

# EVERY CHILD COUNTS

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THE VACCINE ALLIANCE  
PROGRESS REPORT 2014

Supporting  
11 LIFE-SAVING VACCINES

Immunising  
500 MILLION CHILDREN

Transforming  
LIVES AND NATIONS

# SAVING CHILDREN'S LIVES AND PROTECTING PEOPLE'S HEALTH BY INCREASING ACCESS TO IMMUNISATION IN POOR COUNTRIES

2014 ANNUAL PROGRESS REPORT

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Published in July 2015, this report assesses the Vaccine Alliance's progress against goals and targets set out in our 2011–2015 strategy.

**Gavi, the Vaccine Alliance** brings together developing country and donor governments, the World Health Organization, UNICEF, the World Bank, the vaccine industry in both industrialised and developing countries, research and technical agencies, civil society organisations, the Bill & Melinda Gates Foundation and other private philanthropists.



BILL & MELINDA  
GATES foundation



## 73 COUNTRIES ARE DRIVING THEIR IMMUNISATION PROGRAMMES WITH GAVI SUPPORT

Afghanistan, Angola, Armenia, Azerbaijan, Bangladesh,  
Benin, Bhutan, Bolivia (Plurinational State of), Burkina  
Faso, Burundi, Cambodia, Cameroon, the Central  
African Republic, Chad, the Comoros, the Congo, Côte  
d'Ivoire, Cuba, the Democratic People's Republic of  
Korea, the Democratic Republic of the Congo, Djibouti,  
Eritrea, Ethiopia, the Gambia, Georgia, Ghana, Guinea,  
Guinea-Bissau, Guyana, Haiti, Honduras, India,  
Indonesia, Kenya, Kiribati, Kyrgyzstan, the Lao  
People's Democratic Republic, Lesotho, Liberia,  
Madagascar, Malawi, Mali, Mauritania,  
Mongolia, Mozambique, Myanmar, Nepal,  
Nicaragua, the Niger, Nigeria, Pakistan,  
Papua New Guinea, the Republic of  
Moldova, Rwanda, São Tomé and Príncipe,  
Senegal, Sierra Leone, Solomon Islands,  
Somalia, South Sudan, Sri Lanka, the  
Sudan, Tajikistan, Timor-Leste, Togo,  
Uganda, Ukraine\*, the United Republic  
of Tanzania, Uzbekistan, Vietnam,  
Yemen, Zambia, Zimbabwe

\*Currently not receiving Gavi support.

## THE VACCINE ALLIANCE IS FUNDED BY

The A & A Foundation, Absolute Return for Kids (ARK), Anglo American plc, Australia, The Bill & Melinda Gates Foundation, Brazil, Canada, The Children's Investment Fund Foundation, Comic Relief, Denmark, Dutch Postcode Lottery, ELMA Vaccines and Immunization Foundation, The European Commission, France, Germany, His Highness Sheikh Mohammed bin Zayed Al Nahyan, India, Ireland, Italy, Japan, JP Morgan, "La Caixa" Foundation, LDS Charities, Lions Clubs International Foundation, Luxembourg, the Netherlands, Norway, The OPEC Fund for International Development (OFID), the Republic of Korea, the Russian Federation, South Africa, Spain, Sweden, the United Kingdom, the United States of America, UPS, Vodafone

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“We are pleased to be working with Gavi to ensure our children – including those living in the most remote and inaccessible areas – are protected with modern, effective vaccines.”

H.E. Mr Ibrahim Boubacar Keïta  
President of the Republic of Mali



Kenya  
Gavi / 2013 / Evelyn Hockstein

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# THE GAVI MODEL AT WORK

Saving lives, improving health, strengthening economies



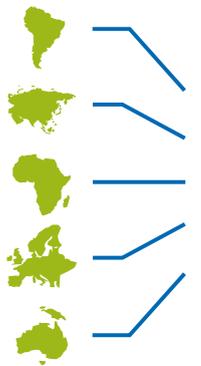
19 million children miss out on the most basic package of vaccines.

## INEQUITY

Less than 5% of children in Gavi-supported countries receive all 11 vaccines recommended by WHO for infants everywhere.

### Leveraging economies of scale

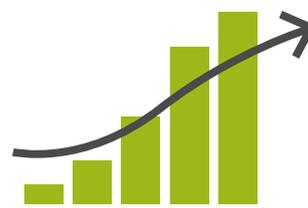
Pooling and responding to demand for vaccines and health system support from the world's poorest countries.



### Long-term funding

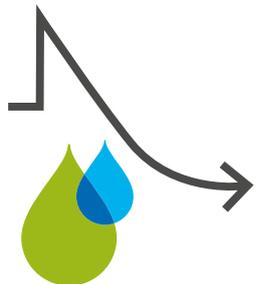
Working with donors and countries to secure long-term, predictable funding for programmes.

Donor contributions and country co-financing of vaccines.



### Shaping vaccine markets

Creating healthy vaccine markets. Ensuring appropriate and affordable vaccines.



THE VACCINE ALLIANCE:

73 IMPLEMENTING COUNTRIES

IMPLEMENTING COUNTRIES AND DONORS

VACCINE MANUFACTURERS

## What we do

Gavi, the Vaccine Alliance is a global partnership bringing together public and private sectors with the shared goal of creating equal access to vaccines for all children.

As a public-private partnership, our Alliance represents all the key stakeholders in global immunisation: implementing and donor governments, the World Health Organization, UNICEF, the World Bank, the Bill & Melinda Gates Foundation, civil society, the vaccine industry and private companies.

Drawing on the individual strengths of its members, Gavi pools country demand, guarantees long-term, predictable funding and brings down prices, helping to ensure that generations of children in poor countries do not miss out on life-saving vaccines.



Find out more about the Gavi model in action in our features section **p52**



## Accelerating access to vaccines

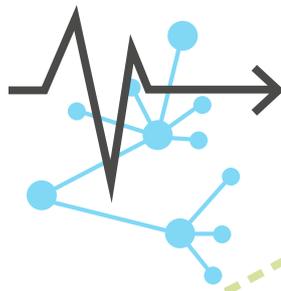
Introducing life-saving vaccines through routine immunisation and campaigns:

-  Pentavalent
-  Pneumococcal
-  Rotavirus
-  Measles
-  Measles-rubella
-  Meningitis A
-  Yellow fever
-  Human papillomavirus
-  Inactivated polio
-  Japanese encephalitis
-  Oral cholera

## Strengthening vaccine delivery platforms

Innovative solutions to strengthen health systems and ensure vaccines reach people everywhere:

Service delivery, health worker training, engaging communities and parents, supply chain management, health information systems.



## Sustaining immunisation

As countries become more prosperous, they invest more in their immunisation programmes.



## EQUITY

Eventually, countries are able to fully finance their immunisation programmes without Gavi support.

**500 MILLION** children immunised to date, saving 7 million lives.

More and more children have access to all 11 vaccines recommended by WHO for infants in all countries.

VACCINE ALLIANCE PARTNERS

HEALTHY COUNTRIES, STRONGER ECONOMIES

## Partnership

Since 2000, Gavi's public-private sector partnership has combined the technical expertise of the development community with the business know-how of the private sector.

Our partners include:

- **WHO** regulates vaccines and supports countries in vaccine introductions, strengthening coverage and data quality.
- **UNICEF** procures vaccines and supports countries in maintaining their cold chain, improving access and collecting data.
- **The World Bank** helps pioneer innovative finance mechanisms like the International Finance Facility for Immunisation (IFFIm) and the Advance Market Commitment (AMC).
- **Bill & Melinda Gates Foundation** and other private-sector partners provide funding and expertise.
- **Developing country governments** identify their immunisation needs, co-finance and implement vaccine programmes.
- **Civil society organisations** help ensure that vaccines reach every child.
- **Vaccine manufacturers** guarantee vaccine quality, supply and affordability for developing countries.
- **Donor governments** make long-term funding commitments.

# Q&A WITH GAVI'S EXECUTIVE LEADERS

## Gavi CEO, Seth Berkley, and Board Chair, Dagfinn Høybråten

Gavi CEO Seth Berkley and Board Chair Dagfinn Høybråten look back on one of the most significant years in Gavi's 15-year history, including the highs of the Berlin Pledging Conference and reaching our vaccine introduction targets and the challenge of the Ebola emergency.

### What was the highlight of the year?

**Seth:** For me polio was one of the biggest highlights of 2014. Having been in New Delhi in January just before India celebrated three years since its last case of wild polio, a truly historic milestone in the eradication of this disease, and then later in the same year we had the first Gavi-supported launch of the inactivated polio vaccine (IPV) in Nepal. By the end of the year 64 countries had applied for IPV support from Gavi. This is important, not just in terms of rising to the challenge of the Polio Endgame – and having at least one dose of IPV introduced into immunisation programmes in all Gavi-supported countries – but also because it is likely to have a broader positive impact on coverage by helping to increase access to routine immunisation.

“Another record-breaking year in terms of the number of launches, with on average one launch per week.”

**Dagfinn Høybråten**  
Board Chair, Gavi

**Dagfinn:** With IPV we collectively took a new step towards polio eradication. However it was not the only new vaccine. In 2014 we also saw for the first time Gavi offering support for Japanese encephalitis and cholera vaccines. In fact it proved to be another record-breaking year in terms of the number of launches, with on average one launch per week. Within the space of a week we met our introduction targets for both pneumococcal and rotavirus vaccines, and in July, despite major internal conflicts, South Sudan became the 73rd and final Gavi-supported country to introduce the 5-in-1 pentavalent vaccine. So many highlights!

### What posed the greatest challenge?

**Dagfinn:** With 20 Gavi-supported countries approaching graduation, one of the greatest challenges we now face is to ensure that they are adequately supported by helping them to plan and prepare for this difficult transition phase. Assessment missions in 2014 revealed that the first four of these countries – Bhutan, Honduras, Mongolia and Sri Lanka – are on track to be fully self-financing their immunisation programmes by 2016. Adding to the challenge will be the higher cost of vaccines for the next cohort of graduating countries, due to the introduction of more Gavi-supported vaccines and because of population increases. However, Gavi will keep supporting these countries by negotiating preferential vaccine prices, to help ensure that each transition is sustainable.

**Seth:** Strengthening health systems presented another perhaps more familiar challenge. This is often one of the Alliance's toughest jobs, but in 2014 demand for new vaccine introductions placed additional strain on country supply chains, and this was reflected by the number of applications dedicated to improving supply chains. In addition to modernising ageing equipment comes the need for improved training, planning and data quality, among other things. To help ensure this translates into positive immunisation outcomes Gavi now uses performance-based funding, where a portion of the funding is determined by coverage and equity indicators. By the end of 2014 a third of all health system strengthening grants were awarded in this way.

### What was Gavi's proudest moment of 2014?

**Seth:** The people of the Vaccine Alliance make me proud every day, but in 2014 I think Gavi really outdid itself by rising to the horrific challenge of Ebola. Although Gavi does not normally handle emergency response, as the terrible situation in West Africa continued to worsen it became increasingly clear that there was a role for Gavi to play, and its response was rapid and resolute. In December the Board approved plans to fill a significant funding gap in the development of Ebola vaccines. By committing funds for vaccine procurement and towards vaccine roll-out, rebuilding of health systems and to bring routine immunisation levels back up, the hope was to help bring an end to the current crisis but also to prevent future outbreaks through the creation of a vaccine stockpile.



Find out more about immunisation programmes and the difference they are making  
**p24**



**Dagfinn:** Yes, I think Ebola has made us all re-evaluate how we prepare for and deal with epidemics, and also to take a fresh look at how vaccine development might be improved. But for me, my proudest moment has to be attending the launch of the human papillomavirus (HPV) vaccine in Lao and seeing schoolgirls there receive the same protection as my granddaughter against cervical cancer, a terrible disease. But also let us not forget the moment when the Vaccine Alliance reached a global health milestone of vaccinating 500 million children since its inception in 2000, which will prevent 7 million deaths. A truly proud moment for us all.

### How is Gavi gearing up for the period ahead?

**Seth:** A big part of 2014 involved laying the foundations for Gavi's strategy for 2016–2020. This new strategy, the third to be approved by the Board since Gavi was founded, reflects and builds upon the dramatic increase in the number of new vaccines that have been introduced to countries by focusing on the sustainable increase in coverage and equity. The simple aim is to save more children's lives by increasing access to these vaccines and addressing the vast inequities that exist in countries. According to the latest figures, routine immunisation coverage has risen in Gavi-supported countries by three points over the last two years, bringing it up to 81% in 2014. But, while that is great news, with only 5% of children in Gavi-supported countries receiving all 11 World Health Organization recommended vaccines, we still have some way to go.

**Dagfinn:** I think it's fair to say that most people will also remember 2014 as being a critical phase in the run-up to replenishment. 2014 saw a wave of support building to ensure Gavi was fully funded for a further five years from 2016–2020; from the World Economic Forum Africa in Abuja, Nigeria, where African leaders signed a declaration pledging their support, to the Brussels Gavi replenishment kick-off meeting, the United Nations General Assembly in New York where Norway unveiled its intentions, or the Francophonie Summit in Senegal, in November, where Canada announced that it was doubling its support for Gavi

**“The simple aim is to save more children's lives by increasing access to these vaccines and addressing the vast inequities that exist in countries.”**

**Seth Berkley**  
CEO Gavi, the Vaccine Alliance

and then finally culminating with Berlin in January when the world came together to fund our plans to vaccinate another 300 million children and save between 5 and 6 million lives by 2020. Hosted by Chancellor Merkel at the launch of Germany's G7 presidency, there we exceeded our target of US\$ 7.5 billion, thus securing a healthy future for millions of children. For me it was a true Gavi moment and a day many of us will never forget.

**Left:** Dagfinn Høybråten, Gavi Board Chair, attends the launch of pentavalent vaccine in Cambodia.

**Gavi / 2013 / Luc Forsythe**

**Right:** Dr Seth Berkley, Gavi CEO, visiting a health clinic in Mozambique.

**Gavi / 2012 / Eva-Lotta Johansson**

# CONTRIBUTIONS TO GAVI, THE VACCINE ALLIANCE

## Cash received by Gavi as of 31 December 2014 (US\$ millions)

Donor governments and the European Commission	2014	Total 2000–2014
Australia	88.6	270.8
Canada	36.7	263.3
Denmark		45.7
European Commission		70.4
France	6.8	115.0
Germany	60.3	161.0
India	2.0	2.0
Ireland	0.7	42.0
Japan	8.7	36.2
Luxembourg	1.1	10.9
Netherlands	39.8	330.6
Norway	147.6	980.3
Republic of Korea	1.0	3.0
Spain		43.2
Sweden	49.8	336.0
United Kingdom	302.6	1,179.9
United States of America	175.0	1,179.5
<b>Subtotal</b>	<b>920.8</b>	<b>5,069.7</b>

Foundations, organisations and corporations	2014	Total 2000–2014
Bill & Melinda Gates Foundation	225.6	2,254.4
His Highness Sheikh Mohammed bin Zayed Al Nahyan		33.0
OPEC Fund for International Development (OFID)	0.5	1.1
<b>Subtotal</b>	<b>226.1</b>	<b>2,288.5</b>

Foundations, organisations and corporations	2014	Total 2000–2014
A & A Foundation	0.5	1.0
Anglo American plc		3.0
Absolute Return for Kids (ARK)		1.6
Comic Relief	5.8	15.9
Dutch Postcode Lottery		3.2
ELMA Vaccines and Immunization Foundation	2.0	2.0
“la Caixa” Foundation	1.8	25.5
LDS Charities	2.0	6.0
Lions Clubs International	7.5	7.5
JP Morgan		2.4
The Children’s Investment Fund Foundation (UK)	12.8	19.3
Other private <sup>a</sup>	1.8	16.8
<b>Subtotal</b>	<b>34.2</b>	<b>104.1</b>
IFFIm proceeds <sup>b</sup>		<b>2,475.7</b>
AMC proceeds <sup>c</sup>	237.7	<b>846.7</b>
<b>Total contributions</b>	<b>1,418.8</b>	<b>10,784.4</b>

<sup>a</sup>Includes some contributions received via the Gavi Campaign.

<sup>b</sup>IFFIm proceeds: cash disbursements from the World Bank: to the GFA (2006–2012), to Gavi (2013–2014).

<sup>c</sup>AMC proceeds: cash transfers from the World Bank to Gavi.



Learn how our funding model lays foundations for sustainable immunisation programmes  
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## Innovative finance mechanisms: AMC and IFFIm

AMC commitments	2009–2020
Italy	635.0
United Kingdom	485.0
Canada	200.0
Russian Federation	80.0
Bill & Melinda Gates Foundation	50.0
Norway	50.0
<b>Total</b>	<b>1,500.0</b>

IFFIm commitments <sup>a</sup>	Length of commitment (years)	Amount	Total (equivalent US\$ millions <sup>b</sup> )
United Kingdom	20	£ 1,380.0	2,979.9
	20	£ 250.0	
France	15	€ 372.8	1,719.6
	19	€ 867.2	
Italy	20	€ 473.5	635.0
	15	€ 25.5	
Norway	5	US\$ 27.0	264.5
	10	NOK 1,500.0	
Australia	20	A\$ 250.0	256.1
Spain	20	€ 189.5	240.4
Netherlands	7	€ 80.0	114.4
Sweden	15	SEK 276.2	37.7
South Africa	20	US\$ 20.0	20.0
<b>Total</b>			<b>6,267.6</b>

<sup>a</sup>Brazil made a new pledge to IFFIm in 2011. Negotiations are currently under way to formally sign this grant agreement.

<sup>b</sup>IFFIm pledges by donors in US\$ and in non-US\$ equivalent amounts of national currency pledges calculated using prevailing exchange rates around the time of the signing of the grant agreement.

## Country co-financing commitments

	2014	2000–2013
Voluntary payments <sup>c</sup>		31.0
Co-financing <sup>d</sup>	84.0	272.0

<sup>c</sup>Voluntary payments prior to the implementation of the co-financing policy (2000–2007).

<sup>d</sup>Co-financing since the implementation of the co-financing policy (2008–2014).

# MEASURING OUR PROGRESS IN 2014

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This section reports on the Vaccine Alliance's performance against our mission and strategic goal indicators for the 2011–2015 period. It also includes updates on the many other initiatives that are in place to further our mission.

## OUR MISSION

Saving children's lives → p12

## THE VACCINE GOAL

Accelerating access to new and underused vaccines → p14

## THE HEALTH SYSTEMS GOAL

Strengthening vaccine delivery platforms → p26

## THE FINANCING GOAL

Securing long-term, predictable funding → p36

## THE MARKET SHAPING GOAL

Creating healthy vaccine markets → p46





One of the 21 million children that the United Republic of Tanzania is aiming to protect against measles and rubella during a week-long campaign in October 2014.

Gavi / 2014 / Karel Prinsloo

# OUR MISSION INDICATORS

## → Ahead of all three targets

Gavi is on track to achieve or surpass its mission goals for 2015

**Gavi relies on three indicators, each with specific targets, to measure progress towards fulfilling our 2011–2015 mission.**

**With just 12 months to go until the end of our strategic period, check each graph and its analysis to see how we are performing against our three mission goals.**

Using the under-five mortality rate to measure our progress reflects Gavi's commitment to helping countries achieve the fourth Millennium Development Goal: to reduce by two thirds the under-five mortality rate between 1990 and 2015. This indicator calculates the probability of a child born in a specific year or period in the 73 Gavi-supported countries dying before reaching the age of five.

Our second mission goal indicator estimates the impact of 10 Gavi-supported vaccines on mortality. We calculate the number of future deaths averted in Gavi-supported countries by our vaccine portfolio: pentavalent, pneumococcal, rotavirus, yellow fever (campaign and routine), meningitis A (campaign and routine), Japanese encephalitis (campaign and routine), human papillomavirus (HPV), measles second dose, measles-rubella campaigns and rubella.

To understand how much our work contributes to increasing routine immunisation in low-income countries, we also calculate the number of children that receive Gavi-supported vaccines through the routine system. To ensure we don't double-count children who receive more than one dose, we base our calculation on the total number of children reached with the last recommended dose of any Gavi-supported vaccine.

Vaccines included in this indicator are: hepatitis B, *Haemophilus influenzae* type b, pneumococcal, rotavirus, measles second dose, routine yellow fever, HPV, rubella, routine meningitis A and routine Japanese encephalitis.

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## REDUCED CHILD MORTALITY

Child mortality in Gavi-supported countries fell from 77 to 69 deaths per 1,000 live births between 2010 and 2013, with vaccines responsible for reducing mortality from vaccine-preventable diseases. The acceleration in the number of new vaccine introductions in recent years has made a major contribution to the unprecedented rate of reduction in under-five mortality.

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## FUTURE DEATHS AVERTED

It is estimated that in the four-year period from the start of 2011 to the end of 2014, use of Gavi-supported vaccines will have averted approximately 3.1 million future deaths. The Vaccine Alliance expects to meet its target of helping to avert 3.9 million future deaths from the beginning of 2011 to the end of 2015. Gavi-funded measles vaccine campaigns conducted between 2013 and 2015 are projected to avert an additional 500,000 future deaths.

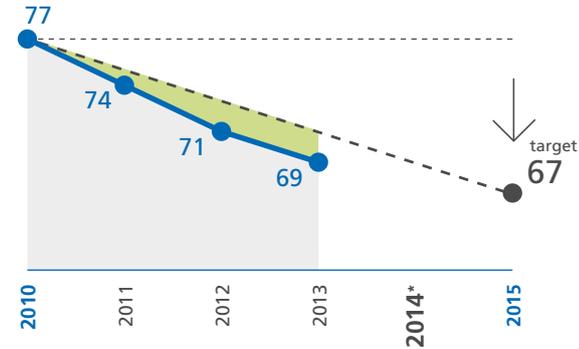
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## CHILDREN IMMUNISED

Relative to the number in 2010, an additional 207 million children have been immunised with Gavi-supported vaccines (by the end of 2014). Gavi expects to meet its target of immunising an additional 243 million children by the end of 2015 across all of its approved vaccine programmes.

## Under-five mortality rate

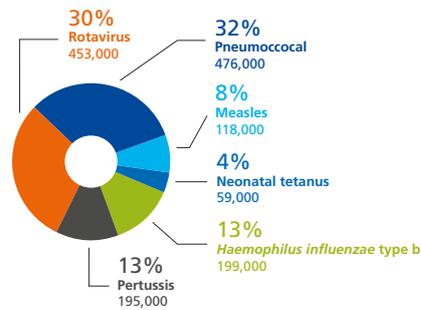
In Gavi-eligible countries (per 1,000 live births)



\*The 2014 value will be available in September 2015 when the updated under-five mortality rate estimates are published.

Source: The United Nations Inter-agency Group for Child Mortality Estimation, United Nations Population Division; World Population Prospects

## Global number of child deaths due to vaccine-preventable diseases



Source: WHO, UNICEF

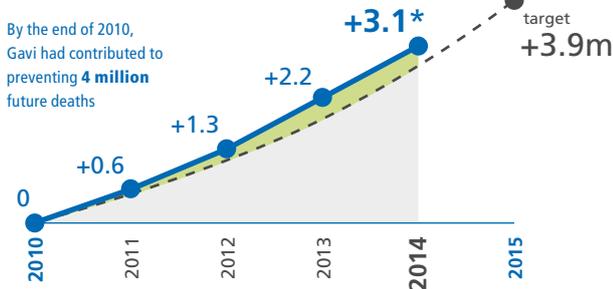


Read how Gavi is accelerating access to life-saving vaccines  
p16

## Number of future deaths averted

(millions)

By the end of 2010, Gavi had contributed to preventing **4 million** future deaths



\*Projection

Source: Joint impact modelling by Gavi, the Vaccine Alliance and the Bill & Melinda Gates Foundation

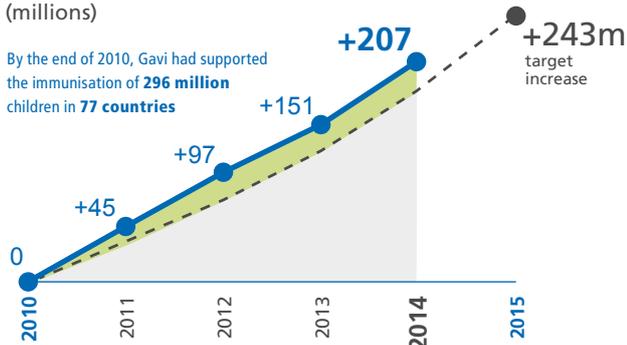


3.1 million = the combined total number of children born each year in Canada, France, Germany, Spain and the UK.

## Number of children immunised

(millions)

By the end of 2010, Gavi had supported the immunisation of **296 million** children in **77 countries**



Source: WHO/UNICEF Estimates of National Immunization Coverage, United Nations Population Division; World Population Prospects

In 2014, 2 out of 5 children born worldwide were immunised with Gavi-supported vaccines.



