Bank, it holds the money in trust for GAVI on behalf of the donors. The World Bank confirms to GAVI, on a quarterly basis, the amounts of donor funds available for disbursements for the purchase of AMC vaccines.

To access donor funds, GAVI submits a Quarterly Funding Request to the World Bank for the anticipated AMC donor funds required for vaccine purchase payments in the upcoming calendar quarter. The funding request is based on the most recent demand and supplier forecasts, as well as on the quarterly Cash Management Plan submitted by UNICEF to GAVI. In addition, GAVI submits a Semi-Annual Estimate to the World Bank twice a year. The Semi-Annual Estimate provides information on the forecasted needs for the upcoming 36-month period, and forms the basis of the World Bank's payment request to the on-demand donors. The financial forecast information presented in the Semi-Annual Estimate is impacted by a number of interrelated factors, the most significant of which is forecasted long-term demand. After receipt of the Semi-Annual Estimate, the World Bank confirms to GAVI the amounts requested from on-demand donors and therefore the expected inflow of funds over the upcoming 36 months.

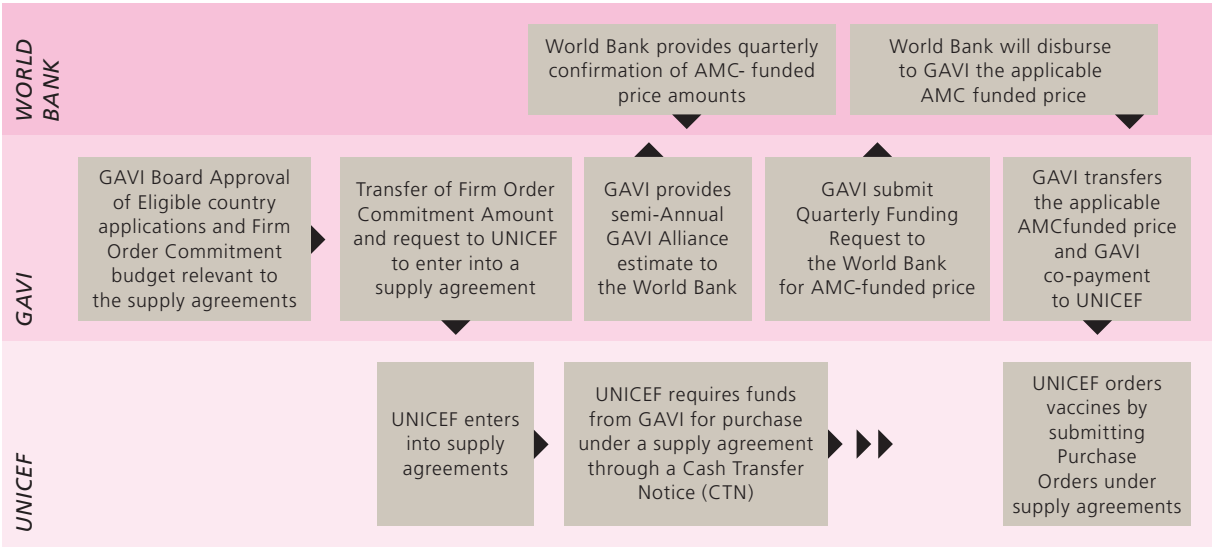
A unique feature of each AMC supply agreement is a minimum purchase obligation, known as the Firm Order Commitment (FOC). Each FOC requires that UNICEF, as GAVI's procurement agent, purchase a minimum of 20% of year one, 15% of year two and 10% of year three of the supplier's annual supply commitment quantity, regardless of whether or not demand materialises in those years. Each FOC is jointly funded by AMC donors and GAVI, with the relative shares being dependent on the tail price specified in each supply agreement.