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015



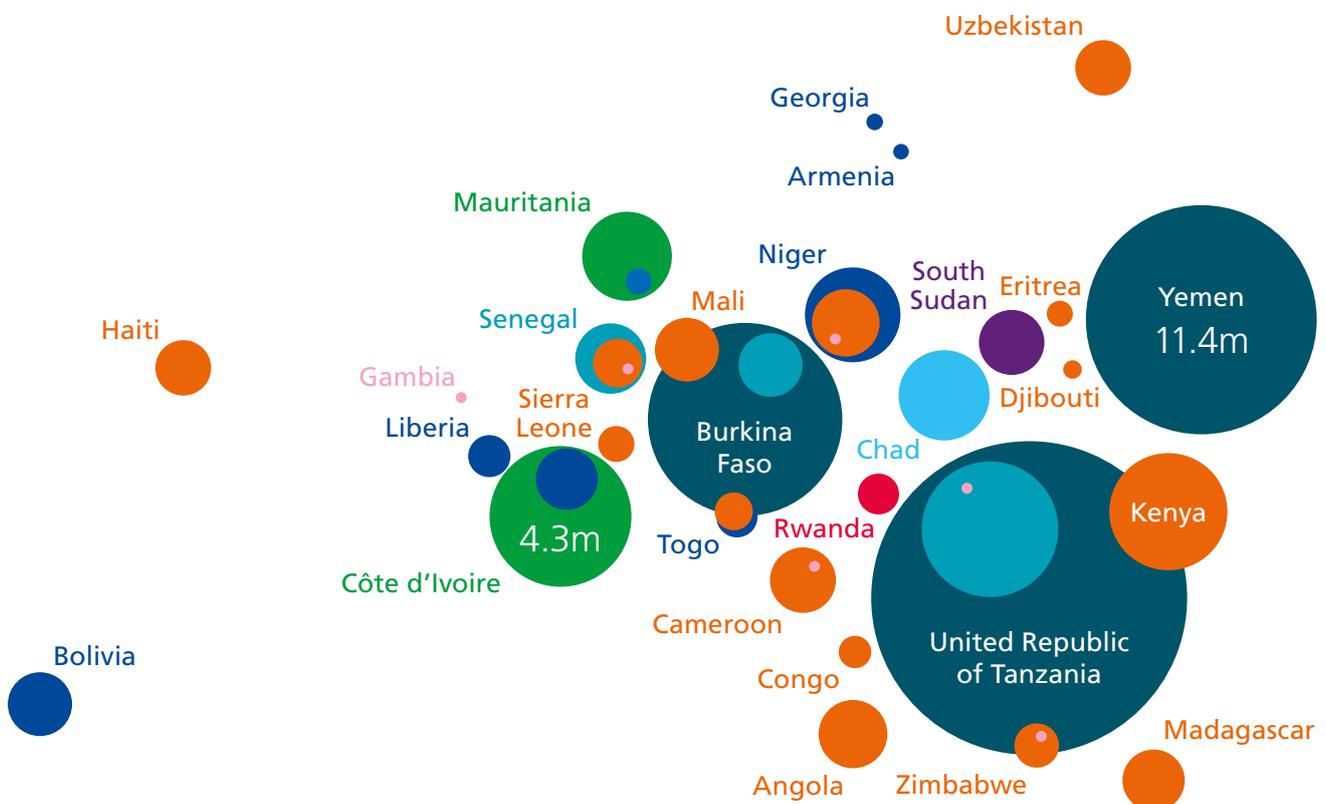
Read about the challenge of increasing coverage rates for pentavalent, pneumococcal and rotavirus vaccines  
p16-18



# ACCELERATING ACCESS TO LIFE-SAVING VACCINES

- Gavi surpasses vaccine introduction targets for 2015 ahead of schedule  
Pentavalent vaccine introduced in all 73 Gavi-supported countries
- Vaccine Alliance starts support for three new vaccines  
Inactivated polio vaccine (IPV), Japanese encephalitis vaccine, oral cholera vaccine stockpile
- Alliance fast tracks IPV programme  
64 countries have applied for Gavi support in 12 months

## Gavi-supported vaccine launches and new campaigns in 2014



\*Refers to the size of the annual birth cohort (for vaccine introductions) or the target population (for vaccine campaigns).

“Never in history has progress in health been faster than during the last four years and Gavi has been a major contributor. This should inspire even harder work.”

**Erna Solberg**  
Prime Minister of Norway



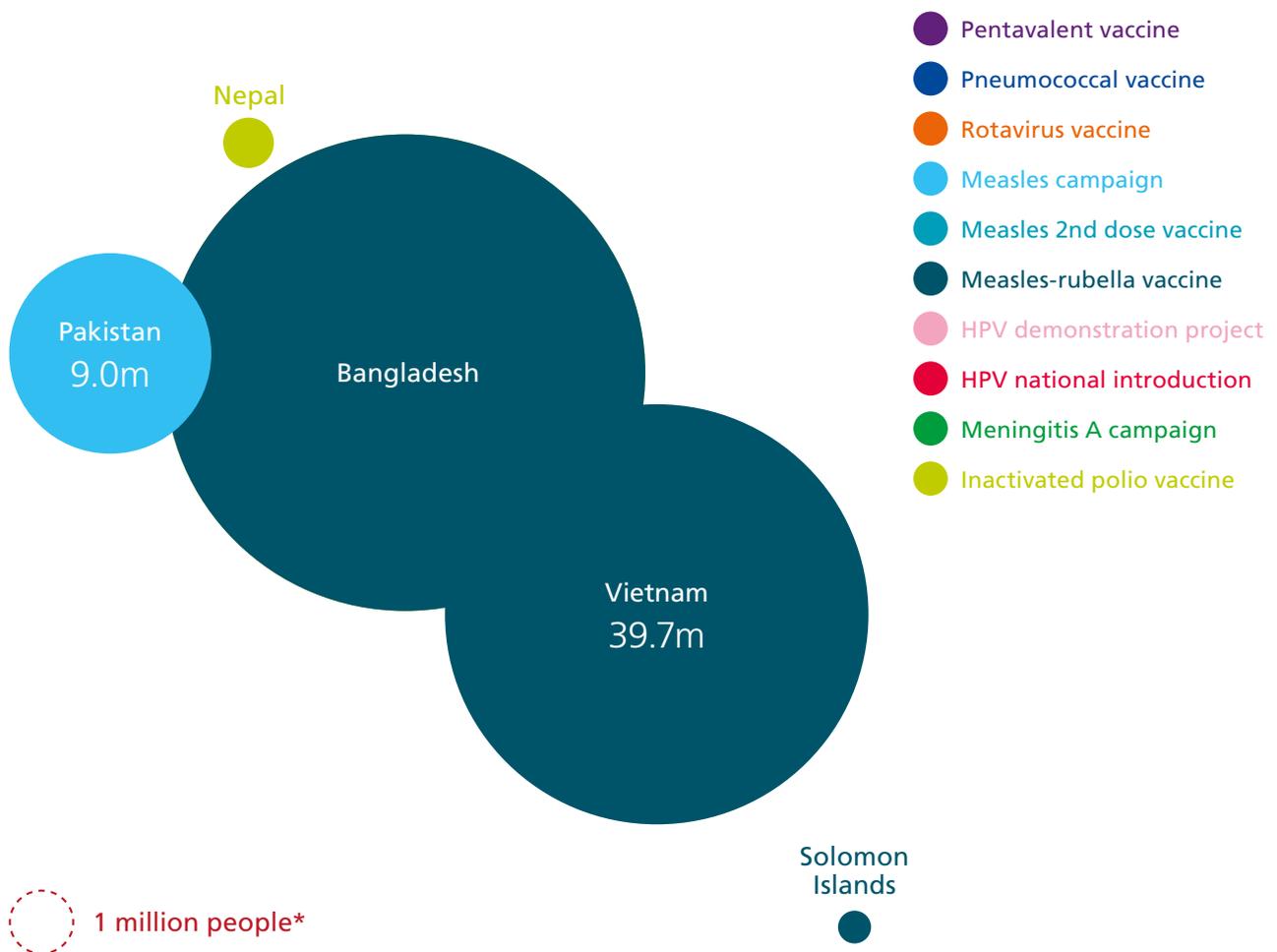
From 2000 to the end of 2014, the Gavi model has helped countries immunise 500 million children  
p4-5

Gavi, the Vaccine Alliance continues to respond to sustained demand for vaccines from developing countries. In a third successive year of record-breaking numbers, our partners supported nearly one vaccine introduction every week.

The trend ensured that we surpassed our 2015 introduction targets for pentavalent, pneumococcal and rotavirus vaccines more than one year in advance. The high level of country introductions will continue apace next year after the majority of Gavi-supported countries applied to introduce inactivated polio vaccine (IPV) by the end of 2015 – as recommended under the Polio Eradication and Endgame Strategic Plan.

In this section, we provide updates on all 11 new and underused vaccines included in the Gavi portfolio, including the first year of support for IPV, Japanese encephalitis and oral cholera vaccines.

As we start to focus on ensuring all 11 WHO-recommended vaccines reach every child, we also look at challenges to increasing coverage and how introducing state-of-the-art vaccines is driving improvements in the management of national immunisation programmes.



Source: Gavi, the Vaccine Alliance, 2014, United Nations Population Division, Department of Economic & Social Affairs, World Population Prospects

# VACCINE INTRODUCTION TARGETS REACHED AHEAD OF SCHEDULE

The 2011–2015 strategic period measures our progress against introduction and coverage targets for the three main vaccines in countries eligible for Gavi support: pentavalent, pneumococcal and rotavirus. Together, these vaccines provide protection against the major causes of the world’s biggest child killers – meningitis, pneumonia and diarrhoea – as well as reducing the risk of liver cancer by protecting against hepatitis B infection.

In the second half of 2014, we surpassed our introduction targets for all three vaccines – evidence of the sustained demand for new vaccines across Gavi-supported countries. Despite this, the percentage of children reached with a full course of each of these vaccines continues to track behind our annual targets, mainly due to supply shortages and delays in some countries’ readiness for introduction. However, by working closely with our partners, countries are starting to get back on trajectory – albeit with a delay.

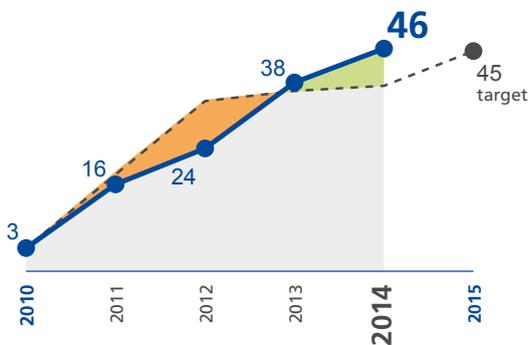
Introductions in 2014:

**Armenia, Bolivia, Côte d’Ivoire, Georgia, Liberia, Niger, Nigeria, Togo**

Number of children reached from programme start to 2014:  
**47 million**

## Number of country introductions

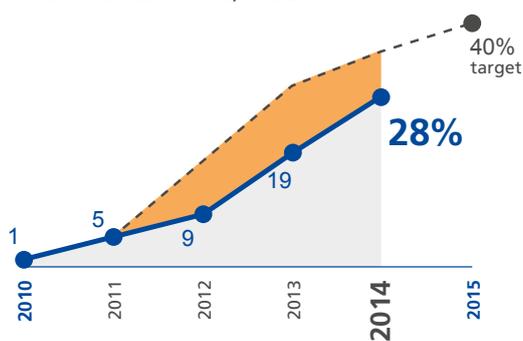
Pneumococcal vaccine



Source: Gavi, the Vaccine Alliance, 2014

## Coverage (%)

Pneumococcal vaccine, 3rd dose



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

## Pneumococcal vaccine

Helps prevent the primary cause of bacterial pneumonia, a leading cause of vaccine-preventable deaths among under-fives.

Gavi supports: **routine immunisation**

### 2015 target of 45 introductions achieved more than one year ahead of schedule

In 2014, country demand for pneumococcal vaccine continued to increase rapidly with eight countries introducing the vaccine. When Georgia added the vaccine to its routine immunisation schedule in November, Gavi met its 2015 target of supporting 45 introductions – 13 months ahead of schedule.

Close cooperation among our partners ensured that Nigeria was ready to introduce the pneumococcal vaccine before the end of 2014, pushing the total number of Gavi-supported launches up to 46. WHO estimates that to date 47 million children have been protected against pneumococcal disease with Gavi support. The disease claims the lives of more than half a million children under five each year.

As Gavi-supported countries continued to roll out the pneumococcal vaccine, coverage levels increased to 28% in 2014. However, coverage is still falling behind annual targets for the 2011–2015 period, largely as a result of supply issues in the early years of the programme and delayed introductions in countries with large populations. Vaccine Alliance partners are working to ensure that supply remains stable, that adequate support is provided for remaining introductions and that coverage is sustained over the long term. In most countries, pneumococcal vaccine coverage reaches the same level as pentavalent coverage rates within two years of its introduction.



Read about pneumococcal vaccine’s impact in Kenya in our Living proof feature **p64-65**



## Gavi supports 11 life-saving vaccines



See the geography of all Gavi-supported vaccine introductions in 2014  
p14

Introductions in 2014:

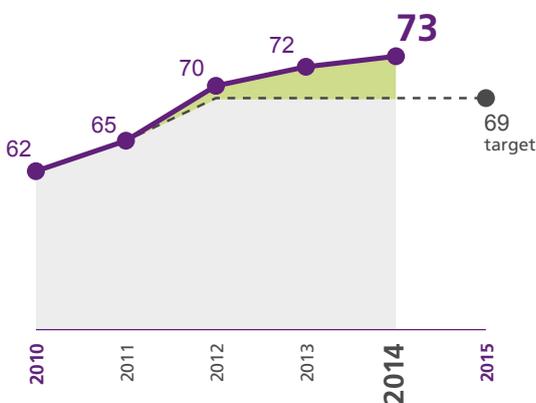
### South Sudan

Number of children reached from programme start to 2014:

**237 million**

### Number of country introductions

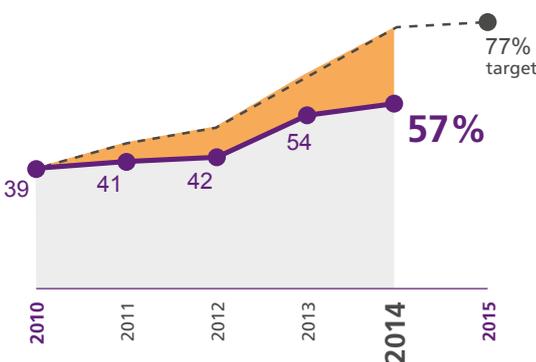
Pentavalent vaccine



Source: Gavi, the Vaccine Alliance, 2014

### Coverage (%)

Pentavalent vaccine, 3rd dose



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

## Pentavalent vaccine

Protects against five major infections in one shot: diphtheria-tetanus-pertussis (DTP), hepatitis B and *Haemophilus influenzae* type b (Hib).

Gavi supports: **routine immunisation**

### South Sudan introduction sees Gavi go well beyond its original target and reach all Gavi-supported countries

In July, South Sudan became the 73rd and final Gavi-supported country to introduce the five-in-one pentavalent vaccine. In 2000, fewer than 10% of low-income countries had introduced hepatitis B vaccine into their national immunisation schedules while less than 5% had added the Hib vaccine.

Fifteen years later, our partners have exceeded one of the Vaccine Alliance's original objectives and achieved our goal to ensure all poor countries have access to these life-saving vaccines as part of the pentavalent vaccine. Hepatitis B infection causes hundreds of thousands of deaths every year through acute and chronic illnesses, including liver cancer and cirrhosis, while the Hib bacterium causes meningitis, pneumonia and septicaemia.



Mother holding her child at the launch of South Sudan's pentavalent vaccine introduction.

GAVI / 2014 / Mike Pflanz

The pentavalent success story reflects the strengths of our public-private partnership model. UNICEF's Supply Division has met demand for over one billion doses. WHO and UNICEF have helped countries make informed decisions about when and how to introduce the vaccine. Industry has increased annual global production capacity from 20 to 400 million doses. Innovation in improved formulation and packaging of the five-in-one vaccine has significantly reduced the strain on poor countries' immunisation cold chains.

This is especially important in conflict-affected and fragile countries such as the Democratic People's Republic of Korea, DRC and Somalia, where the capacity of health systems is often limited.

Even as we approached the introduction target for pentavalent, we had already started to shift our attention to improving coverage. This is estimated at 57% for 2014, below our 77% target for the end of 2015. Progress depends mainly on the successful completion of pentavalent's introduction in India, which accounts for 26 million newborns each year. The roll-out is expected to be completed by early 2016.



Read how India, Indonesia and Nigeria, which together account for more than 45% of the birth cohort in Gavi-supported countries, all introduced new vaccines in 2014  
p68



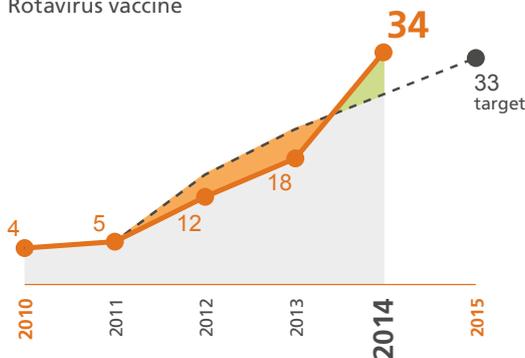
# ROTAVIRUS AND HPV VACCINES PROVIDE VITAL PROTECTION

Introductions in 2014:

**Angola, Cameroon, the Congo, Djibouti, Eritrea, Haiti, Kenya, Madagascar, Mali, Mauritania, Niger, Senegal, Sierra Leone, Togo, Uzbekistan, Zimbabwe**

Number of children reached from programme start to 2014:  
**20 million**

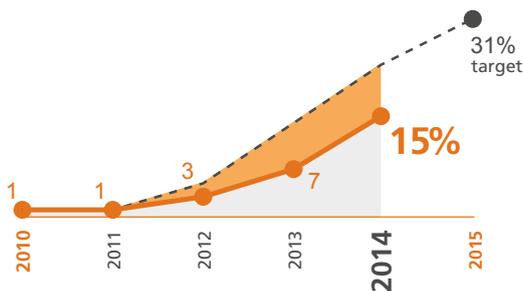
## Number of country introductions Rotavirus vaccine



Source: Gavi, the Vaccine Alliance, 2014

## Coverage (%)

Rotavirus vaccine, 3rd dose



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

## Rotavirus vaccine

Protects against the leading cause of severe diarrhoea which kills over 400,000 children each year.

Gavi supports: **routine immunisation**

### Record number of introductions for a calendar year

Recognising the importance of rotavirus vaccine in preventing diarrhoeal deaths in young children, more countries (16) introduced this life-saving intervention in 2014 than ever before. It represented the largest number of introductions of a single vaccine in a calendar year in Gavi's history and meant we surpassed our 2015 target of 33 introductions.

Both Niger and Togo added to the momentum with simultaneous introductions of rotavirus and pneumococcal vaccines, an approach pioneered by Ghana in 2012.



The large number of countries introducing rotavirus vaccine in 2014 meant coverage levels more than doubled compared with 2013. However, Gavi is still behind its 2011–2015 annual coverage targets due to a lack of introductions in highly-populated countries. As many large countries plan to roll out the vaccine in the near future, the Vaccine Alliance continues to work with manufacturers to ensure supply meets country demand.

Rotavirus vaccine being given to a child in Haiti, where it will protect tens of thousands of children against the leading cause of severe, often fatal diarrhoea.

GAVI / 2013 / Evelyn Hockstein

## Integrating immunisation with other health services

In 2014, as part of the Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD), Bangladesh, India and Zambia piloted comprehensive programmes aimed at ending the two major preventable causes of child death.

GAPPD works for an integrated approach to preventing and treating pneumonia and diarrhoea. This includes exclusive breastfeeding, adequate nutrition, handwashing with soap, safe drinking water and sanitation, treatment with oral rehydration solution, antibiotics and zinc as well as immunisation. All three of the above-mentioned countries have developed district and state-level workplans for pneumonia and diarrhoea prevention and control activities.

## Vaccine introduction grants

Every new vaccine introduction represents an opportunity for countries to review their national immunisation programmes and improve performance to ensure the delivery of other vaccines.

Pentavalent vaccine, for example, has become a critical building block for routine immunisation in all of the world's poorest countries. Improvements in management required to introduce the five-in-one combination vaccine pave the way for other key vaccines: pneumococcal vaccine, rotavirus vaccine and IPV.

Gavi provides **vaccine introduction grants** to improve the management of vaccine programmes. These help countries:

- refine short-term demand forecasting and management of stock levels;
- fill gaps in the cold chain capacity;
- train front-line health workers;
- increase safety and efficiency of immunisation sessions; and
- identify delivery solutions to reduce wastage.



Nurse Myriam at Kiswa Health Centre in Kampala, Uganda.

Gavi / 2014 / Tormod Simensen

## Human papillomavirus vaccine

Protects women against the main cause of cervical cancer. Vaccination is vital in poor countries where access to screening and treatment is limited.

Gavi supports: **routine immunisation and demonstration projects**

### Initial evaluations show coverage rates for HPV vaccine demonstration projects are well above minimum requirement

The human papillomavirus (HPV) is the main cause of cervical cancer which claims the lives of 266,000 women each year, mainly in developing countries. Without changes in prevention and control, cervical cancer deaths are forecast to rise to 416,000 by 2035.

The HPV vaccines recommended by WHO can prevent 70% of all cervical cancer cases. In 2014, Gavi helped seven countries initiate HPV vaccine demonstration projects, the first step towards national introductions. The Alliance also started to fund Rwanda's national HPV programme, first launched in 2011.

A total of 300,000 girls have been vaccinated with Gavi support since the first demonstration project in Kenya in 2013. This figure is expected to rise to one million by the end of 2015. WHO's decision to switch from a recommended schedule of three doses to two doses will also help facilitate country roll-outs and reduce costs.

Initial evaluation suggests that Gavi-supported HPV programmes are successfully demonstrating the feasibility of vaccinating adolescent girls. The first countries to run demonstration programmes all achieved 60–90% coverage rates – well above the 50% minimum required to apply to the Vaccine Alliance for national support. Opportunities have also been identified to integrate HPV vaccine delivery with other important health interventions for adolescent girls, such as tetanus toxoid vaccination and deworming.

However, reports also identified challenges, mainly associated with keeping the cost of delivering HPV vaccine low. Using schools to administer the vaccine has proven successful, but efforts to reach out-of-school girls and align vaccination sessions with the school calendar will require significantly more resources. It is also taking longer than expected for countries to take on board lessons learned from their demonstration programmes.

To ensure a smooth transition from demonstration projects to national introduction, Gavi now offers a year of “bridging support” to ensure girls do not miss out during the application and review process.

Introductions in 2014:

**Cameroon  
the Gambia  
Mozambique  
Niger  
Rwanda (routine)  
Senegal  
United Republic of Tanzania  
Zimbabwe**

Number of girls reached from programme start to 2014:

**300,000**

# MOVING FORWARD WITH SUPPORT FOR THREE NEW VACCINES

## Inactivated polio vaccine

Protects against a highly contagious viral infection, mainly affecting children under the age of five, which can lead to paralysis or even death.

Gavi supports: **routine immunisation**

## The IPV programme is being implemented at record speed

In September, Nepal became the first country to introduce inactivated polio vaccine (IPV) with Gavi support. Unprecedented progress in 2014 means our partners are rising to the challenge of meeting the Polio Endgame deadline: to introduce at least one dose of IPV into the immunisation schedules of all Gavi-supported countries by 2015.

By the end of the year, just 12 months after Gavi Board approval for the IPV programme, 64 countries had applied for Vaccine Alliance support. India was originally expected to fund its own IPV programme but in September 2014 requested Gavi support. The Gavi Board, together with the Global Polio Eradication Initiative (GPEI), approved 12 months of catalytic support to allow India to meet the 2015 deadline.

The Vaccine Alliance has drawn on the tried and trusted strengths of its partners in GPEI to fast track the application process:

- **WHO** and the **US Centers for Disease Control and Prevention** are providing technical guidance.
- **UNICEF** and **WHO** are both helping to raise awareness of the vaccine's importance in implementing countries. For most families, IPV will be the second vaccine against polio after oral polio vaccine.
- **Rotary International** provides in-country and global advocacy support.
- In February, **UNICEF's Supply Division** finalised a tender for IPV with prices as low as € 0.75 per dose (for a 10-dose vial).

Given the unique nature of this programme, Gavi does not require countries to contribute to the cost of IPV.

In view of the short timeline and high demand, UNICEF's Supply Division and the Pan American Health Organization's (PAHO's) Revolving Fund are working to secure sufficient quantities of IPV. In November 2014, WHO prequalified a five-dose IPV vial, which means

that countries will have a choice between three types of IPV: ten-dose, five-dose or single-dose vials. In another significant development, WHO revised its Multi-Dose Vial Policy for IPV to reduce wastage rates. This will help to lower costs and increase supply availability.

Through collaboration with GPEI, Gavi is also seeking to strengthen routine immunisation programmes in 10 focus countries<sup>a</sup>. Improved routine immunisation is critical to maintaining high coverage levels, both to prevent the transmission of poliovirus and, ultimately, to achieve polio eradication.

Eight of the focus countries have already developed fully costed national plans to align routine immunisation and polio tactics and staff. These country-owned plans detail how WHO and UNICEF polio resources should improve coverage in high-risk districts.

As Gavi's new 2016–2020 strategy shifts the Alliance's focus to improving immunisation coverage and equity, it will be important to leverage lessons and strategies from GPEI to:

- target children who consistently miss out on life-saving vaccines;
- improve microplans to cover marginalised communities and populations; and
- increase accountability of national immunisation staff and improve programme management through better data and information.

## Polio Eradication and Endgame Strategic Plan

To eliminate the risk of vaccine-derived polio cases, the Polio Eradication and Endgame Strategic Plan calls for a phased replacement of oral polio vaccine (OPV) containing the type 2 virus with a version that comprises poliovirus types 1 and 3 only by 2016. To minimise the risks associated with the transition, WHO recommends that all countries introduce at least one dose of IPV into their routine immunisation schedule before the end of 2015. This will provide protection against poliovirus types 1, 2 and 3 and lay the foundation for phasing out all OPV by 2019 – a critical step to completing polio eradication.

Introductions in 2014:  
**Nepal**



In Punjab, Pakistan a detailed roadmap is helping to manage vaccinators' time on both polio eradication and routine immunisation  
**p66**



<sup>a</sup>Afghanistan, Angola, Chad, the Democratic Republic of the Congo, Ethiopia, India, Nigeria, Pakistan, Somalia, South Sudan

## Polio endgame: Gavi fast tracks applications for IPV



India officially declared polio-free.  
p35

### Japanese encephalitis vaccine

Spread by mosquitoes, Japanese encephalitis is the main cause of viral encephalitis, especially in Asia. Case-fatality rates can be as high as 30%, while up to 50% of survivors suffer permanent disability.

Gavi supports: **catch-up campaigns for children aged 9 months to 15 years**

### Lao PDR approved to become first country to introduce JE vaccine with Gavi support in 2015

Often called “brain fever”, Japanese encephalitis (JE) begins with flu-like symptoms and progresses to a brain infection. It claims the lives of 20–30% of infected infants and children. Although relatively unknown outside of Asia, some four billion people live in areas at risk of this viral disease, including eight Gavi-supported countries in South-East Asia and the Western Pacific. According to WHO<sup>6</sup>, annual mortality is estimated at between 13,600 and 20,400 deaths.

The Gavi Board approved the opening of a funding window for JE vaccine in 2013, shortly after WHO added a JE vaccine developed by Chengdu Institute of Biological Products to the list of prequalified vaccines that United Nations agencies can procure. This was the first-ever WHO prequalification for a vaccine produced in China, which is now both a donor and vaccine supplier to Gavi. In 2014, Cambodia and the Lao People’s Democratic Republic became the first two countries to apply and be approved for JE vaccine support, with the latter scheduled to introduce the vaccine in April 2015.

Given that the manufacturer requires a long lead time, Gavi partners WHO, UNICEF’s Supply Division, PATH and the Bill & Melinda Gates Foundation all play a critical role in ensuring sufficient doses of the JE vaccine reach a country in time for its introduction.

### Oral cholera vaccine

Cholera is an acute intestinal infection caused by contaminated food or water. It can quickly lead to severe dehydration and, in its extreme form, can be fatal.

Gavi supports: **oral cholera vaccine stockpile**

### Global stockpile has helped vaccinate 600,000 people

Cholera incidence worldwide has increased steadily since 2005 with an estimated 3–5 million cases and 100,000–120,000 deaths every year. WHO recommends that cholera vaccination is used together with other prevention and control strategies such as oral rehydration salts and water, sanitation and hygiene initiatives.

In 2013, the Gavi Board approved support for the global oral cholera vaccine (OCV) stockpile: a contribution of over US\$ 110 million from 2014–2018 to increase access to OCV during emergencies and in countries that regularly experience cholera outbreaks. The stockpile is managed by the International Coordinating Group which includes four Alliance partners: International Federation of Red Cross and Red Crescent Societies, Médecins Sans Frontières, UNICEF and WHO.

In 2014, stockpile doses were allocated to five countries: Ethiopia and South Sudan (including refugee camps in both countries), Guinea, Haiti and Nepal. Since its creation in 2013, the global cholera stockpile has been used to vaccinate more than 600,000 people.



Children in Nepal, one of five countries with Gavi-supported oral cholera vaccine stockpiles.

Gavi / 2014 / Oscar Seykens



Learn how Gavi has secured continuous supplies of inactivated polio, Japanese encephalitis and oral cholera vaccines  
p48



<sup>6</sup>Source: [http://www.who.int/immunization/policy/position\\_papers/pp\\_je\\_feb2015\\_summary.pdf](http://www.who.int/immunization/policy/position_papers/pp_je_feb2015_summary.pdf)

# RESPONDING TO EPIDEMICS AND OUTBREAK RISK

## Measles vaccine

Helps prevent measles infection and its complications, which still claim over 150,000 lives each year.

Gavi supports: **a second dose of measles vaccine for routine immunisation for a maximum of five years, and measles campaigns in six large countries at high risk of outbreaks**

### Burkina Faso, Senegal and the United Republic of Tanzania all introduced measles second dose

An inexpensive vaccine that protects against measles has been in existence for almost half a century. However, in recent years, there has been a resurgence of the highly contagious virus, with many high-income countries experiencing their highest number of cases in decades. Risk of the resurgence spreading to poorer countries, where measles kills up to 5% of the children who catch it, reinforces the importance of building stronger routine immunisation services to increase vaccine reach.

Our Alliance is working to counter the measles resurgence through four types of support:

- second dose of measles vaccine
- measles supplementary immunisation activities
- measles-rubella vaccine campaigns and introductions
- outbreak response fund through The Measles & Rubella Initiative.

Current WHO recommendations are that all national immunisation programmes should aim to reach 95% of children with two doses of measles vaccine in every district to prevent measles epidemics. Since 2007, Gavi has supported a second dose of measles vaccine in 14 countries including Burkina Faso, Senegal and the United Republic of Tanzania in 2014.

To date, our support has helped countries immunise 22 million children with seven more countries planning to roll out the vaccine in 2015. Sierra Leone is approved for measles second dose support but the Ebola outbreak has delayed introduction plans. Achieving high coverage with a second dose of measles vaccine requires far-reaching information campaigns to promote vaccination in the second year of life (when children tend to have less contact with the healthcare system) as well as integration with other health interventions

Since 2013, Gavi has also funded measles campaigns in six large countries considered at high risk of measles outbreaks but not yet ready to introduce the measles-rubella vaccine. In 2014, Chad and Pakistan both ran measles campaigns with Afghanistan due to follow suit in 2015. Some 67 million children have been protected from measles thanks to Gavi-funded campaigns in the past two years.

The Vaccine Alliance also contributes to the outbreak response fund through the Measles & Rubella Initiative. Chad has been able to draw on this fund as well as Gavi's direct support, enabling it to vaccinate a wider age group of children, ranging from 6 months to 9 years, against measles.

Measles second dose routine introductions in 2014:

**Burkina Faso  
Senegal  
United Republic of Tanzania**

Measles campaigns in 2014:

**Chad  
Pakistan**

Number of children immunised with measles second dose from programme start to 2014:

**22 million**

Number of children immunised with measles campaigns from programme start to 2014:

**67 million**

## Measles-rubella vaccine

Each year, over 100,000 children are born with malformations and disabilities due to congenital rubella syndrome. Rubella vaccine protects against this debilitating disease.

Gavi supports: **measles-rubella catch-up campaigns**

### Solomon Islands drew on the outbreak response fund, in addition to Gavi support, to run a measles-rubella vaccine campaign aimed at a wider target age group

An estimated 100,000 children are born each year with congenital rubella syndrome; 80% are in Gavi-supported countries. The measles-rubella vaccine can help prevent this devastating disease.

Gavi supports measles-rubella catch-up campaigns targeting the next generation of mothers and children aged 9 months to 14 years. This approach is expected to catalyse the introduction of rubella into the routine immunisation schedule to help sustain high coverage and prevent congenital rubella syndrome.

In 2014, an additional six countries ran measles-rubella campaigns with Gavi support. The Solomon Islands drew on the outbreak response fund not only to address rubella but also to make an impressive response to a large measles outbreak. The campaign targeted children and adults aged 6 months to 29 years with measles-rubella vaccination.

Country introductions in 2014:

**Bangladesh  
Burkina Faso  
Solomon Islands  
United Republic of Tanzania  
Vietnam  
Yemen**

Number of people immunised from programme start to 2014:

**140 million**

## Gavi to support ebola vaccine procurement and help rebuild health systems



Learn about Gavi's health system strengthening support  
p29

### Ebola

Arguably one of the biggest headline-grabbing events of 2014 was the Ebola outbreak in West Africa, which claimed over 10,000 lives and devastated entire communities. Within a few short months the outbreak reached epidemic levels, crippling already weak health systems in affected countries – particularly Guinea, Liberia and Sierra Leone – and creating one of the largest global health crises the world has seen for decades.

The global health community responded on many levels, not least through the unprecedented fast-tracking of candidate Ebola vaccines. Although not normally involved in emergency response, Gavi played a significant role by assuring funding support once a

vaccine has been recommended by WHO for use. This will help incentivise large-scale production of millions of doses of Ebola vaccine, if needed. The Board's decision, announced in December 2014, made provisions to commit up to US\$ 300 million for vaccine procurement. An additional US\$ 90 million may be made available to help with vaccine roll-outs, and support recovery efforts by strengthening health systems and restoring routine immunisation services, including via catch-up campaigns.

By funding the production of up to 12 million doses of Ebola vaccine, the Board's decision was designed to help support the response to the escalating crisis. It will also help prevent future outbreaks through stockpiling Ebola vaccines.



### Global Vaccine Action Plan

In 2014, the Strategic Advisory Group of Experts (SAGE) on immunisation reported on the implementation of the Global Vaccine Action Plan. Their findings were a sobering reminder of how record-breaking numbers of vaccine introductions will not suffice to deliver the full benefits of immunisation to every child.

The Report concluded that implementation is "far off track" with only one of six agreed global immunisation targets likely to be met. Gavi is directly engaged in the one target that is on track: ensuring

90 low- or middle-income countries introduce at least one underutilised vaccine by 2015. The others – interruption of polio transmission, global elimination of maternal and neonatal tetanus, regional elimination of measles and rubella and reaching 90% DTP3 coverage in every country – are likely to be missed.

The SAGE report identifies five problems that need addressing including poor data, vaccine affordability and supply, and lack of integration of immunisation with other healthcare interventions. The Vaccine Alliance is already working with partners to help tackle these challenges.

Health workers gear up to help communities deal with the Ebola outbreak in Guinea.

WHO / 2014 / Marie-Agnès Heine

# PREVENTING OUTBREAKS THROUGH ROUTINE IMMUNISATION AND CAMPAIGNS

## Meningitis A vaccine

Protects against seasonal epidemics of meningitis A, which threaten 450 million people in Africa's meningitis belt. Survivors can face brain damage, deafness and other disabilities.

Gavi supports: **mass campaigns**

### WHO prequalification allows countries to introduce the vaccine into routine immunisation schedules from 2016

The MenAfriVac vaccine represents the culmination of the Meningitis Vaccine Project, a 10-year effort to develop an affordable vaccine for Africa's "meningitis belt" involving the region's health ministries, the Bill & Melinda Gates Foundation, UNICEF, WHO and PATH.

From 2010 to 2014, Gavi-supported mass campaigns have reached over 215 million people in 15 of the 26 countries in the meningitis belt: Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ethiopia, the Gambia, Ghana, Mali, Niger, Nigeria, Mauritania, Senegal, the Sudan and Togo.

On average, the campaigns have reached more than 85% of the population considered at risk of contracting the deadly disease. The impact has been immediate.

The number and scale of outbreaks have fallen dramatically in all vaccinated countries with no new cases of meningitis A occurring. Burkina Faso and Chad, for example, have reported significant reductions in meningitis A rates across the general population thanks to the high coverage of the MenAfriVac vaccination<sup>a</sup>.

Several international partners are working closely with local health ministries on meningitis A vaccine evaluation studies.

The only setback has been the devastating Ebola outbreak, which has limited some countries' capacity to run mass campaigns. For example, Guinea was forced to postpone its meningitis A campaign until the situation improved.

To date, the campaigns have targeted those aged between 1 and 29 years and are scheduled for completion by 2016/17. To ensure ongoing protection for future generations, Gavi will now support countries to introduce the vaccine into their routine immunisation schedules. Following WHO's prequalification of the meningitis A vaccine in December 2014, Ghana has signalled its intention to introduce the meningitis vaccine into its national programme in 2016.

Country campaigns in 2014:

**Côte d'Ivoire**  
**Ethiopia**  
**Mauritania**  
**Nigeria**  
**Togo**

Number of people (1–29 years) immunised from programme start to 2014:  
**over 215 million**

## Yellow fever vaccine

Helps prevent a deadly viral disease spread by mosquitoes. Death rates can be as high as 50% among those severely affected.

Gavi supports: **mass campaigns & routine immunisation**

### Mass campaigns in 14 African countries have lowered risk of outbreaks

Before the development of a life-saving vaccine in the 1930s, the yellow fever virus was responsible for devastating epidemics in large cities in Africa, the Americas and Europe. In the last 20 years, the number of yellow fever cases has increased due to declining population immunity, climate change and deforestation. There are an estimated 200,000 cases of yellow fever worldwide each year, causing 30,000 deaths.

Starting in 2011, Gavi-supported mass prevention campaigns have been organised in 14 "high-risk" countries in Africa, protecting 88 million people in

Benin, Burkina Faso, Cameroon, the Central African Republic, Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal, Sierra Leone, the Sudan and Togo. According to The Yellow Fever Initiative, these campaigns have significantly reduced the risk of yellow fever outbreaks across the region, lowering the burden of yellow fever by as much as 82% in some countries.

Despite the success of the mass campaigns, challenges remain. Although the Vaccine Alliance has helped 17 countries introduce yellow fever vaccine through routine immunisation since 2000, 6 of these countries reported coverage rates of less than 80% in 2013 – despite successful mass campaigns. For example, in Nigeria, where yellow fever is highly endemic, routine immunisation coverage stood at 49% in 2013.

In addition, shifts in migration patterns and environmental changes are affecting the geography of yellow fever with outbreaks now occurring in areas historically considered non-endemic. Gavi is supporting countries to improve their risk assessment process.

Number of people immunised through campaigns from programme start to 2014:

**88 million**

<sup>a</sup>Source: Novak et al. The Lancet Infectious Disease, 18 July 2012 | Kristiansen et al. Clinical Infectious Disease, 19 Nov 2012

“Thanks to the introduction of the meningitis vaccine..., we have seen not one single outbreak in the country.”

**Dr Sawadogo Abdoulaye**  
Health Worker, Burkina Faso



Gavi supports an innovative supply chain project to ensure meningitis A vaccine reaches every child in West Africa  
p56-57

## Q&A WITH THE WORLD HEALTH ORGANIZATION

**Michel Zaffran, Coordinator,  
Expanded Programme on Immunization, WHO**



### **What are the advantages for WHO of working as part of Gavi?**

WHO is one of the founding partners of Gavi. The need to establish an alliance of partners became very obvious in the late 1990s, to rejuvenate efforts to strengthen immunisation and fill the gaps existing at that time. Most low-income countries lacked access to new vaccines, and over 20 million children every year were not being reached by routine immunisation services. The combined efforts of Vaccine Alliance partners through a strongly coordinated action plan have helped to ensure that available resources are used efficiently to meet immunisation goals at global and country levels. In addition, working as an alliance allows for innovative approaches to tackle challenges.

### **What can WHO achieve as part of the Vaccine Alliance that you could not do alone?**

Gavi has been able to generate donor support for countries and partner agencies that WHO alone could not have secured. As a result, WHO has boosted its technical assistance to countries and its ability to more rapidly prequalify vaccines for use in Gavi-funded programmes. We have also been able to develop policy, strategy and technical guidance in areas such as new vaccine introduction, vaccine management, surveillance, programme evaluation and monitoring.

### **Can you give an example of how Gavi has contributed to accelerating access to vaccines?**

Before Gavi was created, newly licensed vaccines (such as hepatitis B and Hib) would take 10 to 15 years before they became affordable and accessible for lower-income countries. The establishment of Gavi and its ability to finance procurement of new vaccines and drive prices down has had a major impact on this time lag. The Gavi Board endorsed support for rotavirus and pneumococcal vaccines in December 2006, just a couple of years after these vaccines were licensed for use in industrialised countries.

### **What was the main success story of 2014?**

Gavi's contribution to the 2013–2018 Polio Eradication and Endgame Strategic Plan – supporting the introduction of IPV in all Gavi-supported countries – has been extraordinary. Without the Vaccine Alliance and its established mechanisms for new vaccine introduction, the world would not have been able to roll out IPV so rapidly in so many countries.



EPI centre in Dhaka, Bangladesh: vaccines kept at safe temperatures.

Gavi / 2015 / GMB Akash

# STRENGTHENING CAPACITY

- **Health system strengthening support continues to increase**  
Support increasingly tailored to address specific country challenges
- **Partners help countries modernise supply chains**  
Increasing volumes of vaccines put strain on outdated systems and equipment
- **Gavi continues to monitor, evaluate and learn from health system strengthening grants**  
Revisions to grant management process include use of intermediate indicators

## Gavi's approach to health system strengthening

### Monitoring, learning, improving



PERFORMANCE INDICATORS



DATA QUALITY IMPROVEMENTS



COUNTRY-TAILORED APPROACHES



GRANT MANAGEMENT PROCESS



RISK MITIGATION

“One child’s death is one death too many. We can and must do more to reach every child with life-saving vaccines.”

**Dr Asha Mohammed**

Deputy Secretary General, Kenya Red Cross

While strong health systems are essential for successful vaccine introductions, they are even more critical for sustaining immunisation coverage and ensuring equity.

Strong infrastructure – quality services, availability of trained managers and health workers, good information and data systems, and supply chains – is needed to work with communities and parents to protect the gains of the first 15 years of Gavi’s work. It holds the key to reaching the one in five children still missing out on the basic package of childhood vaccines, and the 95% who do not yet have access to all 11 vaccines recommended by WHO for infants in all countries.

The 2014 immunisation coverage rates suggest that Gavi’s and other partners’ investments in health systems are starting to yield results. More and more children are being vaccinated and have regular contact with health services in their fragile first year of life.

This section provides an update on Gavi’s health system strengthening (HSS) support – our main approach to increasing the capacity of health systems to deliver immunisation – with a special focus on the Vaccine Alliance’s Supply Chain Strategy. We also look at how Gavi monitors and learns from the impact of its HSS programmes to improve future grants.

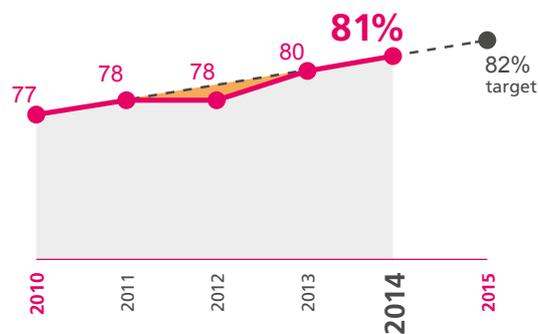
## Main areas of focus for HSS support



# HEALTH SYSTEMS IN GAVI-SUPPORTED COUNTRIES

## DTP3 COVERAGE (%)

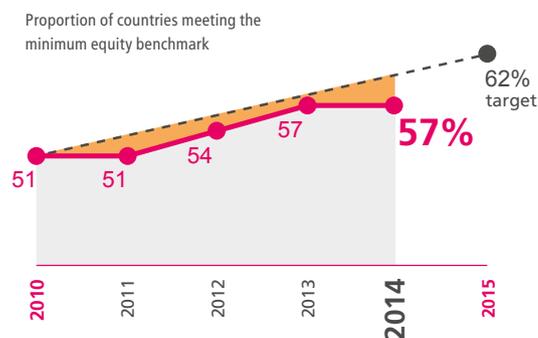
Coverage with three doses of diphtheria-tetanus-pertussis (DTP3) is a standard indicator of the reach of national immunisation programmes. In 2014, DTP3 coverage in Gavi-supported countries reached its highest-ever level (81%); it is the first time this figure has exceeded 80% in these countries. The vast majority of children in Gavi-supported countries receive DTP as part of the pentavalent vaccine.



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

## EQUITY IN IMMUNISATION COVERAGE (%)

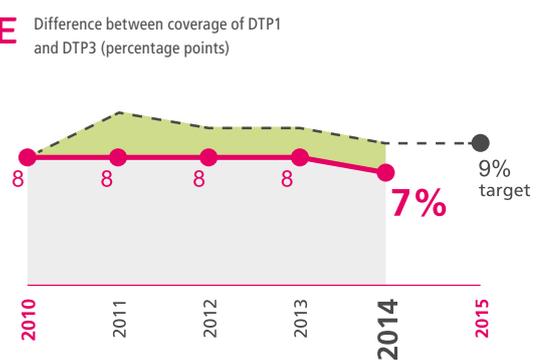
By comparing DTP3 coverage for the poorest 20% of the population in Gavi-supported countries with the richest 20%, this indicator measures the extent to which poverty plays a role in determining whether a child is immunised. The percentage of countries meeting the minimum equity benchmark has increased from 51% in 2010 to 57% in 2014.



Source: DHS and MICS; other surveys that use comparable methods may be used where no DHS or MICS is conducted.

## PERCENTAGE POINT DIFFERENCE BETWEEN DTP1 AND DTP3

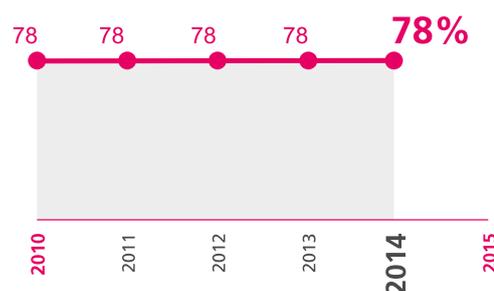
This indicator measures the percentage of children that receive the first but not the third dose of DTP-containing vaccines. Weaker health systems may not be able to reach a child with a full course of DTP rather than just the first dose. In 2014, the difference between DTP1 coverage and DTP3 coverage in Gavi-supported countries fell to seven percentage points, confirming that countries are increasingly able to deliver a full course of the vaccine.



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

## FIRST DOSE OF MEASLES COVERAGE (%)

Children are immunised against measles later than DTP3 but still within the first year of their life. Measles first dose coverage, which Gavi does not support, gauges the ability of health services to vaccinate children beyond three months of age. While DTP3 coverage has increased in recent years, coverage with routine measles first dose has stagnated at 78% for five years in a row.



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2015

# HEALTH SYSTEM STRENGTHENING

## Health system strengthening; investments continue to rise

Gavi has provided support for health system strengthening (HSS) since 2006. Investments aim to improve coverage and equity by resolving bottlenecks in the delivery of immunisation services and addressing three of the main barriers to equal access to vaccines: geography, wealth and gender.

HSS disbursements have continued to rise, with a total of US\$ 144 million disbursed in 2014 – US\$ 25 million more than in the previous year. Gavi's Independent Review Committee recommended 12 new HSS proposals for approval, and the total number of active HSS grants reached 77 in 66 countries. Since 2011, countries have requested that HSS proposals focus primarily on strengthening service delivery, the health and community workforce, procurement and supply chain management, and health information systems.

To ensure an even stronger link between HSS and immunisation outcomes, in 2012 Gavi introduced performance-based funding (PBF). With this approach, a portion of a country's HSS support is determined by its performance against equity and immunisation coverage indicators.

In 2014, Gavi received a first insight into the impact of the PBF approach. Six countries submitted reports on the implementation of their 2013 HSS activities: Afghanistan, Burundi, the Comoros, the Lao People's Democratic Republic, Rwanda and Zimbabwe. Each provides clear evidence of HSS support being used to strengthen immunisation programmes in three key areas:

- **Service delivery: Afghanistan** established mobile health teams to deliver immunisation and other services to hard-to-reach nomadic populations. In **the Lao People's Democratic Republic**, HSS helped fund outreach visits by health workers combining maternal and child health care with basic immunisation delivery services.
- **Supply chain:** to reduce the risk of vaccine stocks running low, storage facilities were improved on **the Comoros**.



Health workers in the Lao People's Democratic Republic administer vaccines.

Gavi / 2013 / Bart Verweij

## CASH INVESTMENTS ON TARGET

In 2010, the Gavi Board agreed that cash-based programmes (including HSS, immunisation services support and vaccine introduction grants) should represent 15–25% of Vaccine Alliance investments as a three-year rolling average of total programme expenditures. In 2014, this average reached 20%, whereas the three-year rolling average for HSS was 8% of Gavi investments.

- **Health and community workforce: Rwanda** drew on HSS funds to train biomedical experts in over 40 district hospitals in cold chain maintenance. Similarly, **Zimbabwe** focused its grant on training 1,600 health facility managers in cold chain capacity and stock management. By the end of 2014, one third of all Gavi HSS grants had been awarded under the PBF approach. Burundi and the Lao People's Democratic Republic had become the first two countries to receive performance payments after increasing and maintaining high, equitable coverage.



Update from Afar: Islamic leaders are helping Ethiopia overcome geographical and cultural barriers to immunisation  
**p70-71**



## REINFORCING THE ROLE OF CIVIL SOCIETY

“There are still massive inequalities in child survival and health access ... in some countries only 16% of children are reached with vaccines.”

**Jasmine Whitbread**  
CEO, Save the Children

### Catholic Relief Services uses Gavi funds to establish national CSO platforms in 24 countries

Given their critical contribution to putting immunisation on the agenda and delivering vaccines on the ground, civil society organisations (CSOs) are key players when it comes to applying for and utilising Gavi HSS grants. Of the 27 countries approved for HSS funding since 2012, 26 worked with CSOs to develop their applications for support and 23 allocated HSS funds to CSO-related activities.

CSO support through Gavi HSS grants ranges from national advocacy and community mobilisation for immunisation to health worker training and service delivery. In Papua New Guinea, for example, where the Church Health Service operates almost half of the remote rural health centres, training nurses and community workers, the health ministry disbursed Gavi HSS funds directly to this and other CSOs in 2013. In exceptional circumstances, Gavi engages directly with global or national CSOs. In 2014, CSOs in Mali provided health-care services in areas under the control of armed forces.

To reinforce such roles for CSOs in immunisation activities, in 2014 Catholic Relief Services (CRS) received US\$ 2.9 million on behalf of the Gavi CSO constituency to establish national platforms for CSO collaboration. By 2014, platforms had been established in 24 countries incorporating over 4,000 individual CSOs. The majority of CSO platforms are engaged in national health policy dialogue and, together with other Gavi partners, help draft HSS proposals.