Before UNICEF can enter into a supply agreement, the GAVI Board must approve the transfer of FOC funds into the UNICEF procurement bank account. In order to reduce any financial risks, UNICEF cannot enter into a supply agreement until funds covering FOC commitments have been received. Prior to procuring vaccines, UNICEF sends a cash disbursement request for the necessary AMC and GAVI funds, upon receipt of which GAVI transfers the requested funds into a designated procurement bank account. These funds, once transferred to the procurement bank account, can only be withdrawn by UNICEF.

GAVI-eligible countries are obliged to co-finance the introduction of the pneumococcal vaccine, in accordance with GAVI's standard co-financing policy. Co-financing means that countries share the cost of the GAVI-supported vaccines by procuring some of the required vaccine doses with their own funds. Countries make their co-financed payments directly to UNICEF.

The financial structure described above is summarised in Figure 5.

*Figure 5. AMC cash flow management*



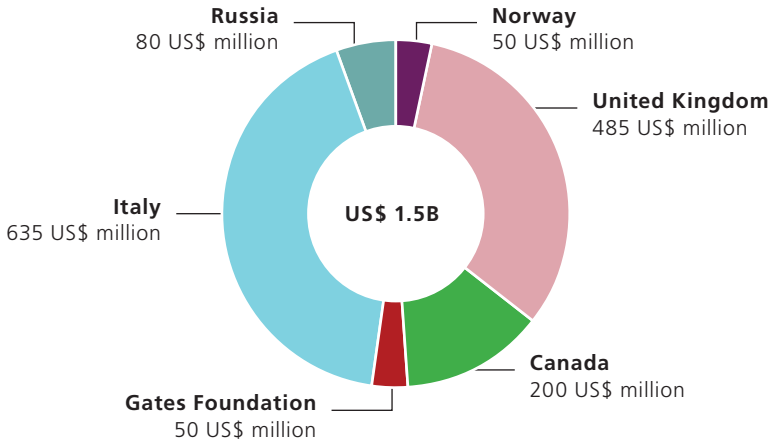

*Source*: GAVI Alliance Secretariat

## 6.1 AMC donor funds: inflow to the World Bank

### AMC donors

The fixed-payment donors have together pledged a total of US$765 million to the pneumococcal AMC. The on-demand donors have pledged US$ 735 million (see Figure 6). The six donors combined bring the total available AMC funds to US$ 1.5 billion, funds that are dedicated solely to the procurement of the pneumococcal vaccine.

*Figure 6. Breakdown of AMC funds, by donor (in US$ millions)*[g.]




g. Italy's contribution was swapped on 12 June 2009 to US$ 635 million.

*Source*: GAVI Alliance Secretariat

## Donors contribution receipts

As of 31 December 2009, the World Bank confirmed to GAVI that it had received a total of US$ 221.2 million from three donors (see Table 11).

*Table 11. Contribution receipts from AMC donors, as of 31 December 2009 (in US$ millions)*[h.]

| Donors | | Grant amount | Cumulative receipts | Remaining contributions receivable |
|---|---|---|---|---|
| **Fixed-payment donors** | | | | |
| Italy | | 635.0 | 105.9 | 529.1 |
| Russia | | 80.0 | – | 80.0 |
| Gates Foundation | | 50.0 | 10.0 | 40.0 |
| | **Sub-total** | **765.0** | **115.9** | **649.1** |
| **On-demand donors** | | | | |
| Norway | | 50.0 | – | 50.0 |
| Canada | | 200.0 | 105.3 | 94.7 |
| UK | | 485.0 | – | 485.0 |
| | **Sub-total** | **735.0** | **105.3** | **629.7** |
| | **Total** | **1,500.0** | **221.2** | **1,278.8** |

*Source*: the World Bank

h. Canada's contribution (the "initial funds") in the amount of US$ 105.3 million is not available for AMC subsidy disbursement until annual maximum cumulative contributions ("subsequent funds") as provided in Canada's Grant Agreement have been disbursed.

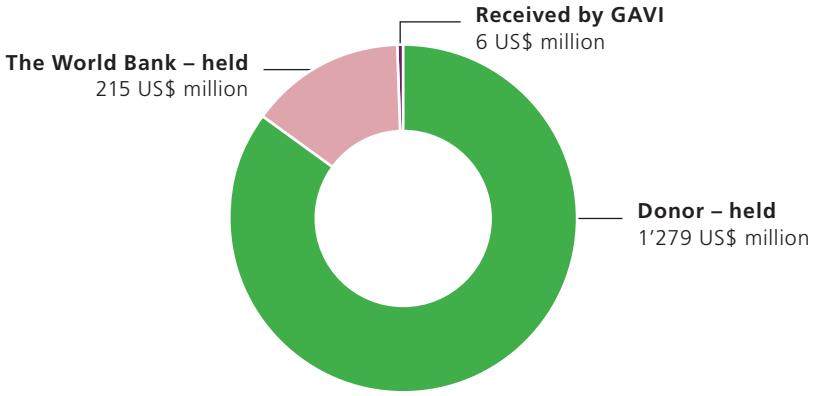
## Reporting on investment activity and results

As of 31 December 2009, the balance in the AMC investment portfolio stood at US$ 221.8 million. The portfolio is part of the World Bank's liquid operational tranche, with funds mainly invested in overnight and term deposits, and this portfolio has outperformed the overnight cash benchmark by 30.3 basis points for the year ended 31 December 2009.

## 6.2 AMC donor funds: inflow to GAVI

As of 31 March 2010, the World Bank had disbursed US$ 6 million to GAVI pursuant to two Quarterly Funding Requests, the first of which was submitted in the last quarter of 2009 and the second in the first quarter of 2010. This leaves a balance of US$ 215.2 million held by the World Bank, of which US$ 109.9 million is available for immediate disbursement to GAVI (see Figure 7).

*Figure 7. Status of AMC donor funds, as of 31 March 2010 (in US$ millions)*




*Source*: GAVI Alliance Secretariat

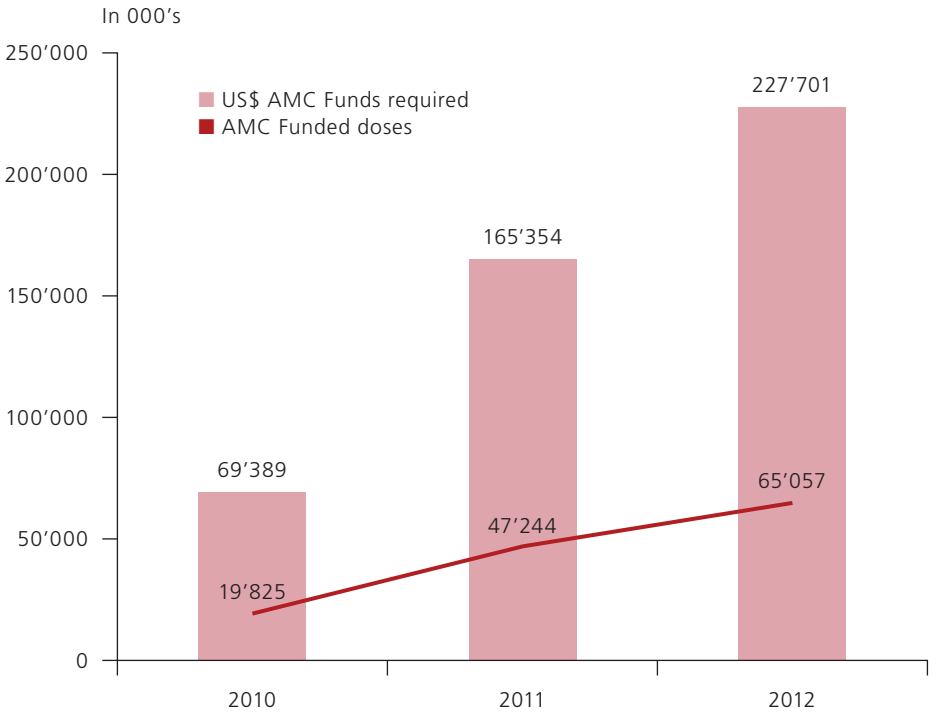
The World Bank has recorded the AMC donor funds on its financial statements as designated assets, with a corresponding liability to pass through the payments to GAVI for the purchase of pneumococcal vaccines subject to the terms and conditions of the AMC. To enhance the predictability of AMC funding, the World Bank has made an additional commitment to pay AMC funds to GAVI even if these funds have not actually been received on schedule from donors. More specifically, the World Bank would commit to transfer funds to purchase AMC vaccines, upon request from GAVI in accordance with the AMC terms and conditions and with the schedule of donor payments, whether or not donors actually pay on schedule or default. The World Bank also provides standard financial management and administrative services with respect to donor contributions, AMC commitments and disbursements.