In 2014, four national CSO platforms received funding through Gavi HSS grants. The Ghana Coalition of NGOs in Health, which brings over 500 CSOs together, will receive a proportion of Ghana's HSS grant to help raise awareness of immunisation services among marginalised communities. Other countries to benefit from this funding stream include Cameroon, Ethiopia and Liberia.

Elsewhere in 2014, Nigeria's CSO platform helped keep front-line health workers in hard-to-reach areas up to date on the latest vaccination trends. Studies in Sierra Leone showed the Ebola outbreak was contributing to a drop in immunisation rates and the numbers of pregnant women attending antenatal clinic. In response, the Health and Nutrition Sierra Leone Civil Society Platform ensured families received information on the importance of keeping to routine immunisation and antenatal schedules.

In 2014, CRS helped provide the CSO platforms with:

- on-the-job training in HSS, communication, monitoring and evaluation, and grant management;
- support to strengthen collaboration with health ministries; and
- a front-line role in the national health planning process.



Nurse in India stores pentavalent vaccine in a fridge at a rural health clinic.

Gavi / 2013 / Manpreet Romana

### FOCUS ON GENDER ISSUES IN IMMUNISATION

Studies have found that globally there is no significant difference in immunisation coverage between girls and boys. However, in societies where women have low status, their children – both girls and boys – are less likely to be immunised.

In 2014, Gavi adjusted its HSS application guidelines to request that countries specify when their proposal targets a gender-related barrier to immunisation. Of the 18 HSS proposals submitted using the new guidelines, 39% incorporated gender-related indicators.

The Sudan requested HSS support for a study of the effects of gender on access to healthcare services, while Ghana proposed raising awareness among community leaders and men of the importance of immunisation.

Other proposals included an assessment of the relationship between maternal education and immunisation and the impact of work on mothers' ability to attend immunisation sessions.

# Q&A WITH UNICEF

## Henri van den Hombergh, Senior Advisor, Immunization and Health Systems Strengthening, UNICEF



### How does UNICEF work as a partner of Gavi, the Vaccine Alliance?

As a founding partner of Gavi, UNICEF works to improve immunisation through policy work, country offices and support from our Supply Division.

We use our presence at all levels in priority countries to deliver change in critical areas. We analyse obstacles to coverage and equity for children and their caretakers in their efforts to access immunisation and other essential health services.

We work with partners to develop proof of concept and implement the joint WHO-UNICEF approach. Bottlenecks are often related to how immunisation financing is managed, from the national level down. We work with WHO at country, regional and headquarters levels to support health system strengthening (HSS) grant applications and implementation. UNICEF applies social and behavioural insights for demand generation and to develop introduction plans, including communication and social mobilisation, to promote and sustain demand for vaccination services. In 2014, UNICEF facilitated the development of 24 government-endorsed plans to support new vaccine introductions and/or routine immunisation programmes. Our staff also work on all aspects of the polio eradication endgame, from technical implementation to logistics and supply. Gavi plays an important role as a convergence platform. Gavi policies and strategies and their implementation rely on good data. UNICEF works with WHO to develop annual joint estimates and on the compilation and analysis of the Joint Reporting Format (JRF).

### What can you achieve additionally through the Vaccine Alliance that you would not be able to do alone?

An excellent example of how much more we can achieve by working together is the Gavi Immunisation Supply Chain Strategy. The strategy is focused on helping countries to put in place the

building blocks for improved immunisation supply chains. It takes an end-to-end perspective on the supply chain, all the way from the manufacturer to the health worker. This important, cross-cutting piece of work was developed by and is being implemented by Vaccine Alliance partners.

### Can you give an example of what you have been able to achieve in this area?

Together with WHO, we have developed and implemented the Effective Vaccine Management tool. This tool has become a globally accepted standard for assessing vaccine management and allowing trend analysis and improvement plan development within countries, as well as comparison between countries. It is used as an important tool for Gavi HSS grant applications, and for development of annual immunisation work plans.

### What was the main success story for UNICEF in this area in 2014?

One example where we were able to have a substantial impact on equity in immunisation was in Madagascar, one of the least developed countries in the world. UNICEF worked with the government to develop a new strategy to address inequities. By helping to identify and analyse obstacles at national and local levels, including barriers to access for disadvantaged populations, we helped to develop and implement a new strategy as part of a national Expanded Programme on Immunization (EPI).



Warehouse in Nigeria stocked with supplies procured through UNICEF.

Gavi / 2013 / Adrian Brooks

## MODERNISING COMPLEX IMMUNISATION SUPPLY CHAINS

**The high proportion of HSS proposals focused on immunisation supply chains reflects the strain that new vaccine introductions are placing on outdated distribution systems and equipment. Gavi's Supply Chain Strategy helps countries find innovative solutions.**

Following the launch of WHO's Expanded Programme on Immunization in 1974, supply chains were established that allowed a basic package of vaccines to be delivered to even the remotest regions of the world. Four decades later, thanks in part to the success of Gavi's mission, these systems are struggling to keep up with the ever-increasing volumes of vaccines that are now available to developing countries.

Despite great efforts to cope with these challenges, too often too many vaccines are not kept at the optimum temperature or pass their expiry date before they are administered. Stockpiles run low in clinics, meaning that vaccines may not be available for immunisation sessions when they are needed.

The strain is reflected in the growing number of HSS proposals dedicated to improving immunisation supply chains. In recent years, almost one third of approved HSS programmes have targeted supply chain bottlenecks. Recognising the importance of modernising supply chains to achieving immunisation coverage and equity goals, in 2013, a special Vaccine Alliance task force with members from WHO, UNICEF, the Bill & Melinda Gates Foundation and the Gavi Secretariat developed the Immunisation Supply Chain Strategy.

The Strategy's 2014/15 action plan, approved by the Gavi Board in 2014, received 20 million Canadian dollars in funding support from the Canadian Government. It focuses on strengthening five key components of supply chains:

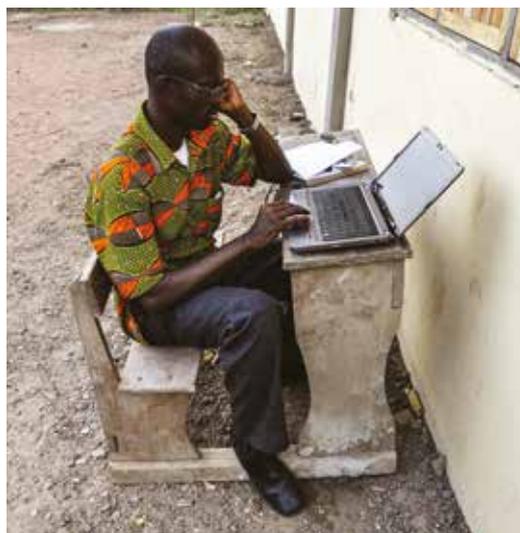
- personnel and their training
- planning
- data management
- cold chain equipment
- system design.

Implementation of the strategy started in 2014 with a series of initiatives in the following areas.

**Planning:** Gavi now requires that all countries applying for HSS funding have supply chain improvement plans in place. In 2014, Vaccine Alliance partners helped individual countries draw up management plans, and also provided recommendations on more up-to-date equipment.

**Innovation:** Alliance partners also drew on private sector innovation to initiate the use of barcodes on vaccine boxes to improve vaccine stock management and the ground-breaking controlled temperature chain to support meningitis A vaccine campaigns in three West African countries – Côte d'Ivoire, Mauritania and Togo.

**Training:** with support from Gavi and the German Government, the East African Community is establishing a centre of excellence for health supply chains at Rwanda University, in order to strengthen supply chain management across the region. Gavi's private sector partner UPS has loaned a supply chain expert to work with Gavi for a year, providing expertise in supply chain management. UPS will also apply their training programme to help improve the performance of supply chain managers in developing countries.



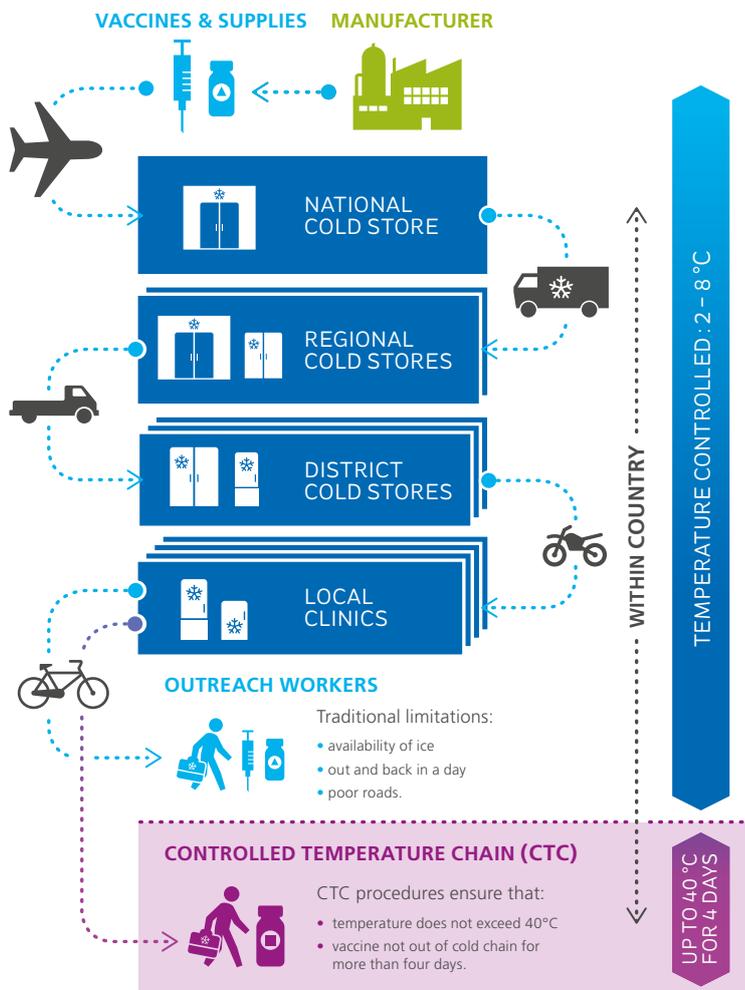
Tracking vaccine supplies in Ghana.

Gavi / 2012 / Doune Porter



Read about how supply chain innovations are revolutionising delivery of MenAfriVac in parts of Africa  
p58

## Links in the supply chain



The immunisation supply chain is a system that moves temperature-sensitive vaccines on their journey from the point of manufacture to the point of administration. It links people, vaccine delivery points and supplies in all Gavi-supported countries. Where supply chains are inefficient or not well managed, vaccines can be exposed to damaging temperatures or pass their expiry date before reaching their destination or clinics may run out of the vaccines they need.

Typically, supply chains are made up of four levels:

- a central repository with cold rooms;
- two levels of intermediate stores with their own cold rooms or refrigerators; and
- health facilities which may also have their own refrigerators.

Coolers and ice packs are used during the transport of vaccines between each level, with health workers relying on carriers and ice packs to make the final link in the chain and administer the vaccines to local communities.



Vaccine cold store in Nigeria.

Gavi / 2012 / Adrian Brooks

# GRANT MANAGEMENT: MONITORING, LEARNING, IMPROVING

## Flexible approach ensures HSS investments are adjusted to take account of lessons learned

As other supporters of development assistance recognise, capturing the impact of HSS support is challenging. At Gavi, we continually review how we monitor, evaluate and above all learn from our HSS programmes.

### Intermediate indicators

#### Keeping track of HSS grants to identify real-time bottlenecks

To help track the impact of its multi-year HSS grants, Gavi has put in place intermediate indicators which assess progress against a set of pre-defined goals and targets. Based on the six annual reports submitted in 2014, countries are meeting 60% of their targets for health worker training, and 47% and 40% of targets for service delivery and community mobilisation, respectively.

In two countries, the indicators have helped identify real-time bottlenecks to implementing immunisation projects: a lack of trainers in the Comoros and delays in processing service contracts in Afghanistan. In both cases, our partners are helping to address the challenges.

### Grant management process

#### Strengthening Gavi's grant management process

In 2014, Gavi started refining the way countries apply for new financial and/or vaccine support, and the way we monitor our investments. The joint appraisal process was introduced to shift our annual reviews of grant implementation to country level. Carried out in over 20 countries in 2014, the approach helps ensure a common understanding of opportunities, challenges and critical needs among governments and Gavi partners.

In another key change, a new High-Level Review Panel brought Vaccine Alliance partners together with technical experts for the first time. The Panel assesses the joint appraisal report together with other country data before delivering recommendations on the renewal of Gavi's multi-year support. Lessons from both these two new approaches are helping to refine and further strengthen our grant management process.

Gavi is also improving the way countries are required to report on grant performance, both to strengthen grant oversight and monitoring and to respond more effectively to issues as they arise. Scheduled for introduction in 2015, the performance framework is being tailored to individual countries, and will establish a set of indicators and targets previously agreed between Gavi and the country. Tracking these indicators will help guide decisions on grant disbursements, renewals or continuation of support.

### Country-tailored approach

#### Adapting support to fit needs of the most fragile countries

Gavi's country-tailored approach was initially designed to adapt support to the specific needs of a limited number of countries facing exceptional systemic challenges such as the Democratic Republic of the Congo and Nigeria. For example, in 2014, Gavi approved additional HSS support to ease supply chain bottlenecks in the Democratic Republic of the Congo. The funds will provide for a new vaccine storage hub in the capital Kinshasa as well as regional depots in Kisangani and Lubumbashi.

The same approach also helps protect immunisation systems and programmes in Gavi-supported countries facing short-term emergencies. In 2014, Gavi readjusted its HSS support to the Central African Republic to ensure uninterrupted delivery of vaccines during the country's humanitarian crisis, with Médecins Sans Frontières distributing vaccines rather than the Government for a period of time.

In light of the value of the new grant management process, intermediate indicators and other approaches in helping to identify specific country challenges to improving immunisation coverage, Gavi is increasingly adopting a tailored approach to every country it supports.



Read about progress in increasing immunisation coverage rates in three countries that have some of the largest birth cohorts in the world. India, Indonesia and Nigeria  
**p68**



# MITIGATING RISK IN GAVI PROGRAMMES

## Gavi makes every effort to ensure proper use of its support

In 2014, Gavi further strengthened its risk management controls to help ensure proper use of our support for vaccines. Following close consultation with partners, including donors, the Gavi Board approved a strengthening of the Vaccine Alliance's risk management capability in three key areas.

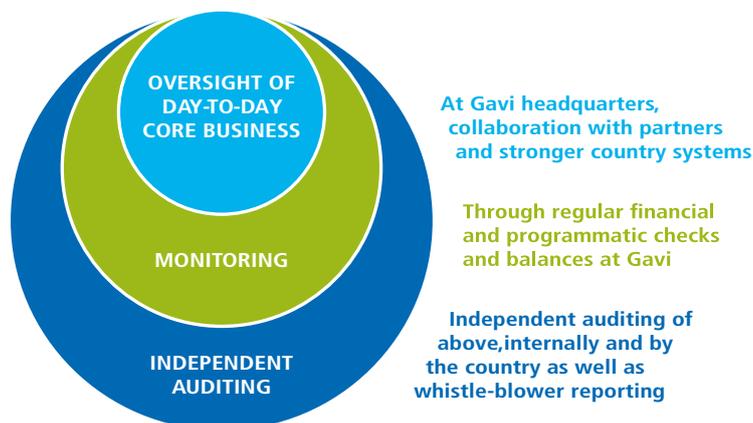
**1. Three lines of defence:** Gavi has reorganised its risk management and fiduciary oversight around a best practice separation of responsibilities.

- **First line: oversight of grant management activities** through Gavi's Country Support team, in collaboration with on-the-ground partners;
- **Second line: independent monitoring** through a number of control and oversight functions to provide an additional "check and balance" on the primary, first-line activities; and
- **Third line: independent auditing** of the first and second lines of defence to ensure they are effective.

**2. Strengthening risk management:** Gavi will better manage risk by ensuring the grant management process is focused on ensuring grants, both vaccines and funds, are properly used, and staff are well-equipped to manage risk appropriately.

**3. Resources:** Gavi is recruiting over 20 additional staff who will be involved in various aspects of risk management across all three lines of defence.

## Three lines of defence



Source: Gavi, the Vaccine Alliance, 2015

## WORKING WITH COUNTRIES TO IMPROVE DATA QUALITY

Accurate and reliable data are critical for both managing vaccine programmes and defining how to strengthen health systems. However, data gathering is often challenging for countries and there are often discrepancies between a country's own administrative data, gathered at local, district and regional levels, and WHO/UNICEF estimates of national immunisation coverage.

The Vaccine Alliance is increasing its efforts to strengthen the quality of reported data with the 2014 HSS guidelines listing alternative ways to verify data. This is particularly important for PBF, which requires accurate data in order to calculate performance payments.

## ADAPTING TO THE COUNTRY CONTEXT: INDIA

In terms of immunisation, 2014 was a truly historic year for India. In March, after three years of no new cases of the wild poliovirus, India was officially declared polio-free. Given that as recently as 2009 India still accounted for half the total number of polio cases in the world, this is a remarkable achievement and something many people believed would never happen.

Building on this success, and following the world's largest-ever democratic election in May, India's new Government showed its support for immunisation by announcing plans to introduce four new vaccines – rotavirus, rubella, inactivated polio and Japanese encephalitis for adults – into India's Universal Immunisation Programme. Furthermore, the Government has now also signalled its interest in introducing pneumococcal vaccine which protects against the main cause of pneumonia, one of the biggest killers of children under five.

In addition to this, with Gavi's help, in October India continued to scale up its coverage of the five-in-one pentavalent vaccine. For a country that in 2014 still had over four million children not receiving the third dose of DTP, this scale-up is likely to have a significant impact on the long-term reduction of global childhood mortality.

With support from Gavi, in the form of a US\$ 107 million commitment toward health system strengthening – the single largest of all Gavi HSS commitments – and the outreach and expertise of UNICEF and WHO, pentavalent vaccine had already been successfully introduced in eight states. Between October and December, this was extended to a further 12 states, accounting for two thirds of all the infants born in India each year, with plans to complete the introduction in all remaining states by early 2016.

# SUSTAINABLE FINANCING FOR IMMUNISATION

→ **Assessment missions prepare the ground for countries to graduate from Gavi support**

Four countries – Bhutan, Honduras, Mongolia and Sri Lanka – on track to self-finance immunisation programmes from 2016

→ **Full funding secured for the 2011-2015 strategic period**

100% of donor pledges signed as formal grant agreements

→ **Private sector ranks among top 15 Gavi donors**

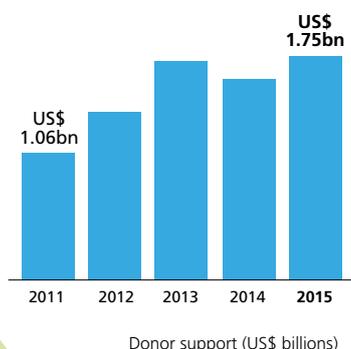
In-kind support delivers advocacy and operational expertise

## Gavi: a model of dynamic resource mobilisation

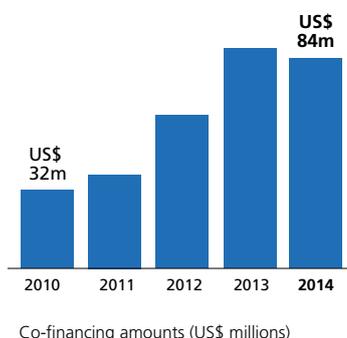
### FUNDAMENTALS OF GAVI'S FUNDING MODEL

DONOR BASE + CO-FINANCING + MARKET SHAPING

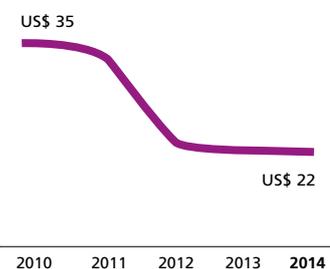
#### Strong donor momentum



#### More co-financing



#### Lower vaccine prices, more vaccines



Total cost to fully immunise a child with pentavalent, pneumococcal and rotavirus vaccines (selected vaccine package price, US\$)

“The model is unique in the landscape of development with the markets, with the partners, with the donors. It is the model of the future.”

**Donald Kaberuka**

President of the African Development Bank

By the end of 2014, just six years after countries made their first co-financing contributions towards Gavi-supported vaccines, there is growing evidence that our funding model is working. Over 20 countries are preparing to graduate from Gavi support. The first four – Bhutan, Honduras, Mongolia and Sri Lanka – are expected to start fully financing their immunisation programmes in 2016.

From Gavi’s inception, our funding model has been designed to increase countries’ investment in their immunisation programmes. The aim is to encourage national ownership and ensure programmes are financially sustainable after Gavi support ends.

Predictable, long-term donor contributions give countries the confidence to introduce new vaccines. Aggregating demand forecast from developing countries enables manufacturers to plan production and supply vaccines at more affordable prices. Greater levels of immunisation lead to healthier, more productive populations, and in turn increase national prosperity. This in turn helps countries move towards full financing of their immunisation programmes.

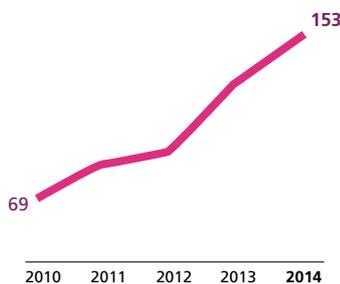
## REAL WORLD OUTCOMES

HEALTHIER POPULATIONS

STRONGER ECONOMIES

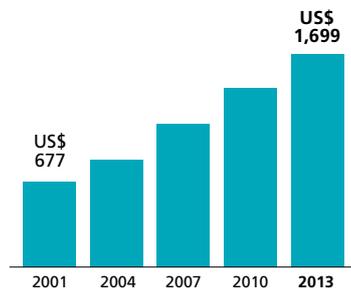
SUSTAINABLE IMMUNISATION PROGRAMMES

**More vaccine introductions, healthier populations**



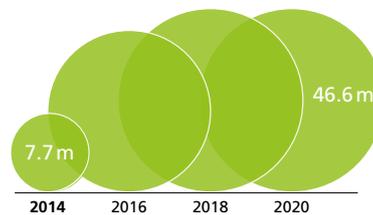
Number of country introductions of new and underused vaccines (pentavalent, pneumococcal, rotavirus)

**Increase in average gross national income**



Population-weighted average GNI per capita for Gavi-supported countries (US\$)

**More countries graduate from Gavi support**



Annual birth cohort of countries graduating and graduated from Gavi support (millions)

# BUILDING A SUSTAINABLE PLATFORM FOR IMMUNISATION

## Our building blocks: co-financing and graduation policies

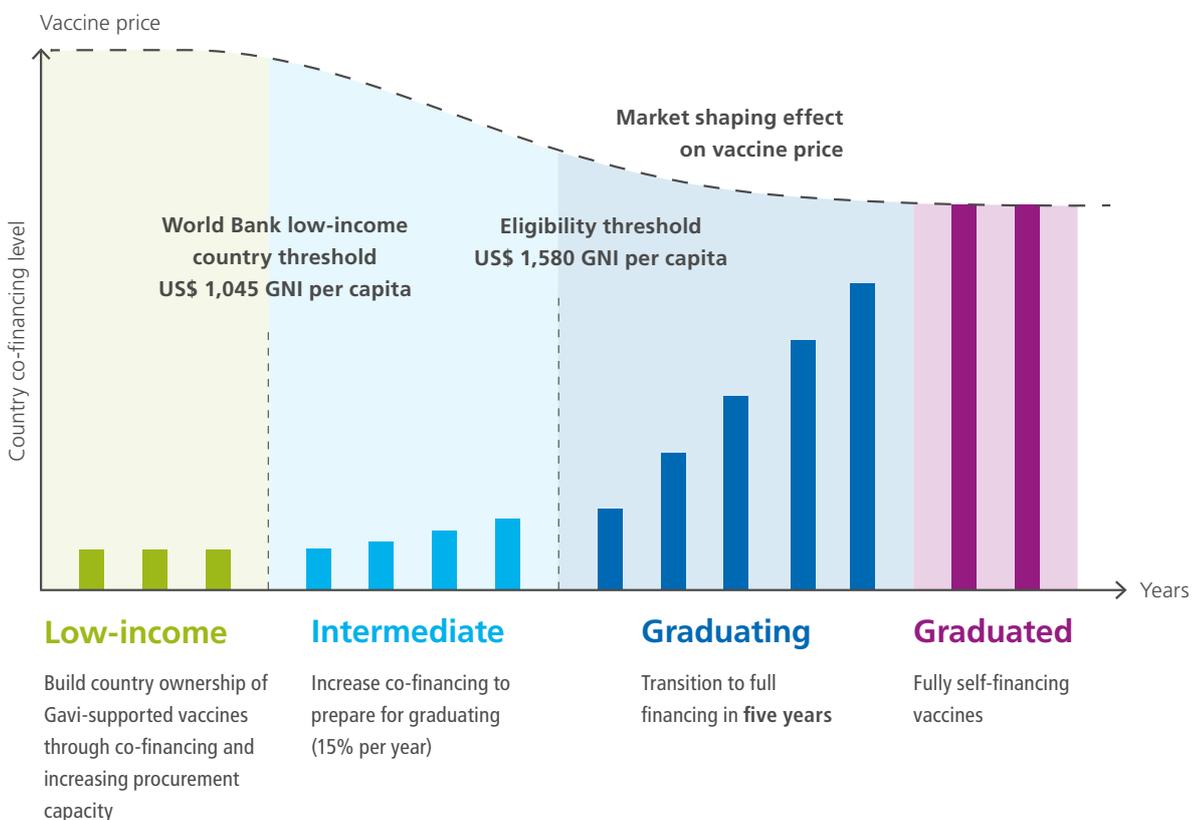
Gavi's co-financing and graduation policies, unique among global health funding agencies, are the building blocks that enable developing countries to lay foundations for sustaining life-saving vaccines originally introduced with Gavi support.

First implemented in 2008, our **co-financing** policy requires that Gavi-supported countries contribute to the cost of purchasing vaccines. The co-financing payments are not made to Gavi, but directly to the supplier through a country's existing procurement process. The size of the contribution is based on each country's ability to pay, as measured by their gross national income (GNI) per capita. For co-financing purposes, countries are divided into three groups: low-income, intermediate and graduating.

The contribution for low-income countries is set at US\$ 0.20 per dose – sufficient to build country ownership without discouraging the introduction of new vaccines. When a country transitions into the intermediate group, its co-financing payment increases by 15% each year.

Eventually, as the national economy grows, a country enters the **graduation** phase – a five-year period when co-financing rises to 100% of Gavi vaccine costs. By the end of graduation, governments are expected to fully self-finance their vaccines.

## Gavi's co-financing model



## Co-financing: countries keep up with rising number of vaccine programmes

As the strategic goal indicator on the right shows, countries continue to invest in vaccines, with the amount spent per child increasing from US\$ 3.80 in 2010 to US\$ 4.3 in 2013. The drop in average expenditure observed in 2013 is a result of the influence of reduced investment per child in three countries with large birth cohorts (Indonesia, Nigeria and Pakistan); elsewhere, relative to 2012, spend per child either increased or remained stable in 2013.

Our co-financing approach is a key driver for country investment in immunisation with US\$ 69 million paid on time in 2014 – a 9% increase on 2013. The number of vaccine programmes paid on schedule also increased, from 111 in 2013 to 116 in 2014. Since the first co-financing contribution was made in 2008, countries have made payments totalling US\$ 356 million.

However, while countries are co-financing more vaccines, the proportion making timely co-financing payments remained similar to 2013 – 75% in 2014 compared with 79% in 2013. This is a reflection of the rapidly increasing number of Gavi-funded vaccine programmes, which rose by more than 20% from 2013 to 2014.

Of the 70 countries co-financing in 2014, 51 fulfilled their commitments on schedule. Although 17 countries defaulted, only five made no contribution – Djibouti, Guinea-Bissau, Haiti, Lesotho and South Sudan. Another two, Guinea and Sierra Leone, were suffering the consequences of the Ebola epidemic and were granted a waiver by the Gavi Board. The others made partial payments or paid off their 2013 arrears.

By mid-2015, 11 of the 17 defaulting countries had already paid off their 2014 arrears, bringing the total contribution through co-financing in 2014 to US\$ 84 million.

In 2014, we started a review of our co-financing policy to assess whether the mechanism requires adjustment to help consistently defaulting countries like the Central African Republic. Although it failed to meet its commitments in 2008, the Central African Republic has since regularly paid its annual contribution, just one year late. Nevertheless, under our current co-financing policy, the Central African Republic is listed as defaulting every year. The review recommended a change to the policy to ensure countries in similar situations are more closely monitored with a payment plan to enable them not to be listed as defaulting.

## Country investments in vaccines per child

Average expenditure per child (US\$)



Source: WHO/UNICEF Joint Reporting Form; Gavi Annual Progress Reports; Gavi's Adjusted Demand Forecast; UNPD data.

## Timely fulfilment of co-financing

Percentage of countries



\*Projection

Source: UNICEF Supply Division and the PAHO Revolving Fund.



See how the Gavi model creates the conditions for countries to increasingly fund their own immunisation programmes  
p4-5

# THE TRANSITION TO SELF-SUFFICIENCY

## Gavi assessment missions help 10 countries prepare for graduation

With a total 24 countries preparing to phase out Gavi support for their immunisation programmes, including Bhutan, Honduras, Mongolia and Sri Lanka in the coming year, 2014 represented a critical test for our efforts to help countries prepare for graduation.

In 2014, the Alliance worked with 10 countries to assess their readiness to graduate, examining both their financial sustainability and the performance of their immunisation programmes. Assessments took place in Angola, Bhutan, Bolivia (Plurinational State of), the Congo, Georgia, Ghana, Guyana, Honduras, Papua New Guinea and the Republic of Moldova, and focused on:

- **Procurement** to make sure countries can continue to purchase high-quality vaccines at affordable prices after Vaccine Alliance support ends.
- **Budget planning** to guarantee government funds are available to purchase vaccines on schedule and avoid stock-outs.
- **Investment in training and management** to sustain high rates of immunisation coverage and performance.

- **Establishment of a national regulatory agency and reliable surveillance systems** to ensure high-quality vaccines and public confidence in national immunisation programmes.

To address potential bottlenecks to full financing of immunisation programmes, Gavi has subsequently helped eight governments draw up graduation action plans. We are also working with our partners to ensure graduated countries continue to have access to Gavi vaccines at affordable prices.

While the first set of 16 countries to enter the transition to graduation phase remain on track to graduate successfully, the next set faces a combination of challenges:

- higher vaccine cost per child due to the introduction of additional vaccines;
- more children to immunise per capita because of high fertility rates; and
- lower average GNI per capita.

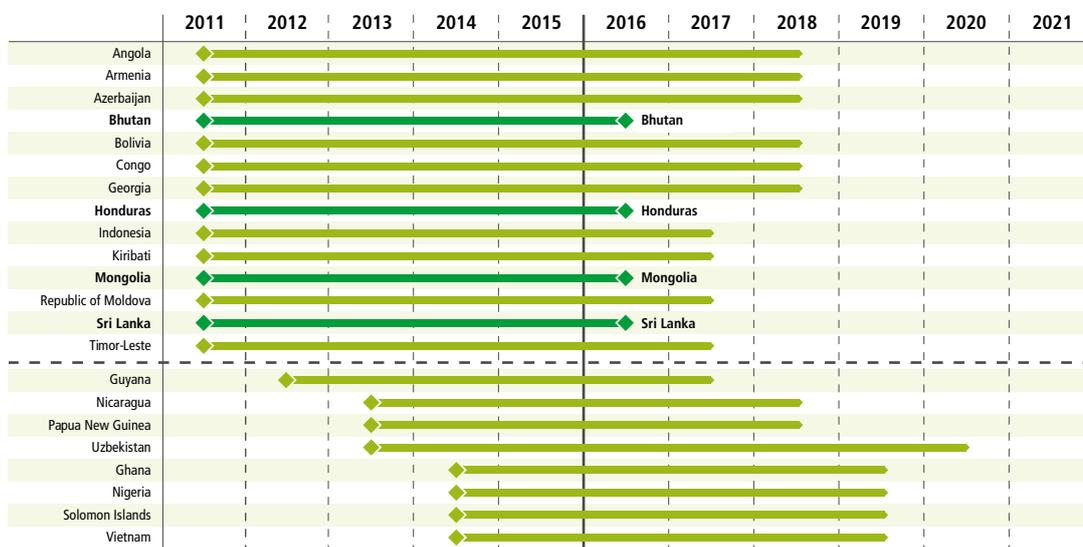
Gavi will work in collaboration with our key partners to help countries with planning and preparation for graduation. To guide the process, we are also working more closely than ever with the World Bank and increasing our engagement with finance ministries in implementing countries.



Recent commitments from manufacturers have given countries access to a range of Gavi-supported vaccines at low prices. Read more **p50**

## Timeline: two waves of countries transitioning out of Gavi support

Green line represents the transition phase for vaccine support (status as of 31 December 2014)



Cuba and Ukraine, which do not receive vaccine support will also transition from Gavi support in 2016.

Source: Gavi, the Vaccine Alliance, 2014



Read about Sri Lanka's six steps to sustainability p54-55

## Q&A WITH THE WORLD BANK

**Rama Lakshminarayanan, Senior specialist on Health, Nutrition & Population and Gavi Alternate Board member**



### **What are the advantages for the World Bank of working as part of Gavi, the Vaccine Alliance?**

The World Bank is a founding partner and active Board member of Gavi, which has given us the ability to engage in important policy discussions and decisions. We cannot overstate the importance of Board membership, which helps to keep us fully engaged with Gavi's thinking and strategy. At country level, Gavi is a key financial supporter of immunisation, whose interests coincide closely with those of the Bank. Immunisation is one of the most effective health interventions, as well as one of the most cost-effective. Gavi and the Bank are both working to increase coverage rates. On health system strengthening, Gavi's investments and interests overlap with the Bank's. For us, it is also important to focus on financial sustainability, so that resources are mobilised to continue support for immunisation.

### **What can the World Bank achieve as part of Gavi that you could not do alone?**

Our work in health focuses on the Universal Health Coverage (UHC) agenda. For countries to reach this ambitious but achievable goal, they and the Bank need to align closely with financing institutions like Gavi. We have also worked to align the objectives of the International Development Association (IDA) with Gavi – to advance the UHC agenda in the poorest countries. And finally, the newly launched Global Financing Facility (GFF) can only attain its goals for Reproductive, Maternal and Child Health through close collaboration with Gavi.

### **Can you give an example of how Gavi has contributed to sustainability?**

Gavi has recently worked to evaluate new evidence and re-examine its approach to policies on co-financing and sustainability. By helping countries to prepare earlier for transition from Gavi support, investing in health systems strengthening,

institutional sustainability and technical support, countries can plan for this transition and minimise volatility. This new approach is critical for future sustainability.

### **What was the main success story for the World Bank in the area of sustainability for immunisation in 2014? What was your most significant challenge in this area?**

Building the financial and institutional capacity of countries is critical for sustainability. Our engagement with Gavi, including the recent partners framework agreement, will help to hone the Bank's engagement in immunisation. This is a good foundation for us to help countries to sustain their immunisation programmes. We are also collaborating with Gavi on the Global Financing Facility.

Our joint challenge is to ensure sufficient government spending to maintain immunisation coverage. Health investments are particularly at risk when countries transition from lower to middle income and these vulnerabilities need to be addressed.

### **Accountable to our donors**

Transparency is a key Gavi principle: we aim to give both donors and implementing countries a clear overview of how we spend our funds. In 2014, for the second year running, the Publish What You Fund Aid Transparency Index ranked our Alliance as a leading organisation for openness and accountability.

Placed fourth out of 68 international development organisations, including United Nations agencies and donor governments, Gavi was highlighted as a leading performer across a range of indicators including the publication of financial information.

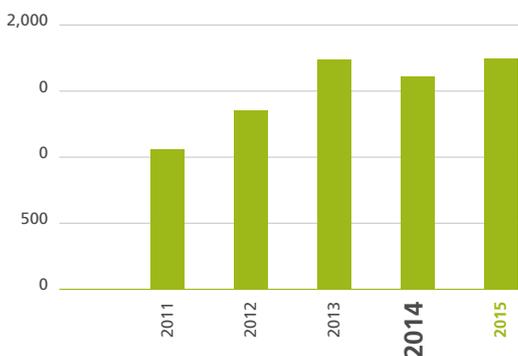
# LONG-TERM FUNDING FROM DONORS AND INVESTORS

## Our donor funding base: predictable, long-term funding commitments

Developing countries assessing whether to adopt a new vaccine look for assurance that programme support will continue until they can take over full financing. Likewise, vaccine manufacturers investing in new or expanded production that can take several years of lead time need confidence that there is guaranteed demand. This means that direct funding agreements, the International Finance Facility for Immunisation (IFFIm) and the Advance Market Commitment (AMC) lie at the core of the long-term, predictable funding required to support Gavi programmes.

In 2014, total donor funding, mainly in the form of multi-year agreements, amounted to US\$ 1.6 billion, meaning Gavi is on track to securing full funding for the 2011–2015 strategic period. Cumulative funds received by Gavi since its inception in 2000 total US\$ 10 billion.

## Contributions pledged to Gavi and IFFIm (US\$ millions)



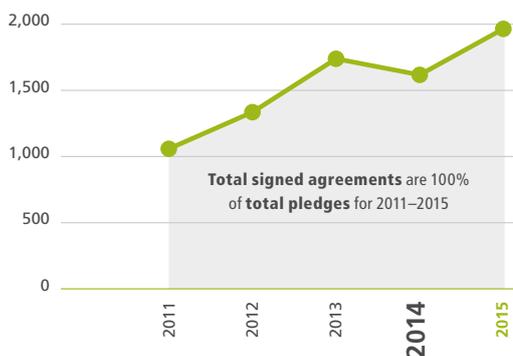
Source: Gavi, the Vaccine Alliance, 2014

## Direct contributions: all pledges for 2011–2015 signed as grant agreements

By the end of 2014, 100% of donor pledges made for the period 2011–2015 had been signed as formal grant agreements, mainly in the form of multi-year agreements (see below). In total, we received US\$ 888 million in direct contributions from 14 donor governments: Australia, Canada, France, Germany, India, Ireland, Japan, Luxembourg, the Netherlands, Norway, the Republic of Korea, Sweden, the United Kingdom (UK) and the United States.

The cumulative value of direct contributions received from national governments and the European Commission since Gavi's foundation in 2000 amounts to US\$ 5.1 billion.

## Signed grant agreements versus total pledges (US\$ millions)



Source: Gavi, the Vaccine Alliance, 2014

“Let us not lose courage but continue to put our efforts into this wonderful work and thank all of those who are committed to this goal.”

**Dr Angela Merkel**  
Federal Chancellor, Germany

Gavi's replenishment raises over US\$ 7.5 billion to immunise an additional 300 million children by 2020  
p76-79

## IFFIm raises US\$ 500 million with first sukuk in Islamic finance markets

Launched in 2006, the International Finance Facility for Immunisation (IFFIm) uses long-term donor pledges to issue and sell vaccine bonds in the capital markets. Throughout the year, the IFFIm Board, under the chairmanship of René Karsenti and expertise of the World Bank as Treasury Manager, oversaw activities in international capital markets, utilising various international events and conferences to promote the innovative financing facility. The Board also worked closely with Gavi to deepen engagement with IFFIm donors.

IFFIm's reputation as a socially responsible investment continued to grow and, in November, the facility issued its inaugural sukuk – a financial certificate that complies with Islamic law. This raised US\$ 500 million in Islamic finance markets for Gavi's immunisation and health programmes. Several awards recognised the first international sukuk for a charitable purpose, including “Social Impact Deal of the Year 2014” by Islamic Finance News, “Best Supranational Sukuk” by EMEA Finance and “Innovation in Islamic Finance” by Euromoney.

As the first aid-financing entity in history to attract legally-binding long-term commitments of up to 23 years, IFFIm has significantly increased the predictability of funding for countries. Since its inception, IFFIm has raised US\$ 5 billion from investors to help fund our programmes; to date, we have drawn down a total of US\$ 2.5 billion in IFFIm funds.

With the support of both the IFFIm and Gavi Boards, IFFIm remains an important cornerstone of our long-term funding strategy. The funding mechanism is projected to contribute an additional US\$ 1.2 billion towards our programmes over the 2016–2020 funding cycle, based on current expected needs.

## IFFIm donors

Australia, France, Italy, the Netherlands, Norway, South Africa, Spain, Sweden and the UK have all contributed to IFFIm.

## AMC success accelerates access to pneumococcal vaccine in 46 countries

The Advance Market Commitment's (AMC) success means children in developing countries are receiving protection against one of the world's leading child killers at virtually the same time as children in high-income countries.

By the end of 2014, 46 countries had introduced Gavi-supported pneumococcal vaccines as part of their routine childhood immunisation thanks to the AMC. Georgia's introduction in November ensured that we met our 2015 target of supporting 45 introductions more than one year ahead of schedule.

By the end of 2014, the Vaccine Alliance had received a cumulative total of US\$ 847 million in AMC funds via the World Bank, of which close to US\$ 238 million was received in 2014.



The Congo introduced the pneumococcal vaccine to protect children against one of the leading causes of pneumonia.

Gavi / 2013 / Evelyn Hockstein

## How the AMC works

Manufacturers participating in the AMC must provide vaccines that offer protection against the most deadly disease strains prevalent in Gavi-supported countries.

The pneumococcal AMC uses US\$ 1.5 billion in donor commitments to incentivise production of pneumococcal vaccine for developing countries. Manufacturers, guaranteed the price of a share of the doses sold through the AMC, enter into legally-binding commitments to supply the vaccine for developing countries for at least 10 years at a fraction of the cost to industrialised countries.

Canada, Italy, Norway, the Russian Federation, the UK and the Bill & Melinda Gates Foundation have collectively pledged US\$ 1.5 billion towards the AMC for pneumococcal vaccines.

# PARTNERING WITH THE PRIVATE SECTOR

## In-kind support delivers advocacy and operational expertise

Private sector partners play a critical role in the Gavi funding model – helping to ensure affordable vaccines in the right quantities, increasing resources, providing skills and innovation, and advocating for immunisation.

Gavi continues to seek partnerships with the private sector to fully leverage the **Gavi Matching Fund (GMF)**, a mechanism through which the UK Government and the Bill & Melinda Gates Foundation match private sector contributions either in cash or in kind. The GMF has proven to be catalytic and cost-effective, encouraging foundations, organisations and corporations to choose Gavi as a partner<sup>a</sup>.

Since the GMF was established, the private sector has invested more than US\$ 106 million, bringing the total contribution, including matches, to date to US\$ 212 million<sup>b</sup>. Over 95% of this goes towards purchasing vaccines. Collectively, the private sector now ranks among the top 15 Gavi donors.

Beyond their cash contributions, a number of current partners are contributing **in-kind support** aimed at improving Gavi operations, either broadening awareness of immunisation or applying private sector expertise.

### Expertise

In the area of **data quality**, the Government of Mozambique, Vodafone and Gavi launched a health initiative aimed at improving the collection and management of immunisation and vaccine stock data. The global telecom provider is contributing expertise, software, hardware and training.

In the 2016–2020 strategic period, Gavi will seek new ways to increase the private sector's role in finding innovative solutions to long-standing operational challenges, particularly in the areas of supply chain management, data and information systems, and demand generation.

### Advocacy

Partners such as **Comic Relief, the Lions Clubs International Foundation (LCIF), "la Caixa"** and **The Church of Jesus Christ of the Latter Day Saints Charities (LDS Charities)** have collaborated with Gavi to raise the profile of immunisation in the UK and Europe and to increase awareness of immunisation programmes in Gavi-supported countries.

- In 2014, **Lions Clubs** and **LDS Charities**, in partnership with governments, launched social mobilisation activities to support vaccine introductions and campaigns in eight countries (Bangladesh, Burkina Faso, Chad, Haiti, Kenya, Pakistan, Sierra Leone and the United Republic of Tanzania). Both organisations will continue to help raise awareness about the importance of immunisation in at least 12 countries in 2015.
- The UK public turned out in their millions to raise visibility for good causes, including immunisation and Gavi, during **Comic Relief's Sport Relief 2014** event. On television, where Sport Relief attracted over nine million BBC viewers, a film starring former Dr Who actor David Tennant put the spotlight on immunisation, health services and Gavi.
- **"la Caixa"** raises funds and awareness for immunisation through its employee-giving programme and its innovative Business Alliance for Child Vaccination – with more than 400 Spanish companies contributing to support Gavi programmes. In 2014, "la Caixa" bank launched an online giving option to further support Gavi.
- A grant from **The ELMA Vaccine and Immunization Foundation**, matched through the Gavi Matching Fund, has helped pilot a Supply Chain Fund (SCF). The SCF is a rapid response mechanism, designed to help countries faced with unexpected bottlenecks in their immunisation supply chain and no available funding to address them. The Fund has contributed to improvements in temperature monitoring and strengthened cold chain storage and transport capacity in Cameroon, Guinea-Bissau, Mali and Niger.

As Gavi's 2016–2020 strategy shifts the focus to reaching all children with more vaccines, we will increasingly scale up engagement with private sector partners committed to making both a lasting and measurable impact on immunisation coverage and equity. By expanding our private sector engagement and maximising synergies, we will aim to foster innovation, cut costs and increase operational efficiency.



Delivering together:  
read how UPS is using  
its expertise to help Gavi  
modernise immunisation  
supply chains  
**p60-61**



<sup>a</sup>The private sector is defined as for-profit companies, business associations and coalitions, industry groups, philanthropic foundations, social enterprises and the like.

<sup>b</sup>Total amounts based on FX rates as of 31 December 2014.

“Gavi is constantly working to be more and more effective and this for a funder is an extremely rare thing. It’s like gold dust.”

→  
For a full list of our donors, see Contributions to Gavi p8-9

**Michael Anderson**

CEO, The Children’s Investment Fund Foundation

Foundations, private individuals and organisations contributed an additional US\$ 260.3 million to the Vaccine Alliance in 2014

**Contributions were received from:**

**BILL & MELINDA GATES foundation**

The Bill & Melinda Gates Foundation



The OPEC Fund for International Development

**New Gavi Matching Fund commitments were received from:**



The ELMA Vaccines and Immunization Foundation



The Lions Clubs International Foundation

**Renewed pledges or pledge payments were received from:**



The A&A Foundation

Comic Relief



“la Caixa” Foundation

“la Caixa” Foundation



LDS Charities



The Children’s Investment Fund Foundation

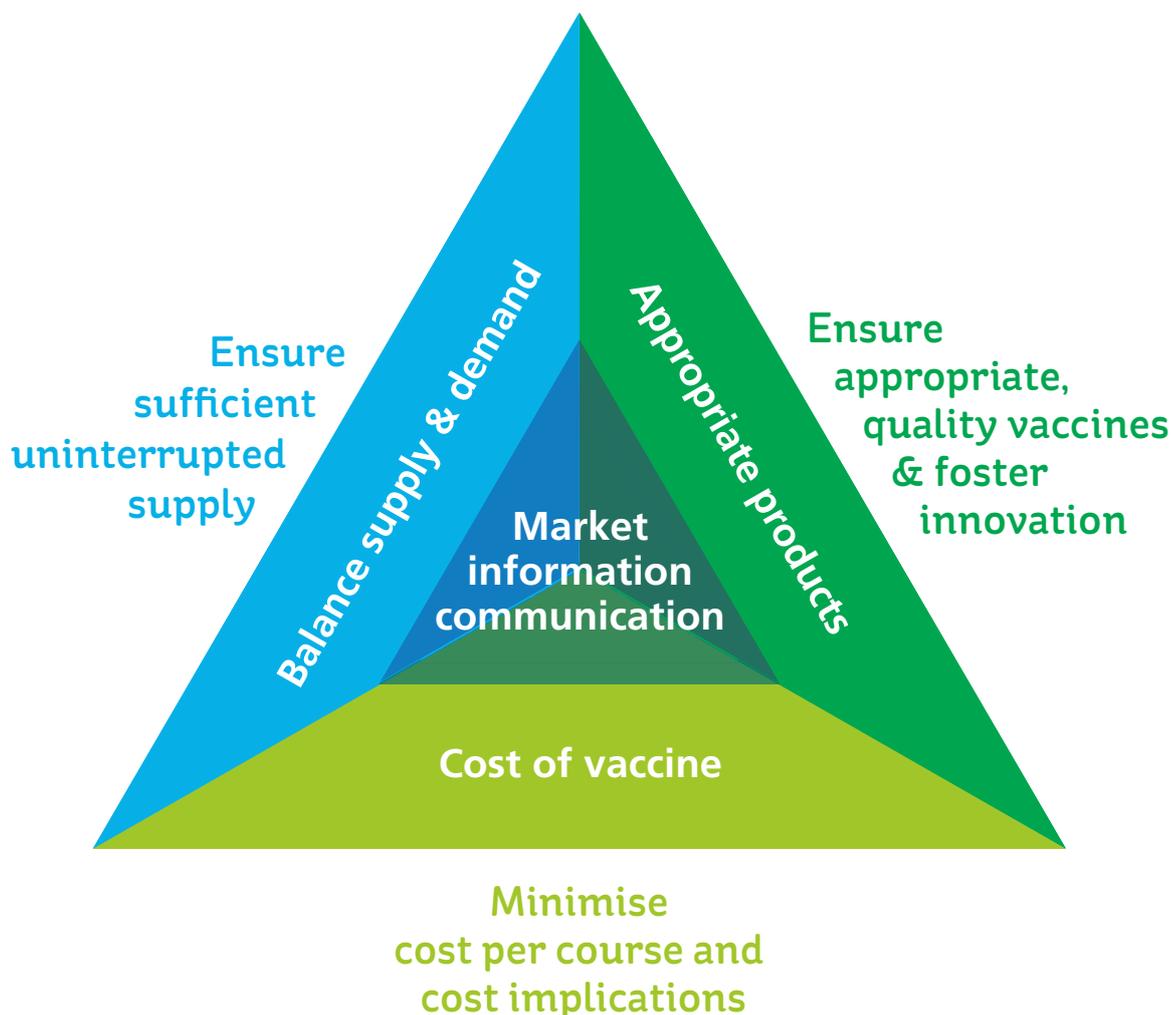


Lions Clubs: United Against Measles campaign in Uganda.  
Lions Clubs / 2013

# SHAPING VACCINE MARKETS

- **Supply secured for three new vaccines**  
Cholera, inactivated polio and Japanese encephalitis vaccines
- **Low prices achieved for inactivated polio vaccines**  
Prices starting from as low as €0.75 per dose
- **Four new vaccine roadmaps to guide Gavi's market shaping efforts**  
Roadmaps developed for cholera, Japanese encephalitis, measles-rubella and pneumococcal vaccines

## How Gavi's supply and procurement strategy works



“In vaccines, from those people who work at the most local level to those people who develop, who invent, who create vaccines, we all have the power to change the world.”