As part of the reporting process, GAVI has submitted to the World Bank two Semi-Annual Estimates, the first in September 2009 and the second in March 2010. Unfortunately the second Semi-Annual Estimate was delayed from its scheduled submission date of 4 January 2010 due to a delay in the closure of the Call for Supply Offer process by UNICEF. However, the postponement of the second Semi-Annual Estimate meant that the submitted document contained up-to-date information, reflective of the outcome of the first Call for Supply Offer.

Based on the most recent Semi-Annual Estimate, submitted in March 2010, it is anticipated that US$ 462.4 million of AMC funds will be needed to procure 132.1 million doses of the pneumococcal vaccine over the next 36 months. This translates to a projected weighted average vaccine price of US$ 7 per dose over the three-year period. Fulfilment costs are estimated at US$ 0.19 per dose[i]. These weighted average prices are based on the most up-to-date dosage demand and financial cost forecasts available (see Figure 8).

i. Fulfillment costs are the extra costs incurred in supplying vaccines, in addition to the cost of the vaccine itself. These costs typically include the cost of syringes, safety boxes and freight.

*Figure 8. Upcoming 36 month forecast, as of 31 March 2010*[j.]




*Source*: GAVI Alliance Secretariat

j. The forecast information provided in the Semi-Annual Estimate is based on the best available information in an unconstrained supply environment.

## 6.3 UNICEF procurement: outflow of AMC donor funds

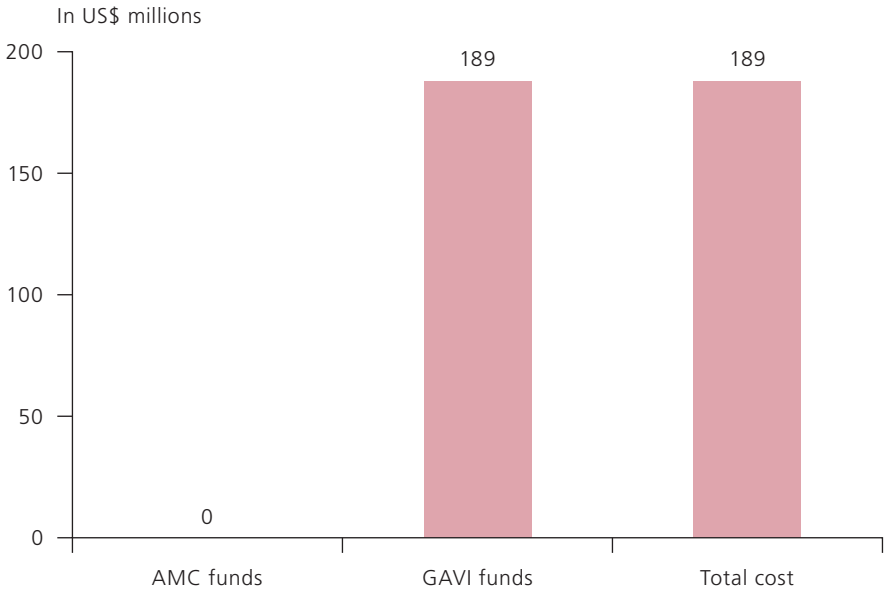
In the week beginning 22 March 2010, UNICEF entered into two provisional supply agreements, one with GSK and a second with Pfizer. The 60 million awarded doses equal a total Firm Order Commitment (FOC) requirement of US$ 189 million. Based on a tail price of US$ 3.50 per dose, the AMC-funded portion of the FOC balance amounts to US$ 94.5 million and the GAVI-funded portion of the balance contributes the remaining US$ 94.5 million.

On 9 February 2010, the GAVI Secretariat Executive Committee approved a budget of up to US$ 189 million for the FOC and also approved the creation of a Promissory Note to UNICEF for the AMC-funded portion of the FOC (see also section 7).

On 12 March 2010, UNICEF sent to GAVI a cash disbursement request for the full FOC balance. On 22 March 2010, GAVI transferred the entire FOC balance of US$ 189 million to the UNICEF procurement account as the AMC-funded portion of the FOC (i.e. one half of this, US$ 94.5 million) will be transferred by the World Bank one quarter prior to years 1, 2 and 3 of the supply agreements. GAVI is working with UNICEF on the creation of a Promissory Note which, once approved, will allow the release back to GAVI of US$ 94.5 million. For future supply agreements, the Promissory Note will require GAVI to transfer only the GAVI-funded portion of the FOC prior to the signature of the supply agreements.

Since procurement has yet to be commenced, the only funds disbursed to UNICEF as of 31 March 2010 relate to the FOC discussed above. Procurement is however expected to begin during the third quarter of 2010 which will require funds being transferred in the second quarter of 2010 (see Figure 9).

*Figure 9. Total cash disbursements to UNICEF's procurement account, as of 31 March 2010 (in US$ millions)*[k.]




*Source*: GAVI Alliance Secretariat

k. Represents the full Firm Order Commitment requirement. Funds have been transferred to the UNICEF procurement bank account for which UNICEF has the sole withdrawal right.

As at 31 March 2010, 13 countries have been approved by the GAVI Board to receive financial support for the procurement of pneumococcal vaccine for the 2010 programmatic year. This approved financial support amounts to US$ 265.1 million and translates into the procurement of 35.2 million doses of the pneumococcal vaccine. The co-financing level for these 13 countries ranges from US$ 0.15 to 0.35 per dose.