**Prof. David Salisbury**  
British Chair, Jenner Vaccine Foundation

**Fostering healthy vaccine markets, with adequate, secure supply of quality vaccines at low and sustainable prices, is at the core of the Gavi business model.**

**As Gavi’s vaccine portfolio was expanded in 2014 to include cholera, inactivated polio (IPV) and Japanese encephalitis (JE) vaccines, we worked to ensure that countries have access to sufficient supply of these new vaccines.**

**By working with our partners, we successfully secured prices as low as € 0.75 (approximately US\$ 1) per dose for IPV.**

**Vaccine roadmaps help to guide our market shaping efforts by analysing the dynamics of each market, prioritising our objectives and establishing a way forward to achieve them. In 2014 we developed roadmaps for cholera, JE, measles-rubella and pneumococcal vaccines, and updated the roadmap for pentavalent vaccine.**

## Working together to ensure vaccine markets are healthy

Being able to achieve our mission and reach every child with life-saving vaccines relies on vaccine markets working optimally – allowing countries to buy the right vaccines at prices they can afford, manufacturers to plan production and provide ample supply, and donors to maximise their investments.

Together with our partners, notably the Bill & Melinda Gates Foundation and UNICEF, we work to ensure vaccine markets do just that. We do this by providing predictable funding and visibility on long-term aggregated country demand and by working with manufacturers and partners to ensure quality control and encourage competition. We also use financial tools, such as pooled procurement and tiered pricing (whereby countries pay according to their income level), and incentives to manufacturers to provide adequate supplies of vaccines at appropriate prices.

As Gavi expands the portfolio of vaccines it supports, the health of vaccine markets is more critical than ever. Sufficient supply security, affordability and improved products mean that more vaccines can be introduced in the lowest-income countries, and that more children can be immunised.

## Gavi’s strategy for vaccine supply and procurement

The Gavi strategy for vaccine supply and procurement, which guides our market shaping work, came into force in early 2012. It aims to ensure sufficient and uninterrupted supply of vaccines, minimise vaccine costs, ensure appropriate products and foster innovation.

Achieving the appropriate balance across the supply and procurement objectives is inherently challenging. Underpinning them all is the need for timely, transparent and accurate market information for all parties involved.



Production of inactivated polio vaccine by Sanofi Pasteur.

Sanofi Pasteur / 2014

## ENSURING ADEQUATE, UNINTERRUPTED SUPPLY

As the world's biggest buyer and supplier of vaccines for developing countries, UNICEF secures vaccine supply on behalf of Gavi through competitive tenders. In 2014, Gavi supported three new vaccines: cholera, Japanese encephalitis (JE) and inactivated polio vaccines (IPV). We also saw important movements in the pentavalent vaccine market.

### Inactivated polio vaccine

Gavi will support more than 60 introductions of IPV in 2015 – a record number for any vaccine in a single year. The aim is to ensure, in partnership with the Global Polio Eradication Initiative, that all the world's countries introduce the vaccine in a coordinated way.

A UNICEF tender, concluded in February 2014, secured sufficient quantities of affordable IPV doses for all Gavi-supported introductions, in line with the ambitious timeline.

### Japanese encephalitis vaccine

Following the 2014 tender for JE vaccines, Gavi will be buying vaccines from a Chinese manufacturer for the first time. With a grant from the Bill & Melinda Gates Foundation and support from PATH, the manufacturer was successful in obtaining prequalification for its JE vaccine. The vaccine is suitable for countries' needs, quality-assured by WHO and available at a low cost.

Gavi has funded WHO efforts to strengthen the national regulatory authority in China, thus helping Chinese manufacturers to gain prequalification status for their vaccines.

### Cholera vaccine

The Gavi Board decided to invest in cholera vaccines in late 2013, as recommended by our vaccine investment strategy. One of the objectives of our investment is to bring positive change to the cholera vaccine market through market shaping activities.

There are currently only two cholera vaccines on the market, one of which is mainly targeted at travellers from rich countries. It is sold at a relatively high cost, is not very effective in young children and is difficult to use in emergency situations. The second vaccine, which is better adapted to the needs of developing countries, was developed by the International Vaccine Institute with support from the Bill & Melinda Gates Foundation and other partners.



Children in Malawi transfixed by a vial of oral cholera vaccine.

**WHO / 2015 / Lorenzo Pezzoli**



Yellow fever vaccine supply: how Gavi is working with manufacturers to meet urgent global demand **p58-59**



However, supply is constrained as there are limited incentives for manufacturers to produce cholera vaccines for outbreaks in developing countries. As a result, Vaccine Alliance partners developed a strategy in 2014 to ensure continuity of the global stockpile. The International Vaccine Institute is currently working with a third cholera vaccine manufacturer in collaboration with the Bill & Melinda Gates Foundation and other partners.

As cholera vaccines are most effective in combination with other measures, such as improved water and sanitation, Gavi works closely with such initiatives.

### Pentavalent vaccine

The pentavalent vaccine market continues to mature, with increasing supply security. By the end of 2014 there were seven prequalified pentavalent vaccines, compared with five the year before. Supply is now greater than demand from all 73 Gavi-supported countries and comes from a diverse supplier base.

## WHO prequalification of vaccines

WHO introduced its vaccine prequalification programme in 1987 as a service to UNICEF and other United Nations agencies that purchase vaccines. Today, it is the only programme in the world that helps to ensure international harmonisation of vaccine production standards.

WHO prequalification provides a guarantee that a vaccine meets global standards of quality, safety and efficacy, and that it is suitable to the needs of developing countries. An important prerequisite for prequalification is that the national regulatory authority responsible for the vaccine is functional.

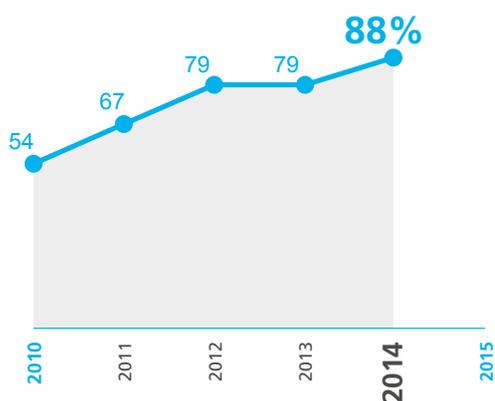
## More manufacturers, increased supply security

Efforts to improve vaccine markets have led to increased competition and diversification of the manufacturing base. In 2001, there were just 5 Gavi vaccine suppliers; by the end of 2014, 16 manufacturers were producing prequalified vaccines suited to the needs of Gavi-supported countries.

By tracking the number of products offered in response to tenders for Gavi-supported vaccines, we can measure vaccine supply security. The number of products offered as a percentage of the 2015 target increased to 88% in 2014, from 79% in 2013. Since 2010, it has increased from 54%. Gavi remains on track to meet the 2015 target for the number of products offered.

## Security of supply

Number of products offered as % of 5-year target



Source: UNICEF Supply Division

## The manufacturing base in 2014

16 manufacturers<sup>a</sup> in 11 countries of production

Gavi suppliers and manufacturers of prequalified, appropriate Gavi vaccines (parent companies in brackets):

Biological E

Bio-Manguinhos<sup>c</sup>

Chengdu Institute of Biological Products (China National Biotech Group)

Berna Biotech (Janssen/Johnson & Johnson)

Chumakov Institute  
GlaxoSmithKline

Institute Pasteur Dakar

LG Life Sciences

Merck & Co.

Panacea Biotech

Pfizer

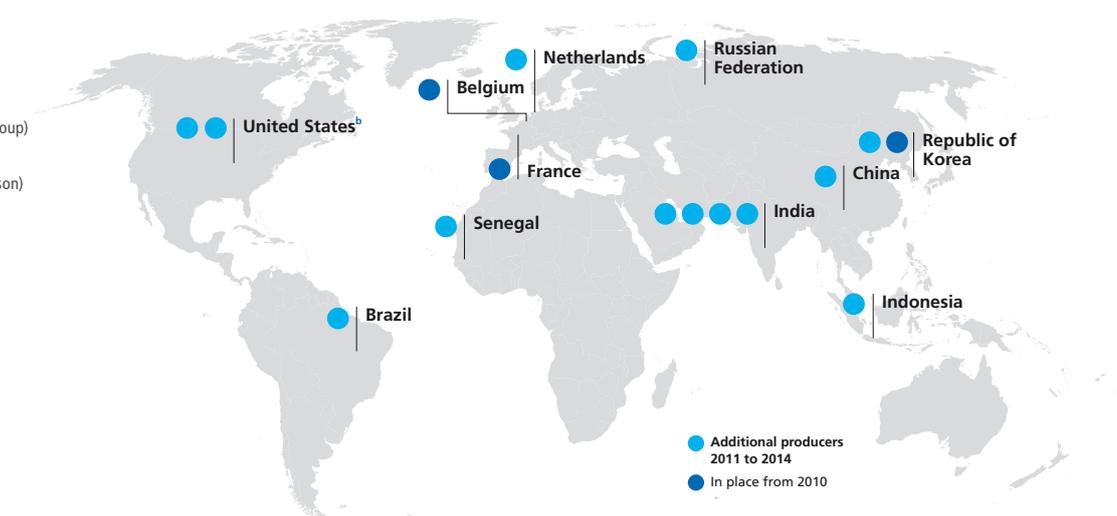
PT Bio Farma

Sanofi Pasteur

Shantha Biotechnics<sup>c</sup>

Serum Institute of India

Bilthoven Biologicals (Serum Institute of India)



<sup>a</sup>Includes 14 Gavi suppliers and 2 manufacturers of prequalified Gavi vaccines.

<sup>b</sup>One US manufacturer also produces in the Netherlands.

<sup>c</sup>Manufacturers of prequalified, appropriate vaccines that did not supply vaccines to Gavi in 2014.

Note: country of production represents country of national regulatory agency responsible for vaccine lot release.

Sources: UNICEF Supply Division and WHO list of prequalified vaccines

# PARTNERING FOR APPROPRIATE, QUALITY VACCINES AND MINIMISING COST

## Innovation in vaccine technology

WHO prequalified two innovative vaccine products in 2014. The compact, auto-disabled system for pentavalent vaccine comes prefilled, making it easier to use and reducing preparation time. This new technology, which is currently being evaluated for use in Gavi-supported countries, is expected to facilitate outreach if implemented.

The second innovation, the five-dose presentation for pentavalent vaccine, has the potential to become an important complement to the existing one- and ten-dose presentations. The new presentation has some of the space-saving capacity of the ten-dose presentation, but does not produce as much wastage if all doses are not used within a specific time frame.

In April 2014, WHO gave an expert recommendation for countries to move from a three-dose to a two-dose immunisation schedule for HPV vaccine. This is likely to have a positive impact on the cost-effectiveness and sustainability of HPV vaccine programmes.

While there is still a shortage of supply of the two-dose presentation of rotavirus vaccine, the three-dose option is available in sufficient quantities. Alternative presentations are currently being developed, but it will take some time before these can be prequalified by WHO.

## Minimised costs

Together with our partners we managed to secure appropriate prices in all of our 2014 tenders.

Following the tender for IPV, the vaccine will be available to Gavi-supported countries from as little as €0.75 (approximately US\$ 1) per dose. Middle-income countries will be able to buy the vaccine through UNICEF for between €1.49 and €2.40 (approximately US\$ 2.04–3.28) per dose.

The weighted average price that Gavi pays for pentavalent vaccine fell from US\$ 2.04 in 2013 to US\$ 1.90 in 2014. The total cost of fully immunising a child with pentavalent, pneumococcal and rotavirus vaccines, which is one of our key indicators, went down from US\$ 35 in 2010 to US\$ 22 in 2014.

In January 2015, Vaccine Alliance partners reached a new agreement with a manufacturer to purchase its pentavalent vaccine at a reduced price (up to 20% lower than previously). The agreement is expected to bring savings of up to US\$ 50 million in the 2015–2016 period.

Securing appropriate prices for countries after Gavi support ends remains a challenge. However, recent commitments from manufacturers give countries access to a range of Gavi-supported vaccines – including HPV, pentavalent, pneumococcal and rotavirus vaccines – at appropriate prices over the long term. Throughout 2014, Vaccine Alliance partners worked together to develop new mechanisms to ensure countries have access to adequate prices after Gavi support ends.



Learn how pentavalent vaccine is now part of the routine immunisation schedule in all 73 Gavi-supported countries  
**p17**



## Total cost to fully immunise a child with pentavalent, pneumococcal and rotavirus vaccines

Selected vaccine package price (US\$)



Manufacture of pentavalent vaccine at the Serum Institute of India.

Gavi / 2007 / Atul Loke

Source: Procurement partner manufacturer offers

# Q&A WITH THE BILL & MELINDA GATES FOUNDATION

Dr Orin Levine, Director, Vaccine Delivery,  
Bill & Melinda Gates Foundation



## What are the advantages for the Gates Foundation of working as part of the Vaccine Alliance on market shaping?

First, we have access to thought partners in the Gavi Secretariat and UNICEF Supply Division. Sometimes we have different views, but this challenges us to be more robust and clear in our analysis and recommendations, and improves the overall effectiveness of our efforts. Also, each institution has access to different information and different perspectives, so together we can get to the best collective perspectives on issues. The Gavi Secretariat leads development and partner alignment on the vaccine roadmaps, which are our most important tools for harnessing the benefits of working together. It also develops the Strategic Demand Forecasts (SDF), which we then use for our own market analysis.

## What can the Gates Foundation achieve as part of the Vaccine Alliance that you would not be able to do alone?

We dedicate more of our own internal resources (time and people) to novel, innovative projects because Gavi takes care of important inputs for market shaping, like roadmaps and SDFs. Our partnership with Gavi is based on sharing information, which enables all partners to access critical information we might not otherwise have. Lastly, by working within a coordinated Gavi effort, our voice gains impact and legitimacy as compared to working alone.

## Please give an example of an outcome that resulted from the Vaccine Alliance's work?

By leading development of the vaccine roadmaps, and gaining input and alignment with UNICEF's Supply Division and the Gates Foundation, we have

more impact on supply and pricing. The roadmaps require alignment on market strategies and action plans which focuses everyone's efforts on defining and working toward the same goals. Alignment is not always perfect, but the roadmap approach is definitely an improvement and positions us for further improvement.

## What was the main success for the Gates Foundation in the area of market shaping in 2014?

The biggest success story in market shaping was the Sanofi IPV investment to reach US\$ 1.00 per dose to remove cost as a barrier to rapid IPV introduction and uptake for polio eradication.

Another major success was bolstering our ability and information base for market strategies and investment decisions. We solidified our approach to market analysis and action plans, improved our production economics data (how we collect it and use it in a more dynamic way), and developed a framework for assessing total systems costs and identifying goals around product innovation.



Technician oversees production of inactivated polio vaccine.

Sanofi Pasteur / 2014

# THE VACCINE ALLIANCE IN ACTION

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Defrosting the cold chain → p56

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Islamic leaders champion immunisation → p70



A child and her grandfather in Nepal, where children are now being protected with the inactivated polio vaccine.  
Gavi / 2014 / Oscar Seykens

# SRI LANKA: SIX STEPS TO SUSTAINABILITY

Sri Lanka, which reports a near 100% coverage rate, is one of four countries scheduled to graduate from Gavi support in 2016. Dr Ananda Amarasinghe of the Health Ministry's Epidemiology Unit reveals the secrets behind the country's immunisation success story.

## 1. MAKE FAMILIES AWARE OF VACCINES

Remarkably mothers who lost everything either as a result of civil conflict in the north-east or the 2005 tsunami which devastated the south, still possessed their children's immunisation cards. "It shows their recognition for immunisation as a guarantee of a better future for their children," says Dr Ananda.

It also demonstrates the importance of Sri Lanka's high literacy rates with mothers and fathers highly aware of the benefits of preventive care. For example, hospitals are preferred to home deliveries. When the pentavalent roll-out was suspended in 2008, following reports of adverse reaction to the vaccine, the Health Ministry was rapidly able to reassure families about the five-in-one vaccine's safety. "Mothers temporarily questioned pentavalent but they never lost their faith in immunisation," says Dr Ananda.

## 2. CONNECT WITH GRASSROOTS COMMUNITIES

Sri Lanka's near-100% immunisation coverage rate owes much to a nationwide network of 4,000 community-based healthcare workers. There is approximately one health worker for every 5,000 Sri Lankans. Regular door-to-door visits, usually by bike or scooter, mean each is always up to date on their patients' state of health.

The health workers hold regular outreach clinics raising awareness of antenatal care, immunisation and maternal and child health – and also registering every newborn child. If a mother or father fails to bring their child to a vaccination session, the health worker visits their home and, in some cases, personally accompanies the child to her clinic for immunisation.

## 3. BUILD TOP TO BOTTOM PUBLIC HEALTH STRUCTURE

Sri Lanka's public health system, which dates back to the 1920s and the time of British rule, provides a mix of curative and preventive services at national, district and divisional levels. "Our colonial masters established a good foundation," says Dr Ananda. It ensures a steady flow of information from grassroots communities to the Health Ministry for monitoring and evaluation. Regular updates on local immunisation coverage rates are delivered to Colombo and are often available online thanks to a new online registration system.

The system works both ways. When launching pentavalent vaccine in 2008, the Ministry enforced a new open vial policy by meeting with 26 district EPI managers, who, in turn, informed the 330 divisional offices. "We told them if some doses remain, don't discard them," says Dr Ananda. Instead of 10% wastage, the Health Ministry registered less than 1% – enough vials to provide for one month of vaccinations.



Health worker visits workers inside the tea plantations of central Sri Lanka.

Gavi / 2013 / Sanjit Das

#### 4. SECURE POLITICAL SUPPORT

Even during the civil conflict, temporary ceasefires allowed hospitals and clinics to deliver immunisation and other basic health services.

Successive Sri Lankan administrations have prioritised free health and education.

In 2014, the Government introduced a national immunisation policy guaranteeing every citizen the right to vaccination. There is a separate line in the national budget for immunisation ensuring continuity in the delivery of vaccines and virtually no stock-outs. "It is the responsibility of our people to get vaccinated so the Government guarantees the availability of vaccines," says Dr Ananda.

#### 5. INVEST IN LONG-TERM TRAINING

To ensure the long-term sustainability of its immunisation programme, the Health Ministry invests in training future generations of public health inspectors and health workers at six regional training centres and one national centre. "No matter how many clinics you build, you can't provide services without trained resources," says Dr Ananda, "We want our successors to do even better than us." Since the end of the civil conflict in 2009, the training centre at Vavuniya in the north of Sri Lanka has trained over 600 health workers to help rebuild the health system in the former conflict zone.

Under the colonial administrative system, all government officers learnt their trade in rural areas before moving to the major cities. Today, Sri Lanka's public health staff must also gain extensive experience working at divisional then district levels before moving to the Ministry in Colombo. "Before we come to the centre, we need to know the reality on the periphery," says Dr Ananda.

#### 6. CONTINUE TO LEVERAGE GAVI'S EXPERTISE

When Dr Ananda was asked to draft Sri Lanka's first application for Gavi support in 2000, he had to look in the files to find out about the Vaccine Alliance. Now, he is very clear about how Gavi can continue to help countries like Sri Lanka after they have graduated.

The Health Ministry has already asked the Vaccine Alliance to help negotiate a fair price for the HPV vaccine, which Sri Lanka plans to include in its routine immunisation schedule in the near future. "That is where Gavi can help," says Dr Ananda, "We wish to rely on ourselves. We know that the UNICEF procurement system is one option, but we have the money and can procure the vaccine ourselves. But with our small population, we are not in a position to bargain with the manufacturers. That is what we ask of Gavi: can you help as a negotiator?"

**Midwife Mathumitha Kodeeswara, aged 28, looks after a small clinic in the rural community of Pnaineeravi, in north Sri Lanka. She and her colleagues are a key reason for Sri Lanka's near-perfect immunisation record:**

*"I became a health worker because I used to see photos of midwives during polio campaigns and liked the uniform and hairstyle. I kept the photo in my bedroom. I was 16-years-old," she says.*

*"I get real pleasure out of delivering babies but I get frustrated when occasionally mums do not listen to my advice about immunisation. First, I remind them of immunisation sessions at the clinic. Sometimes I take them on my scooter. Once, there was a woman who insisted on staying at home. I took the vaccines to her house.*

*(During Sri Lanka's civil conflict) we used to lie on the floor or go to a bunker for protection but we were still delivering vaccines to local mums. When all the fighting was over, there were no beds, no furniture at the clinic, not even a door. We used to sit outside on wooden benches on the verandah. Instead of an examination bed, we had to use a mat on the floor. It was very difficult. Now we have renovated clinics and all the new furniture came from Gavi funding."*

#### GAVI SUPPORT FOR SRI LANKA

- 2000** Government applies for Gavi support for hepatitis B vaccine
- 2002** Gavi approves hepatitis B vaccine and injection safety support
- 2003** Sri Lanka introduces hepatitis B vaccine
- 2008** Sri Lanka introduces pentavalent vaccine with Gavi support
- 2014** Gavi starts phasing out support
- 2015** Sri Lanka scheduled to introduce inactivated polio vaccine, while health system strengthening support is phased out
- 2016** Sri Lanka scheduled to graduate Preparing to introduce HPV vaccine without Gavi support

# MENAFRIVAC: DEFROSTING THE COLD CHAIN

By removing the need for ice packs during the final stage of some vaccines' journeys from manufacturer to clinic, the controlled temperature chain (CTC) is transforming the immunisation supply chain.



MenAfriVac in CTC: vaccine box with peak temperature threshold indicator.  
WHO / 2012 / Olivier Ronveaux

For health workers and vaccinators in Boulohou, a village in the central region of Togo, a typical day begins at 5.30 am with the preparation of what is arguably their second most treasured cargo – ice. It protects the precious vials of vaccines from the punishing African sun, ensuring that they remain effective and safe when administered.

Useful as it is, ice comes with its own challenges. It requires power and resources to produce and places a limit on the amount of time a vaccinator has to get the vaccines out to the community and – in the case of any unused vials – back again. Ice also requires conditioning, a time-consuming process whereby the temperature of the ice is raised to 0°C through partial melting, to prevent sub-zero temperatures from damaging the vaccines through freezing. For just as heat can harm vaccines, so too can extreme cold.

In 2014, Gavi funding helped health workers in Togo take part in a ground-breaking trial of a radical new approach to vaccine delivery, which removes the need for ice during the final stage of a vaccine's journey.

Using a combination of vaccine vial monitor labels (VVMs) and peak temperature threshold indicators (PTTIs) to create a controlled temperature chain (CTC), Togolese health workers conducting a 10-day meningitis A campaign were able to safely maintain MenAfriVac vaccines outside the cold chain for up to four days, provided their temperature did not exceed 40°C.

By simplifying their job and reducing their load by several kilos, the new CTC approach had an extremely positive impact on the day-to-day lives of vaccinators and healthcare workers.

According to WHO epidemiologist Dadja Essoya Landoh, who formerly worked for the Togo Health Ministry and was involved in last year's campaign, CTC can halve the number of vaccinators involved because removing the need for ice frees up more space in the container. One vaccinator can then carry more vials.

It can be difficult for vaccinators to reach some of the older people in the target population because they are often at work from early in the morning until late in the evening. However, CTC vaccinators are not constrained by the condition of their ice and do not have to head back to base to return unused doses to refrigerators.

Instead, according to Landoh, some vaccinators stay overnight in local villages, so they can catch farmers as they come in from the fields or before they head out in the morning. With more than a million people aged between 0–29 years targeted by Togo's meningitis A campaign, this can add up to a lot of people that would otherwise have been missed.

In addition to anecdotal evidence that the vaccine shots are less painful, because they are delivered at ambient temperature, there is a growing belief that CTC will also reduce costs. With one pneumococcal vaccine pre-approved for a CTC approach in 2015, and several others in the pipeline, CTC could be about to revolutionise the supply chain.

**“CTC is perhaps the first real revolution in the logistics of immunisation programmes that has taken place over the past 10 to 15 years,”**

**says Michel Zaffran, Coordinator of WHO's Expanded Programme on Immunization.**

## **CONTROLLED TEMPERATURE CHAIN**

Most vaccines must be kept refrigerated at a temperature of between 2–8°C to ensure they remain safe and effective. However, some vaccines, like meningitis A, have demonstrated some albeit limited tolerance to heat and are now WHO prequalified to preclude the need for refrigeration during their final leg of their journey, provided they are kept below 40°C for no more than four days.

Using a combination of smart temperature and time-sensitive vial labels, a simple ambient temperature monitor and good stock management practices, controlled temperature chain (CTC) ensures that vaccines remain within these parameters before being used. By removing the need for ice packs during the final stage of the journey, this approach not only significantly reduces costs but it has a dramatic impact on the ease and efficiency of delivery.

In 2014, Gavi funding helped three countries – Côte d'Ivoire, Mauritania and Togo – use CTC to support mass meningitis A vaccine campaigns.

# YELLOW FEVER VACCINE: INCREASED DEMAND REQUIRES INNOVATIVE SOLUTIONS

The hard work done by Gavi and its partners to increase immunisation against yellow fever over the past 15 years has been so successful that more vaccine is now urgently needed to meet global demand.

Just over a decade ago, 20 million doses of the yellow fever vaccine were enough to supply global demand for this vaccine. But with yellow fever now included in routine immunisation programmes in a growing number of countries and a global stockpile that needs regular replenishment, demand has surged to around 80 million doses a year for Gavi-supported countries alone.

With only four prequalified yellow fever vaccines available worldwide, one of Gavi's biggest challenges in 2014 was to find a way to encourage additional capacity. Building on work by WHO and other Alliance partners, the Institut Pasteur de Dakar in Senegal and Sanofi Pasteur in France decided to invest in facilities to grow production capacity, thereby ensuring adequate supplies of this much needed vaccine for Africa.