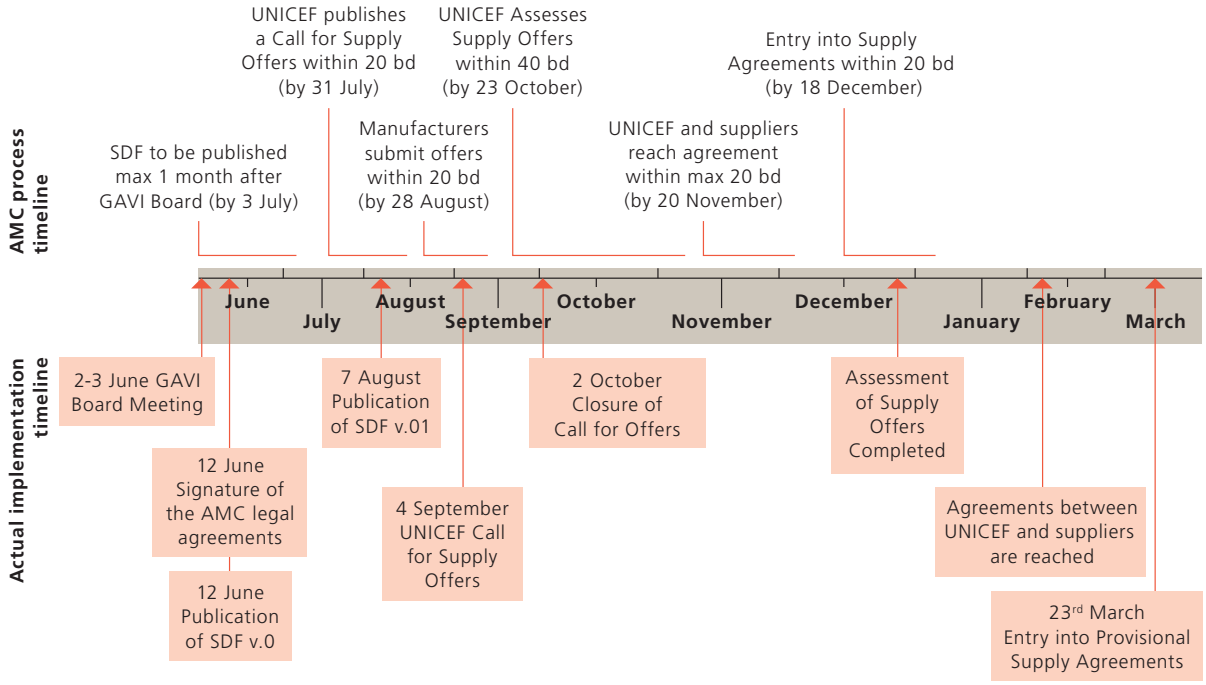
## 7. CHALLENGES AND FUTURE PRIORITIES

The initial months of implementation of the AMC for pneumococcal vaccines have presented a number of challenges, as outlined below. The AMC Secretariat is currently actively working to address these challenges, in collaboration with AMC stakeholders.

### Procedures and timeline

Relative to the AMC procurement timeline set out in the legal agreements, the first round of the call for offers to supply the pneumococcal vaccine was delayed (see Figure 10). This was due to the novelty of the tender procedures and of the supply agreements. Such delays are not expected for future rounds of Calls for Supply Offers. Nevertheless, in an attempt to avoid similar problems in the future, GAVI, UNICEF and the World Bank met on 12 February 2010 to re-assess the feasibility of the processes and timelines as set out in the AMC legal agreements. Following this meeting, the implementing agencies have elaborated proposed changes to procedures which will be discussed with AMC donors during the next annual meeting scheduled for June 2010 and thereafter will need to be reflected in revised legal agreements as appropriate.

*Figure 10. AMC procurement timeline against actual implementation timeline*




## Tiered pricing

Industry has drawn attention on several occasions throughout the development of the AMC to the potential difficulty in pricing for the same vaccines in non-GAVI-eligible countries. This issue is not specific to the pneumococcal AMC, but rather one that both GAVI and its suppliers face with other vaccines as well. In order to address this issue, a working group was set up consisting of representatives from the Pan American Health Organization, GAVI, the World Bank, WHO and UNICEF. This group has met several times over the past 18 months. Industry is also working to find innovative proposals to ensure that the concept of tiered pricing, which GAVI supports, is upheld while ensuring the widest possible access to vaccines for all children in the world.

## Promissory Note

After the submission of the first Quarterly Funding Request to the World Bank in September 2009, an implementation issue arose related to the timing of the transfer of the AMC portion of the Firm Order Commitment (FOC) to GAVI. GAVI is required to transfer both the GAVI and AMC portions of the FOC to the GAVI deposit account, with UNICEF as a sole beneficiary, prior to UNICEF's entry into supply agreements. According to donor requirements, however, AMC donor funds can be transferred to GAVI and then from GAVI to UNICEF only when physical procurement of vaccines is imminent.

To resolve this issue, GAVI proposed the use of a Promissory Note from GAVI to UNICEF guaranteeing the transfer of the AMC-funded portion of the FOC into the procurement bank account in time for UNICEF to meet its obligations in years 1, 2 and 3 of the supply agreement (instead of prior to the signature of the supply agreement). This means that GAVI would be required to transfer only the GAVI-funded FOC portion prior to signature of the supply agreements. As noted in section 6.3, in the case of the first two provisional supply agreements, the entire FOC balance, including the AMC-funded portion was transferred by GAVI to the GAVI deposit account with UNICEF as beneficiary. The reason for the transfer of the full FOC balance was to prevent a delay in the signature of the provisional supply agreements as the Promissory Note concept had yet to be finalised. As of the date of this report, the World Bank, UNICEF and GAVI are collaboratively working to agree upon and to complete the two Promissory Notes for the two provisional supply agreements entered into to date.

## Country demand

In November 2009, the GAVI Alliance Board revised GAVI's country eligibility policies and created a new set of Graduation Procedures. The revisions included:

- a new gross national income (GNI) per capita threshold to define annually country eligibility, increased from a per capita GNI of US$ 1,000 to US$ 1,500 (2003 values), to apply from 2011;
- a new threshold of 70% DTP3 coverage to define future access to new vaccine support (NVS);

In addition, the GAVI Board decided to postpone the funding decision of IRC-recommended new country proposals until at least June 2010.

These Board decisions have impacted the SDF because some countries that were assumed to adopt pneumococcal vaccines are likely to graduate before they are expected to adopt. For other countries, adoption may be delayed because of the increase in the minimum required DTP3 coverage to 70%: the WHO coverage projections that underlie the SDF suggest that a few countries will not be able to reach the 70% DTP3 coverage rate before they graduate. The duration of the "review" period and the reduction to a potential single round of IRC reviews in 2010 is also likely to result in changes in introduction dates and uptake by various countries.

Additionally, one third of the demand forecast for pneumococcal vaccines is represented by India. As discussed during the design phase of the AMC pilot, the ability and willingness of the government of India to adopt pneumococcal vaccines will have an impact on the ability of the project to achieve all its objectives.

A meeting was organised with AMC stakeholders on 26 March 2010 to discuss the above challenges and explore ways forward to address them. Other ad-hoc meetings with partners will be set up to discuss these issues as necessary.

## Sustainability

The AMC is intended to provide an additional source of funding for vaccine purchase. To this end, AMC funds are designed primarily to cover investment costs, thereby acting as stimulus for vaccine development and capacity scale-up while recognising that vaccine purchasers (GAVI and GAVI-eligible countries) will need to continue their functions as buyers of the final product at manufacturing cost. GAVI thus needs to continue to raise funds for the purchase of AMC pneumococcal vaccines in order to encourage companies to build manufacturing capacity and ensure that such manufacturing capacity is exploited for the benefit of the poor.

At the time of writing, GAVI has sufficient funding to cover its approved and endorsed commitments as well as all required extensions up to 2015. However, this represents only approximately 35% of the total expected financial requirements for pneumococcal vaccines over the 2010–2015 period. The pneumococcal fundraising need amounts to approximately $ 1 billion from present to 2015. Given the innovative nature of the AMC, and the tremendous potential of the pneumococcal vaccine, GAVI's donors are exerting every effort to secure the required resources.

## CONCLUSION

All AMC stakeholders have worked in close collaboration to successfully implement the pneumococcal AMC. Indeed, much has been accomplished since the signature of the legal agreements on 12 June 2009.

The AMC Secretariat is now up and running and is managing the administrative and programmatic work of the pneumococcal AMC in coordination with other implementing agencies. New members have reinforced the expertise of the IAC which is now also fully operational and well placed to accomplish its duties. The payment system between AMC donors, the World Bank, GAVI and UNICEF has been formalised and works effectively. In addition, since June 2009, the visibility of the pneumococcal AMC has significantly increased thanks to the development of additional communications materials that have allowed a better understanding of this innovative project.

Moreover, industry has given a strong and positive response to the AMC initiative. As a result of the first round of tender, agreements to supply 60 million doses of pneumococcal vaccines annually over the next 10 years were signed with GSK and Pfizer. GAVI expects the first vaccines to be delivered to countries as early as the third quarter of 2010. Compared to other vaccines, such as those against Haemophilus influenzae type B (HiB) and hepatitis B, this is a significant reduction in time between introduction in rich countries and introduction in developing countries. Thanks to the pneumococcal AMC, GAVI-eligible countries will benefit of a reduction in price of approximately 90%. At present, 70% of AMC funds remain unallocated and will be available for successive Calls for Supply Offers. Developing country manufacturers are also showing interest; for instance, the Serum Institute of India and Panacea Biotech Ltd have both registered to participate in the initiative. We hope to see further price reductions in the future thanks to the market entry of new manufacturers.