To meet growing demand, the Vaccine Alliance has been working to scale up production of yellow fever vaccine in two continents, Africa and Europe.

The Institut Pasteur de Dakar (IPD) has been manufacturing its yellow fever vaccine since the 1930s, which makes it the oldest, most experienced producer in the world. The vaccine itself – like all yellow fever vaccines – also dates from the early years of the last century. The live, attenuated vaccine is produced using chicken eggs and embryos, and the required levels of sterility are difficult to achieve. With growing demand and a rapidly increasing population in endemic areas, outside investment was urgently needed to ensure the continuing viability of the IPD plant.

*"As the African population continues to grow, increased production of the yellow fever vaccine will certainly be needed,"* said IPD Director, André Spiegel. He added that this increased demand is best met by a vaccine manufacturer and supplier based in Africa, focusing on a serious health challenge for the continent. So when the team from the Vaccine Alliance came to visit, he was more than open to a partnership that enables his institute to invest in producing yellow fever vaccine and so guarantee a secure future supply.

*"Gavi's work in this area has allowed us to maintain and sustain production of the vaccine for Africa in Africa,"* Dr Spiegel said.

While IPD focuses almost entirely on meeting demand in Africa, Sanofi Pasteur has its eyes on two separate markets: people living in endemic areas, and travellers visiting those areas. To meet growing demand in both markets, Sanofi Pasteur has invested in a new plant that will produce enough vaccine to contribute to the global emergency stockpile as well as meeting annual demand in developing countries. This is a tale of two solutions.

By encouraging more countries to introduce yellow fever vaccine into their routine immunisation schedule, the Vaccine Alliance and its partners have substantially increased stable demand. Now, after investing time and effort in strengthening key supply sources, Gavi hopes that the capacity will soon be in place to meet the full needs of countries as well as the global stockpile used to respond to outbreaks of the disease.



Technician at Sanofi Pasteur's production facility in France.

“We need both visibility and long-term commitments to ensure our investments will be sustainable. The perspective and capacity of Gavi showed there is evidence of a stable long-term market as well as a public health added value.

With the new facility, we can have a security stock for epidemics as well as sustainable, long-term production.”

**Olivier Charmeil**

President and CEO, Sanofi Pasteur  
and Gavi Board member



# DELIVERING TOGETHER: UNITED PARCEL SERVICE AND THE VACCINE ALLIANCE

In 2014, United Parcel Service (UPS) announced a partnership with Gavi. Ed Martinez, President of the UPS Foundation, explains how UPS will apply more than 100 years experience in running supply chains and over 50 years in business philanthropy to modernising the vaccine supply chain.



## Centre of Excellence

The East African Community's Centre of Excellence of Health Supply Chain Management brings together the Universities of Tanzania, Rwanda, Burundi, Uganda and Kenya to foster regional expertise.

In 2014, the Centre endorsed the Gavi-UPS Strategic Training for Executive Programme (STEP) as part of its curriculum. Courses will start in October 2015.

## Supply chain synergies

### United Parcel Service

- Largest supply chain and package transportation company in the world
- Serves 220 countries and territories
- One of the largest airlines in the world
- 2% of the global GDP flows through the UPS network annually

### Gavi

- Supports 11 life-saving vaccines in 73 countries
- Supported a record number of vaccine introductions in 2014
- From 2016, two children every second will be protected by a Gavi-supported vaccine



UPS logistics team load a Boeing 747 freight aircraft.  
UPS / 2009

### **What are the origins of the UPS corporate social responsibility programme?**

Our founder, Jim Casey, saw the United States go through the toughest of times – depression, World Wars One and Two, the civil rights and womens' rights movements. He felt that for a business to survive, the community has to be healthy and prosperous. So he started the UPS Foundation in 1961.

Half a century later, we support over 4,000 organisations globally ranging from community-sized nongovernmental organisations to large entities the size of the Vaccine Alliance. Our focus has changed over the years but our philosophy remains the same, whether it's applied in Atlanta or Hanoi, to help civil society with our expertise, our resources and the hard work of our employees around the world. If a UPS staffer wants us to make a financial contribution to a local NGO, they have to devote a minimum of 50 hours of their own time and expertise to their chosen cause.

### **Most of your private sector partners are humanitarian organisations focused on emergency response like UNHCR, the World Food Programme (WFP) or Care. Why did UPS choose Gavi?**

There are three ways UPS can help humanitarian programmes: preparedness, urgent response and post-crisis recovery. Today, we help 11 global organisations that specialise with one or more of these workstreams: United Nations agencies like UNHCR, UNICEF and OCHA and NGOs such as Care and the Salvation Army. But we are always looking for ways to garner greater impact and that's where the conversation with Gavi started.

Some of your partners are either our partners or our customers so there's enormous potential to build synergies. For example, we work with UNICEF and one of your partners, Merck (a pharmaceutical company), is a UPS customer. That's a perfect opportunity to share expertise to build a more effective cold chain for vaccines.

### **The immunisation supply chain is under strain because of the number of new vaccines. How can UPS help the Vaccine Alliance's supply chain strategy?**

Gavi works with very professional organisations like UNICEF and health ministries, but I think UPS can bring a different skill set to the table. Transportation and supply chains have been our core competency for 100 years and I believe there are elements of the immunisation supply chain that we can enhance. Inventory management is vital to avoid wastage. Tracking technology can ensure that beneficiaries receive life-saving commodities more quickly and efficiently.

The UPS Relief Link is an example of modern-day tracking technology. It's helping UNHCR accelerate the delivery of commodities to refugee camps and also monitor the level of nutrition in the camps. It's perfectly replicable in the distribution of vaccines.

### **Is UPS support limited to logistics?**

Delivering packages is just one piece of the partnership. We believe that besides saving time, a lot more can be done in the management of the supply chain to save resources and increase the number of products.

Like any business process, supply chain initiatives need strong leadership. We have offered Gavi training not only in supply chain management but also in leadership. This will deliver well trained supply chain managers in Gavi-supported countries.

### **How has UPS already drawn on its global resources to help humanitarian agencies?**

Last year, we used UPS aircraft based in Cologne, Germany, to transport UNHCR and UNICEF equipment to countries worst hit by the Ebola epidemic. And when WFP needed a logistics capacity assessment in Nigeria, we put out a call to our local office. They delivered an assessment within a couple of weeks.

### **What are the first steps and how will you measure the success of your partnership with Gavi?**

First, we are working together to build a strong foundation based on supply chain best practices. Then, we'll dive into the specific cold chain needs of individual countries in Africa and Asia, apply best practice and find solutions.

We're working with the Alliance to develop metrics so we can measure progress five years down the road. But, ultimately, the goal is to ensure healthier communities everywhere. We'll know that we've been successful when those communities no longer need our help.

# SMARTPHONES IN INDIA: DIAL V FOR VACCINE

Even in the remotest areas of Uttar Pradesh, health workers use smartphones to track vaccine stock levels in real time. Now Gavi health system strengthening support will ensure this innovative approach dials-in three large Indian states.



Simple mobile phone technology....

At the end of a busy vaccination session, Mitra Kumari needs to take stock, literally. As a cold-chain handler for the Bareilly Primary Health Center in Uttar Pradesh, India's most populated state, she needs to know that she has enough vaccine doses in stock for the next day's immunisation session.

Instead of returning to the cold store, Mitra reaches for her phone. At the push of a few buttons she can quickly see how many doses she has in stock and when these stock levels were logged.

Piloted in two districts, the new Electronic Vaccine Intelligence Network (eVIN) is transforming the way vaccine stock is managed and making the distribution of vaccines much more efficient. "Since the introduction of this technology, it has become easier for me to maintain the record systems," says Mitra. The interactive system is designed to work across different platforms, from the latest smartphones to the most basic text-based handsets. "It is very easy to use," says Mitra.

In addition to checking stock, eVIN also allows cold-chain handlers, like Kumari and her colleague Surajmukri Gangawar, to update the system in real time by logging the number of used, open or discarded vials. It can even track temperature levels of cold storage facilities.

By standardising and streamlining vaccine logistics management, eVIN has already had a profound impact on the supply chain in the two districts where the pilots have taken place. In the first six months of implementation, vaccine stock-outs have been virtually eliminated.

"Now, with Gavi's health system strengthening support, the plan is to scale this up across three large Indian states – Uttar Pradesh, Rajasthan and Madhya Pradesh – which have a combined population of 345 million," says Bhrigu Kapuria, Team Leader for Vaccine Logistics & Cold Chain Management, for the Government of India's Immunization Technical Support Unit. "This is going to help improve immunisation coverage," he says.



A close-up photograph of a hand holding a white tray filled with numerous small, clear glass vaccine vials with orange caps. The tray is being held in front of a white refrigerator shelf. In the background, a blue spray bottle with a white label that says "MUST BE USED" is visible. The lighting is bright, highlighting the vials and the hand.

“This system helps me keep the records properly...It gives me a sense of empowerment because I can check the stock at any time. It’s given me an oversight I never had previously.”

**Surajmukri Gangawar**  
Cold-chain handler for the  
Bareilly Primary Health Center

Indian health worker reaches for refrigerated vaccine vials.  
Gavi / 2013 / Manpreet Romana

# LIVING PROOF: IMPACT OF PNEUMOCOCCAL VACCINE IN KENYA

Surveillance studies supported by Gavi at the Kenya Medical Research Institute (KEMRI) in Kilifi are helping to establish to what extent pneumococcal vaccines have contributed to the recent drop in the number of reported pneumonia cases.

Lying on a hospital bed, the tiny figure of an infant struggles for breath, his hands bandaged to stop him from pulling the oxygen tube from his nose. “We see a lot of pneumonia,” says Mwanavua Boga. “Some, when they come in, are very severe. They need a lot of intense care. They are often very sick and the mothers are very worried.”

“This infant is one of the lucky ones. He has made it through the worst of the infection and is now on the mend,” says Mwanavua, who is Head Nurse of the Kenya Medical Research Institute (KEMRI) High Dependency Unit at Kilifi County Hospital. During the 13 years she has worked there, pneumonia has consistently been the biggest killer of under-fives. “It’s the number one cause of admissions on the ward,” she says. However, since 2011, the number of cases of pneumonia appear to have fallen after the Government of Kenya, with Gavi support, introduced pneumococcal vaccines.

As pneumonia has a number of different causes, which can vary in different parts of the world, it was not clear how much of the drop in cases was down to the pneumococcal vaccine. To help determine the impact of the vaccine, researchers at KEMRI carried out a comprehensive series of studies to establish whether the vaccine was as effective as it had appeared to be in the controlled setting of clinical trials. “These studies are important,” says Mwanavua. “They give us a perspective of what our problems are and, in terms of planning for the future, what vaccines we need for our children,” she says.

However, identifying the precise cause of pneumonia is far from straightforward and often requires indirect methods. For example, in one approach, field researchers were sent out into the community to take swabs from healthy members of the population, chosen at random. Pneumococcal bacteria live in the back of the nose and throat of both healthy and sick

people; by measuring the bacteria’s prevalence in the community, it is possible to gauge their ability to spread. Researchers found that within six months of the vaccine’s introduction, there was a two-thirds reduction in carriage of strains targeted by the vaccine, in both vaccinated and unvaccinated individuals.

This valuable research was only made possible because researchers at KEMRI had the foresight to begin pneumococcal disease surveillance, with Gavi support, four years before the pneumococcal vaccine was introduced in the region. This provided researchers with a clear reference point to help measure the vaccine’s impact.

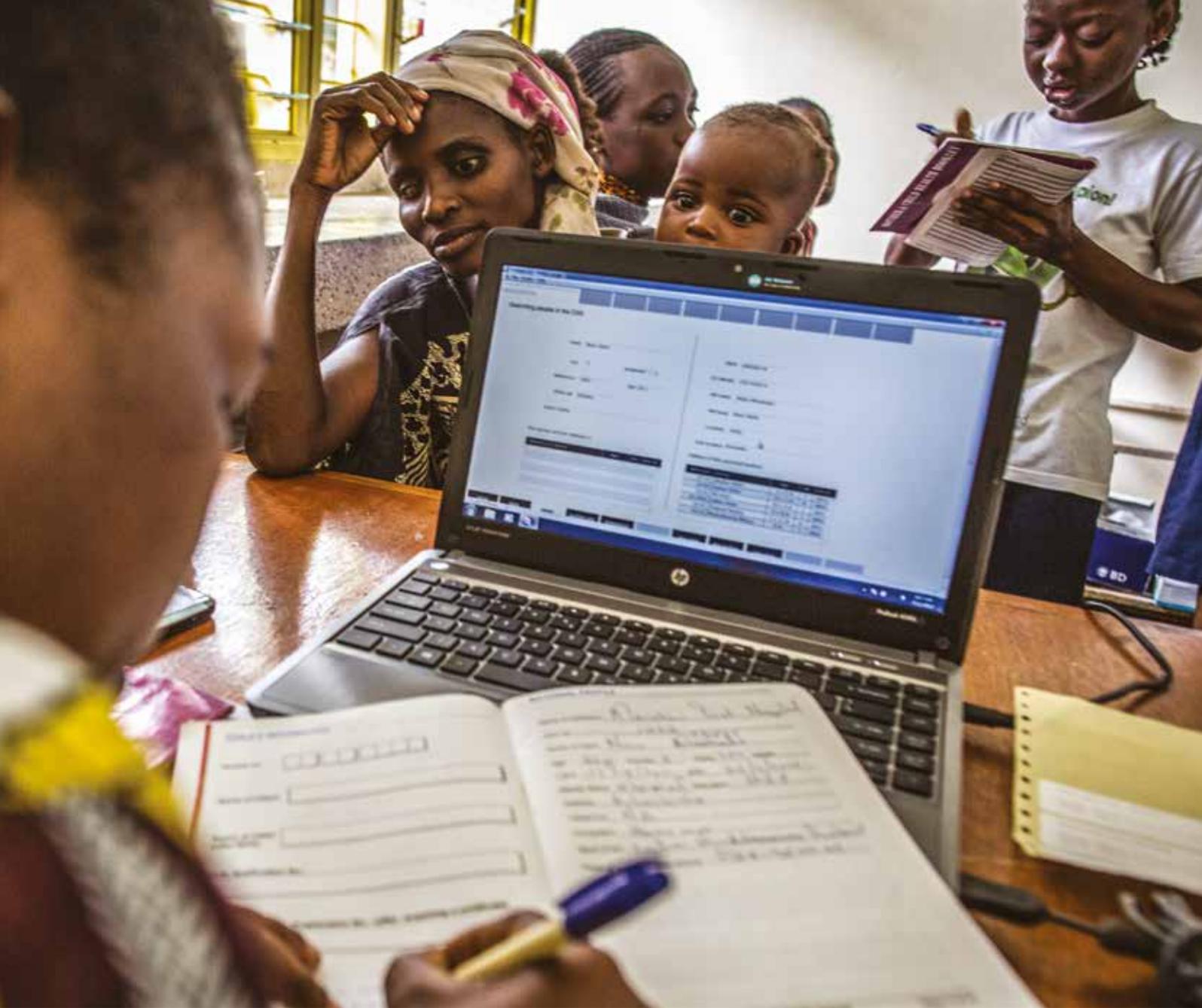
In addition to this, tracking of hospital admissions showed that the number of cases of pneumonia has dropped by a quarter, with a reduction in radiologically proven pneumonia largely caused by pneumococcus bacteria. In addition, major declines in cases of invasive pneumococcal disease (IPD) – a very severe but less common form of pneumococcal disease – have been seen. “Kilifi often used to see more than 40 cases of IPD a year,” reports Dr Anthony Scott of the KEMRI-Wellcome Trust Research Programme. “When we introduced the vaccine the numbers fell quite rapidly,” he says.

In the whole of 2013 and 2014 only one case of vaccine-specific IPD was reported, representing a 95% drop over pre-vaccination levels. “That’s a very dramatic change in the epidemiology of the disease,” says a delighted Scott. “Essentially we’re at the point where we think that disease is controlled. It’s almost gone.”

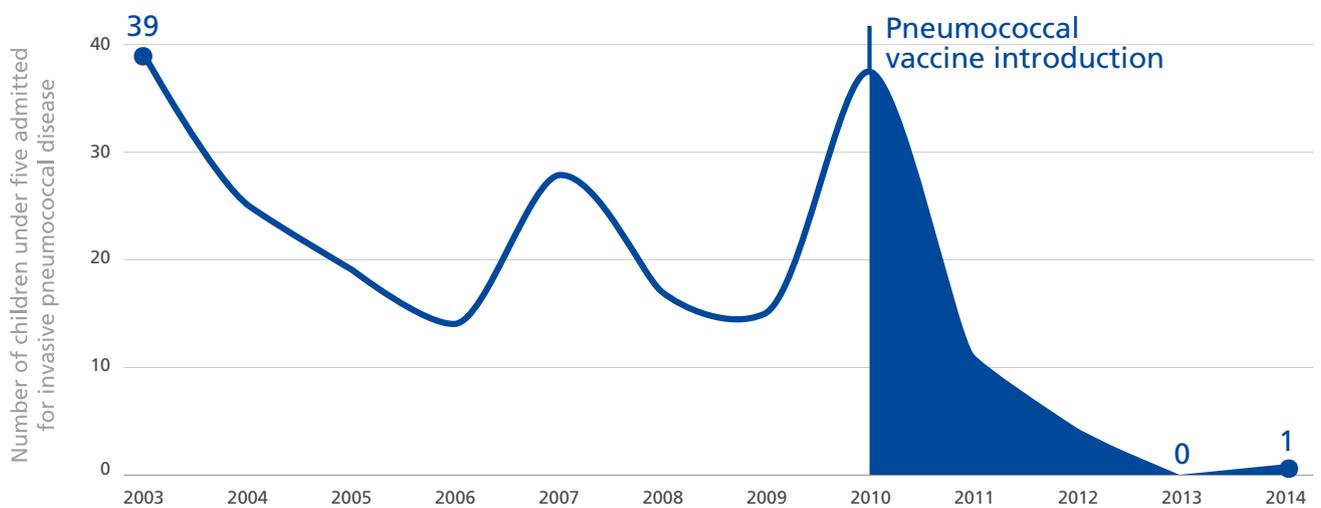
Collecting pneumococcal vaccine immunisation data in Kenya.

Gavi / 2013 / Evelyn Hockstein





**Admissions of children under five years with invasive pneumococcal disease, Kilifi District Hospital, 2003–2014**



Source: Anthony Scott, KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya.

# FINAL PUSH AGAINST POLIO: PUNJAB SHOWS THE WAY

The successful introduction of the inactivated polio vaccine in Punjab province will depend on a new plan to strengthen the routine immunisation system.

Vaccinator in Punjab province uses a mobile application to register immunisations.

Acasus / 2014

It's not often you pick up the phone and hear the voice of a senior minister at the other end, asking how you think local immunisation services could be improved. Yet this is soon to become reality in Punjab province, where Chief Minister Shehbaz Sharif is so committed to public health services that he has recorded a personal telephone message inviting citizens to share their experience of vaccination.

This is just one example of how the Punjab province, home to more than half of Pakistan's population, is committed to improving its routine immunisation system and, ultimately, eliminating polio.

*"Pakistan accounts for about 80% of the world's polio cases and we have measles outbreaks – things the rest of the world has largely overcome. And I attribute that largely to a poorly executed and managed vaccination system,"* says Dr Umar Saif, head of the Punjab Information Technology Board.

Pakistan is one of just three remaining polio-endemic countries, and is expected to introduce inactivated polio vaccine (IPV) with support from Gavi later this year. Reaching every Punjabi with the vaccine will depend on a strong routine immunisation system, so the province has introduced a new plan to help strengthen its capacity.

Supported by partners such as the UK Department for International Development (DFID) and UNICEF, the plan includes re-allocating vaccinators' time from campaigns to routine immunisation, as well as providing training and even fuel allowances to help vaccinators move between communities.

The plan is expected to provide new momentum to boost the delivery of vaccines against other diseases as well.

*"Routine immunisation is key to polio eradication,"* explains Aizaz Akhtar, head of the Special Monitoring Unit of Punjab's Chief Minister's Office. *"Any study confirms that when routine immunisation coverage gets up to 95% your polio cases will go down. And that's the story we need to tell."*

To help public health managers track progress and set targets, Dr Saif and his team have developed a smartphone app, funded by the World Bank, which allows vaccinators to quickly register every jab on a central data hub. Results have been impressive. *"We have witnessed a sea change in the way vaccination is done. Vaccinators used to meet 21% of their targets. With the new app, this has increased to 91% in just four months,"* he said.

Dr Captain Asif, the health manager in Jhelum district, is optimistic. *"We are really pleased with the new system. Our experience has been a good lesson for the rest of Pakistan!"*

Punjab's plan marks a milestone in the country's long journey to eradicate polio and strengthen routine immunisation systems. Dr Saif, Mr Akhtar and Dr Asif are all positive about its potential to work in other provinces, because, says Dr Asif, it is *"making vaccines accessible at the doorstep of each child"*.

## POLIO ENDGAME: THE IMPORTANCE OF ROUTINE IMMUNISATION SYSTEMS

The year 2014 was critical for the global effort to eradicate polio, with Nepal becoming the first country to introduce the inactivated polio vaccine (IPV) with Gavi support. This started a period of rapid introductions as Gavi-supported countries aim to comply with the Polio Endgame target: to introduce at least one dose of IPV into immunisation schedules by 2015.

Adding IPV to routine immunisation programmes will improve immunity and help prevent rare outbreaks associated with oral polio vaccine (OPV), which has traditionally been used to fight polio in developing countries.

The success of the IPV roll-out is directly related to the performance of a country's immunisation system. The need to reach every child with IPV through the routine system will provide new momentum to strengthen its capacity. This, in turn, could boost the delivery of vaccines against other diseases as well.



*"... making vaccines  
accessible at the  
doorstep of each child"*

# GLOBAL COVERAGE RATES: THE BIG THREE

As Gavi shifts its focus and attention towards increasing coverage and equity, it is important to remember that any progress towards global targets very much depends on what happens in just three large, highly-populated countries.

## INDIA

In 2014 India accelerated its national roll-out of pentavalent vaccine with a further 12 states introducing the vaccine with Gavi support. These states alone account for 50% of India's 25.5 million strong birth cohort, with another 15 states, representing 35% of the national birth cohort, due to complete the vaccine's introduction by early 2016. The Government will be taking up the cost of pentavalent vaccine from 2016. Since 2010, India has increased DTP3 coverage from 79% to 83%. The switch to pentavalent vaccine will also provide protection against hepatitis B and Hib infection.

## INDONESIA

Indonesia successfully completed the nationwide introduction of pentavalent vaccine across its 6,000 islands in less than two years – half the time it took to roll out the tetravalent vaccine (DTP and hepatitis B). However, DTP3 coverage rates dropped to 78% in 2014. The national immunisation programme also reported a four-month stock-out in the first half of the year. This underlines how supply issues and geographical challenges can heavily impact a large country's ability to achieve and maintain high coverage.

## NIGERIA

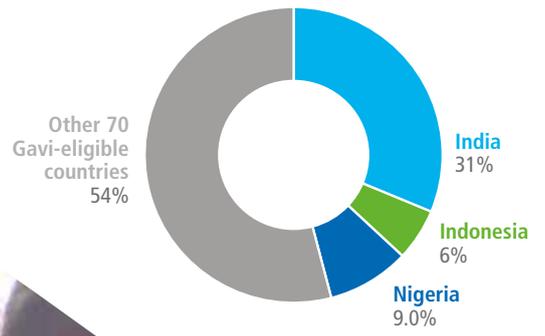
After falling to 42% in 2012, Nigeria's coverage with a third dose of DTP-containing vaccine rose to 66% in 2014 – the highest level ever.

While Nigeria is one of Africa's wealthiest countries, it has the highest number of vaccine-preventable deaths in the continent. However, in 2014 the Government, with support from Gavi, boosted its routine immunisation programmes by improving an historically poor vaccine supply chain infrastructure. This included the procurement and installation of over 1,500 Solar Direct Drive fridges and freezers.



India, Indonesia and Nigeria collectively account for 37.5 million new infants each year, or more than 45% of the birth cohort in the 73 Gavi-supported countries. In 2014, there were signs of progress in these countries. However, there was also evidence that challenges persist.

Proportion of children born annually in Gavi-supported countries



Source: UN World Population Prospects: The 2012 Revision



Gavi / 2013 / Manpreet Romana



Gavi / 2013 / Chris Stowers



Gavi / 2013 / Adrian Brooks

# UPDATE FROM AFAR: ISLAMIC LEADERS CHAMPION IMMUNISATION

Imams in one of Ethiopia's remotest regions are helping break cultural and geographical barriers to immunisation.

A doctor's waiting room crammed full of women and children waiting for routine immunisation is a common enough sight in many rural African communities. However, in Ethiopia's vast Afar region, where families are constantly on the move searching for water and fresh pasture for their cattle, health workers have to go out and look for their patients.

Geography is only one of several barriers to increasing immunisation coverage rates in a region where less than a quarter of all children receive the basic package of vaccines. Even when health workers find Afar's shifting communities, they must overcome deeply entrenched fears and suspicions of vaccines. One nurse has described being threatened by an angry father after approaching his child for a routine immunisation check.

Yet the children of Afar cannot afford to miss out on the protective powers of vaccines. When a child falls sick here, they must travel vast distances to receive even the most basic level of medical treatment.

Recognising the need for a fundamental shift in the community's beliefs, Afar's Regional Health Bureau turned to influential religious leaders such as Sheik

**"You have the messages and we have the people. Together we can reach the community with messages that will protect our children from illness and death."**

**Sheik Mussa Mohammed**

Deputy head of the regional Islamic Affairs office

Mussa Mohammed, a highly respected Islamic scholar and deputy head of the regional Islamic Affairs office.