The AMC is a cornerstone of GAVI's ambitious plan to further impact child mortality rates globally. Pneumococcal disease takes the lives of 1.6 million people each year – including approximately 800,000 children before their fifth birthday. More than 90 percent of these deaths occur in developing countries. For the very first time in history, thanks to the AMC, a new vaccine could reach the world's poorest children the same year it reaches children in industrialised nations. GAVI estimates that the introduction of pneumococcal vaccine through the AMC could save approximately 900,000 lives by 2015 and up to seven million lives by 2030.

## SOURCES


1 Advance Market Commitment Working Group. *Making markets for vaccines. Ideas to action*. Washington, DC, Center for Global Development, 2005 (http://www.vaccineamc.org/files/markets4vaccines.pdf, accessed 8 April 2010).

2 *Background papers to Advance Market Commitments for vaccines: A new tool in the fight against disease and poverty. Report to the G8 Finance Ministers*. Rome, Ministry of the Economy and Finance, 2005 (http://www.vaccineamc.org/files/AMC_Tremonti%20Report.pdf, accessed 8 April 2010).

3 *Advance Market Commitment for pneumococcal vaccines. Implementation Working Group report presented to the AMC Donor Committee, July 10th 2008* Geneva, GAVI Alliance, 2008 (http://www.vaccineamc.org/files/AMC_IWG10JULY08_2_.pdf, accessed 8 April 2010).

4 *Consultation and advisory process.* Geneva, GAVI Alliance, 2009 (http://www.vaccineamc.org/files/amcconsultationreportdec.pdf, accessed 8 April 2010).

5 Schedule 1. *AMC Registered Manufacturer Agreement.* In: *AMC Procedures Memorandum*. Geneva, GAVI Alliance, 2009:11–19 (http://www.vaccineamc.org/files/procedures_memo.pdf, accessed 8 April 2010).

6 AMC Registered Manufacturer Registration procedures. In: *AMC Procedures Memorandum*. Geneva, GAVI Alliance, 2009:2 (http://www.vaccineamc.org/files/procedures_memo.pdf, accessed 8 April 2010).

7 Schedule 1: AMC Terms and Conditions. 5. GAVI Strategic Demand Forecast and Calls for Supply Offer. In: *AMC Offer Agreement*. Geneva, GAVI Alliance, 2009:10 (http://www.vaccineamc.org/files/amc_offer_agree.pdf, accessed 8 April 2010).

8 *Target Product Profile for the Advance Market Commitment for pneumococcal conjugate vaccines* Geneva, GAVI Alliance, 2010 (http://vaccineamc.org/files/TPP_Master_Table.pdf, accessed on 12 April 2010)

9 Summaries of IAC meetings are available via the AMC website, http://vaccineamc.org

10 *Advance Market Commitment for Pneumococcal Vaccines. Report of the Monitoring and Evaluability Study*. Geneva, GAVI Alliance, 2008 (http://www.vaccineamc.org/files/amc_mont_eval_stdy.pdf, accessed 8 April 2010).

11 *GAVI Pneumo AMC*. [GAVI video presented at the Signature Event, Lecce, Italy on 12 June 2009]. (http://www.rockhopper.tv/gavi/programmes.aspx?programmeid=247, accessed 8 April 2010).

12 *Moving forward with innovative financing* [programme broadcast on BBC World (as part of the Kill or Cure series) on 4 August 2009]. (http://www.rockhopper.tv/GAVI/, accessed 8 April 2010).

13 *Innovative financing* [GAVI video presented at the Partners Forum in Hanoi, Viet Nam, 16 November 2009]. (http://www.rockhopper.tv/gavi/programmes.aspx?programmeid=300, accessed 8 April 2010).

www.vaccineamc.org