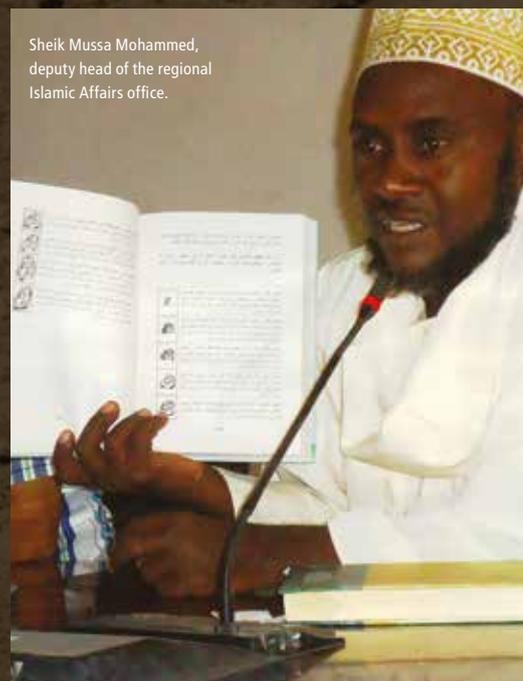
With support from PATH and Gavi, the Health Bureau and the Islamic Affairs office invited more than 40 imams to attend an advocacy workshop on immunisation and plan how to spread the word about the importance of vaccinating children. Sheik Mussa cited a passage from *Reflection of Islam in the Quran on Child Care and Protection* which tells Muslims that it is their religious duty to protect children from any illness, including vaccine-preventable diseases.

Subsequent workshops involving more than 100 imams from across Afar have resulted in widespread dissemination of immunisation messages in mosques during Friday prayers and at religious events. During Nika – the marriage vows ceremony – imams often call upon couples to vaccinate their future children.

One year after first reaching out to the Islamic community, Ibrahim Gudelle, head of the Maternal and Child Health Unit at Afar's Regional Health Bureau has already noticed an increase in immunisation coverage rates.

Following the success of its initial pilot project in Afar, the Regional Health Bureau is expanding the partnership with PATH and Gavi and reviving social mobilisation committees across the region. First established several years ago, the committees are composed of respected members of the community including administrators, clan and religious leaders, womens' groups and health and education authorities.

"I am happy to inform you that we have seen a lot of successes, particularly in increasing our region's coverage with the basic package of childhood vaccines. It's a result of the involvement of Islamic leaders," says Mr Gudelle.



Sheik Mussa Mohammed, deputy head of the regional Islamic Affairs office.

Health extension workers in the Afar region of Ethiopia out on the “last mile” of reaching children with vaccines.

PATH / 2013 / Jiro Ose



## Ethiopia's immunisation coverage rates: no half-measures

While 94% of children in Addis Ababa receive three doses of the DTP (diphtheria-tetanus-pertussis) vaccine, the percentage rate plummets outside the capital. In some areas, immunisation coverage rates are as low as 12%.

Ethiopia's Government, one of the largest recipients of Gavi funding, has developed a coverage improvement plan which addresses geographical inequities through, for example, routine immunisation outreach programmes, and data and supply chain improvements.

In Afar region, which has an average immunisation coverage rate of 25%, the Regional Health Bureau is targeting geographical inequity by working closely with religious leaders to help overcome local fears and raise awareness of the power of vaccines.

# PLANNING THE FUTURE

---

Moving forward, Gavi has a revised five-year strategy for 2016–2020, which builds on the current strategy and draws lessons from the previous 15 years.

Funding for the period 2016–2020 was promised at Gavi's Pledging Conference, allowing the Vaccine Alliance not simply to continue its work but to aim high – to help countries immunise another 300 million children by 2020.

## **OUR STRATEGY FOR 2016–2020**

Setting our goals → p74

## **THE ROAD TO REPLENISHMENT**

Building momentum → p76

## **GAVI'S REPLENISHMENT**

A great day for children → p78



Boy in Kilifi, Kenya.  
Gavi / 2014 / Duncan  
Graham-Rowe

# GAVI SETS OUT NEW STRATEGY FOR 2016–2020

→ Achieving equitable access is a key objective of the new strategy

**The period 2011–2015, covered by Gavi’s third five-year strategy, has been characterised by a dramatic increase in introductions of new vaccines into national immunisation systems. We have also focused on ensuring predictable long-term financing, shaping vaccine markets and strengthening national health systems to support the delivery of immunisation services.**

While each of these endeavours is still highly relevant, the present landscape has changed. Thanks to rapid economic growth, many countries are assuming increasing financial responsibility for their immunisation programmes. There have been significant reductions in child mortality and in many places immunisation coverage has increased. But economic growth and the benefits of immunisation are often unevenly distributed, and many of today’s underimmunised children live in middle-income countries. Despite great successes – we have helped countries to immunise 500 million children, saving 7 million lives in the long term – too many are still missing out.

Coverage, equity and sustainability are at the core of our new strategy. Focus is shifting from introducing new vaccines into countries’ immunisation schedules to also increasing access to these new vaccines. However, increasing access alone is not enough: making it fairer is as important.

**Gavi’s new mission: to save children’s lives and protect people’s health by increasing equitable use of vaccines in lower-income countries.**

Our task now is to reach all children in Gavi-supported countries with the miracle of vaccines regardless of where they are born or how rich their families are, and whether they are boys or girls. The new mission statement reflects the crucial role of equitable access. Further, the reference to lower-income countries emphasises our continued focus on countries with limited ability to pay for their immunisation programmes.

## Our mission is underpinned by four strategic goals

**Strategic goal 1: to accelerate equitable access to and use of vaccines**



The first strategic goal reinforces our role in helping countries to increase access to potentially life-saving vaccines. This involves introducing new vaccines, but also emphasises the importance of reaching all children in an equitable way.

### Objectives:

- to increase coverage and equity of immunisation
- to support countries to introduce and scale up new vaccines
- to respond flexibly to the special needs of children in fragile countries.

**Strategic goal 2: to increase effectiveness and efficiency of immunisation delivery as an integrated part of strengthened health systems**



Strong and efficient immunisation delivery systems are critical to ensuring that we can reach more children in a sustainable way. Going forward, we will place even more focus on integrating immunisation with other health services in a way that benefits the whole health system.

### Objectives:

- to contribute to improving integrated and comprehensive immunisation delivery
- to support improvements in supply chains, data systems, demand generation and gender-sensitive approaches
- to strengthen engagement of civil society, the private sector and other partners in immunisation.

Gavi strategies run for five-year-periods. They outline our mission, goals and objectives, and define the targets against which we measure our performance.

Eight **principles** define our business model and aspirations in the 2016–2020 period:

- country-led
- community-owned
- globally engaged
- catalytic and sustainable
- integrated
- innovative
- collaborative
- accountable

Furthermore, four **strategic enablers** are critical to successfully achieving our mission.

These are: country leadership, management and coordination; resource mobilisation; advocacy; and monitoring and evaluation.

Targets and indicators for the strategy will be finalised during 2015. Work is already under way to refine the way we engage with our partners and ensure we can deliver on our next strategy.



### Strategic goal 3: to improve the sustainability of national immunisation programmes



As an increasing number of countries will graduate or enter the graduation phase between 2016 and 2020, ensuring that immunisation programmes are sustainable in the long term will be even more critical in Gavi's next strategy period.

#### Objectives:

- to enhance national and subnational political commitment to immunisation
- to ensure appropriate allocation and management of national human and financial resources to immunisation through legislative and budgetary means
- to prepare countries to sustain performance in immunisation beyond graduation.

### Strategic goal 4: to shape the markets for vaccines and other immunisation products



The fourth strategic goal has been broadened to include immunisation-related products as well as vaccines. This reflects the important market that the Vaccine Alliance represents for commodities such as autodisable syringes, and the role it could play in the future, for instance for cold chain equipment. It also reflects our efforts to help countries that have graduated from Gavi support, and potentially other lower-middle-income countries, to access prices equal or close to Gavi prices.

#### Objectives:

- to ensure adequate and secure supply of quality vaccines
- to reduce prices of vaccine and other immunisation products to a sustainable level
- to incentivise development of suitable and quality vaccines and other immunisation products.

# THE ROAD TO REPLENISHMENT

Building momentum for Gavi's 2015 Pledging Conference in Berlin

Under the leadership of German Federal Chancellor Angela Merkel, Gavi's historic Pledging Conference held in Berlin represented the peak of a year-long global movement involving all our partners.

Over the previous 15 months, advocacy campaigns led by civil society, leadership visits to donor capitals and high-level donor outreach had built up a wave of support for Gavi's replenishment ask: to mobilise the resources needed to immunise an additional 300 million children and realise US\$ 80–100 billion in economic savings and benefits.

## 30 OCTOBER 2013 MID-TERM REVIEW

Stockholm, Sweden

The foundations for Gavi's replenishment process are laid at the 2011–2015 Mid-Term Review (MTR). Jointly hosted by Sweden's Minister for International Development Cooperation, Hillevi Engström, and Ghana President, HE John Dramani Mahama, the MTR assesses the Vaccine Alliance's results. Donors and partners recognise our achievements but call for even greater impact in our next strategic period.

## 8 MAY 2014 WORLD ECONOMIC FORUM ON AFRICA

Abuja, Nigeria

Just days before the formal launch of Gavi's replenishment, African leaders commit up to US\$ 700 million of their own resources in co-financing payments. The Immunise Africa 2020 Leaders' Declaration is launched by the presidents of Ghana, Senegal and the United Republic of Tanzania.

## 29 MAY 2014 SAVING EVERY WOMAN, EVERY CHILD: WITHIN ARM'S REACH

Toronto, Canada

The 2016–2020 Gavi Investment Opportunity features at summit convened by Canadian Prime Minister, Stephen Harper.

## 29 JANUARY 2014 ADVOCACY PARTNERS' CAMPAIGN KICK-OFF

Geneva, Switzerland

Over 20 global partner organisations assess needs and align plans and strategies for a year-long campaign.



## Key announcements

- 1. Thomas Silberhorn, Secretary of State of the Federal Ministry of Cooperation and Development**  
Germany will host Gavi's 2016–2020 pledging conference in Berlin in early 2015.
- 2. President Barroso of the European Commission (EC)**  
EC pledges €175 million over seven years, tripling its previous contribution.
- 3. Andrew Witty, CEO of GSK (GlaxoSmithKline)**  
GSK commits to a five-year price freeze on GSK vaccines for the 22 countries who will graduate from Gavi support by 2020.
- 4. Civil society**  
On the eve of the 2014 World Cup, ONE.org launches its "Going for Goal" report to promote Team Gavi, while RESULTS/Action's latest donor report card marks donor governments according to their commitment to immunisation.

## 20 MAY 2014 GAVI REPLENISHMENT LAUNCH

Brussels, Belgium

European Commissioner for Development, Andris Piebalgs, launches Gavi's replenishment in Brussels, where the Vaccine Alliance asks donors for US\$ 7.5 billion to fund its 2016–2020 Investment Opportunity. José Manuel Barroso, President of the European Commission and Ethiopia President, Mulatu Teshome, open the event, which brings together high-level country, donor, private sector and civil society representatives.



## The 2016–2020 Gavi Investment Opportunity

The Vaccine Alliance's 2016-2020 Investment Opportunity brochure challenged donors to commit US\$ 7.5 billion to achieve three goals.

1. Accelerate impact: immunise an additional 300 million children against potentially fatal diseases, saving between 5 and 6 million lives.
2. Reach more children: increase the percentage of children immunised with WHO's recommended 11 vaccines from 5% to 50%.
3. Build a sustainable future in which countries are able to fund their own immunisation programmes.



### 4–5 JUNE 2014 G7 SUMMIT

Brussels, Belgium

Official G7 communiqué calls for a successful replenishment of Gavi.



### 2 OCTOBER 2014 HPV VACCINE DEMONSTRATION PROGRAMME

Vientiane, Lao People's Democratic Republic

Gavi Board Chair Dagfinn Høybråten, Australian parliamentarians and civil society organisations attend the launch of the Lao People's Democratic Republic's HPV vaccine demonstration programme, which is funded by Gavi.



### 27 NOVEMBER 2014 UK GOVERNMENT PLEDGES £ 1 BILLION TO GAVI

London, the United Kingdom

The United Kingdom confirms its role as a leading Gavi donor when Secretary of State for International Development, Justine Greening, announces a pledge of £ 1 billion to continue "Britain's investment in immunisation" through Gavi.



### 28 SEPTEMBER 2014 UNITED NATIONS GENERAL ASSEMBLY

New York, United States

At the Global Citizens Concert in Central Park, Norwegian Prime Minister, Erna Solberg, announces a leadership pledge to contribute at least US\$ 215 million per year to Gavi for the next five years, calling on other donors to increase their contributions.

Liberia President, Johnson Sirleaf, hosts a meeting at which implementing countries emphasise the need to invest in immunisation, build strong and sustainable health systems, and fully fund Gavi.



### 29 OCTOBER 2014 GAVI CEO VISIT BACKED BY CIVIL SOCIETY LEADERS

Canberra, Australia

Australia Foreign Minister, Julie Bishop, meets Seth Berkley and announces additional funding support to Gavi for 2015 as well as signalling Australia's continued support for 2016–2020.



### 28 NOVEMBER 2014 CANADA DOUBLES SUPPORT FOR GAVI AT FRANCOPHONIE SUMMIT

Dakar, Senegal

Canadian Prime Minister, Stephen Harper, announces "a considerable contribution for immunisation" equivalent to CA\$ 500 million, doubling his Government's previous level of support.



# A GREAT DAY FOR CHILDREN: GAVI'S REPLENISHMENT

In late January 2015, the world responded to our call to save even more lives by pledging over US\$ 7.5 billion to Gavi programmes

The high-level Pledging Conference: Reach Every Child held in Berlin on 26–27 January 2015 under the auspices of Germany's G7 presidency represented a culmination of the commitment of global leaders to protect the world's most vulnerable children.

As the host of the 2015 Pledging Conference, German Chancellor Angela Merkel, with the support of Federal Minister for Economic Cooperation and Development Dr Gerd Muller, played a critical role in Gavi's replenishment.

From the start, Chancellor Merkel made Gavi's replenishment a key milestone of Germany's G7 presidency signalling early on her Government's intention to triple its contribution to at least €100 million a year. The Chancellor also directly engaged with other leaders during the G20 and G7 meetings and convinced new donors China, Oman, Qatar and Saudi Arabia to support the Vaccine Alliance.



Chancellor Merkel was joined by Dr Jakaya Mrisho Kikwete, President of the United Republic of Tanzania, and Mr Ibrahim Boubacar Keïta, President of the Republic of Mali, Erna Solberg, Prime Minister of Norway, Donald Kaberuka, President of the African Development Bank, Bill Gates, co-Chair of the Bill & Melinda Gates Foundation, ministers from more than 20 implementing and donor countries, representatives of civil society groups, CEOs of vaccine manufacturing companies and United Nations agencies, among many others.

During the Conference, representatives of Gavi-supported countries and civil society leaders provided first-hand accounts of the power of vaccines to remind donors of the real-life impact of their support.

Some donors committed additional funding. For example, the EC Commissioner for International Cooperation, Neven Mimica, pledged an additional €25 million, building upon the European Commission's May 2014 pledge and bringing their total pledge to €200 million.

## 26–27 JANUARY 2015 HIGH-LEVEL PLEDGING CONFERENCE: REACH EVERY CHILD

Berlin, Germany



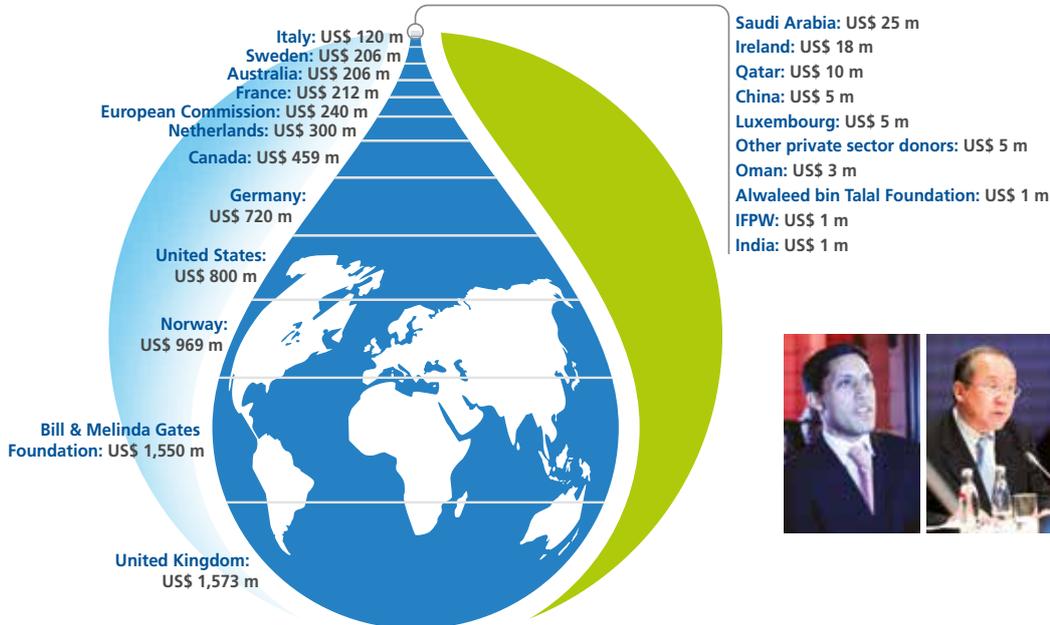
“Investing in immunisations means investing in the world’s future.”

**Ban Ki-moon**

United Nations Secretary-General

## Gavi’s 2016–2020 Pledging Conference

US\$ 7.539 billion mobilised<sup>1,2</sup>



## Expanding Gavi’s donor base

The Berlin Pledging Conference successfully diversified and expanded Gavi’s donor base. China, Oman, Qatar and Saudi Arabia all pledged for the first time and joined our donor family. China’s pledge marked its transition from a former recipient country – Gavi provided support for China to introduce hepatitis B vaccine during 2002–2006 – to a Gavi donor, and its inclusion as the final BRICS (Brazil, Russia, India, China and South Africa) donor to join the Vaccine Alliance.

Many existing donors also increased their level of support relative to the June 2011 replenishment, including the United States who took a bold step to increase their pledge to US\$ 1 billion<sup>3</sup>. With increases from existing donors as well as new donors coming on board, Gavi has reduced its previous over-reliance on just a few donors. The Vaccine Alliance now has a more sustainable funding portfolio that provides even greater long-term security to Gavi-supported countries.

Replenishment also reinforced innovative financing as a key pillar of Gavi’s funding strategy. Australia, France and the Netherlands all committed new pledges to IFFIm totalling over US\$ 280 million. The Netherlands also joined the Bill & Melinda Gates Foundation and the UK as the latest supporter of Gavi’s Matching Fund which matches

pledges made by the private sector. France, a founding donor of IFFIm, once again demonstrated its commitment to innovative financing by pioneering a concessional loan structure to purchase vaccines for targeted countries.

Gavi’s 2016–2020 replenishment was an historic moment in our 15-year existence. Pledges of support from across the Vaccine Alliance – donors, implementing countries and industry – underscored the value of immunisation, both as a return on investment and in creating a more prosperous future. Gavi is grateful for a resounding vote of confidence and will continue working together with its partners to deliver life-saving vaccines to the children who need them most.

**Left to right:** Gavi Board Chair Dagfinn Høybråten, German Minister Gerd Muller, Gavi CEO Seth Berkley and Gavi Deputy CEO Anuradha Gupta welcome confirmation that Gavi has reached its pledging target.



<sup>1</sup>Includes further cost savings from market shaping (US\$ 60 million) and cash & investment drawdown (US\$ 50 million).

<sup>2</sup>Pledges in non-US\$ currencies were converted to US\$ equivalents using an average of the annual forecasted exchange rates for the 2016–2020 period as published by Bloomberg on 23 January 2015

<sup>3</sup>The United States announced a pledge of US\$ 1 billion for the years 2015–2018, including US\$ 800 million for 2016–2018, subject to US Congressional approval.

# ANNEXES

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## GOVERNANCE STRUCTURE

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## COMMITMENTS FOR COUNTRY PROGRAMMES

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## BOARD APPROVALS FOR COUNTRY PROGRAMME EXPENDITURE

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## COMMITMENTS AND BOARD APPROVALS FOR INVESTMENT CASES

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Cameroon  
Gavi / 2014 / Duncan  
Graham-Rowe

# ANNEX 1: GOVERNANCE STRUCTURE AS OF 31 DECEMBER 2014

## The Gavi Board

### There are 28 seats on the Board:

- 4 permanent members representing UNICEF, WHO, the World Bank, and the Bill & Melinda Gates Foundation
- 5 representing developing country governments
- 5 representing donor country governments
- 1 member each representing civil society organisations, the vaccine industry in developing countries, the vaccine industry in industrialised countries, and research and technical health institutes (4 in total)
- 9 independent individuals with a range of expertise
- The CEO of Gavi (non-voting)

## Institutions

### UNICEF

Geeta Rao Gupta, Vice Chair of the Board

### WHO

Flavia Bustreo

### The World Bank

Tim Evans

### The Bill & Melinda Gates Foundation

Orin Levine

## Independent members

### Dagfinn Høybråten, Board Chair

Wayne Berson

Maria C. Freire

Ashutosh Garg

H.R.H. The Infanta Cristina of Spain

Yifei Li

Richard Sezibera

George W. Wellde Jr.

Stephen Zinser

## Non-voting member

Seth Berkley, CEO Gavi, the Vaccine Alliance

## Constituencies\*

### Developing country government representatives

#### Constituency 1

Suraya Dalil (Afghanistan)

#### Constituency 2

A.F.M. Ruhai Haque (Bangladesh)

#### Constituency 3

Andrei Usatii (Republic of Moldova)

#### Constituency 4

Awa Marie Coll-Seck (Senegal)

#### Constituency 5

Ruhakana Rugunda (Uganda)

### Donor government representatives

#### USA/Australia/Japan/ Republic of Korea

Jenny Da Rin (Australia)

#### Canada/Ireland/United Kingdom

Donal Brown (United Kingdom)

#### Italy/Spain

Angela Santoni (Italy)

#### France/Luxembourg/ European Commission/ Germany

Jan Paehler (European Commission)

#### Denmark/Netherlands/ Norway/Sweden

Anders Nordström (Sweden)

### Research and technical health institutes

Zulfiqar A. Bhutta (Aga Khan University, Karachi, Pakistan)

### Developing country vaccine industry

Adar Poonawalla (Serum Institute of India Limited)

### Industrialised country vaccine industry

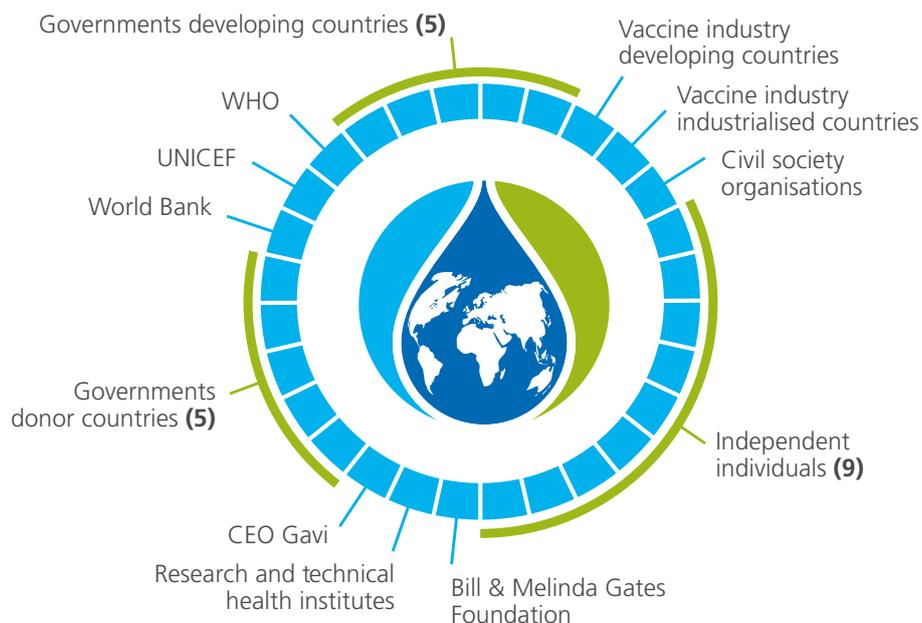
Olivier Charmeil, Sanofi Pasteur

### Civil society organisations

Joan Awunyo-Akaba (Future Generations International)

\*For the full list of constituency members please refer to: [www.gavi.org/about/governance/gavi-board/composition/developing-country-governments](http://www.gavi.org/about/governance/gavi-board/composition/developing-country-governments)

## Governance structure



## Other Gavi-related governance structures

### THE INTERNATIONAL FINANCE FACILITY FOR IMMUNISATION (IFFIm) COMPANY

**René Karsenti**

(Chair) President The International Capital Market Association (ICMA)

**Didier Cherpitel**

Former Secretary General International Federation of Red Cross and Red Crescent Societies

**Cyrus Ardalan**

Vice Chairman Barclays

**Marcus Fedder**

Former Vice Chair TD Securities

**Christopher Egerton-Warburton**

Partner Lion's Head Capital Partners

### GAVI CAMPAIGN

**Paul O'Connell**

(Chair) President and Founding Member FDO Partners, LLC

**Steven Altschuler**

President and CEO The Children's Hospital of Philadelphia

**Daniel Schwartz**

CEO Dynamica, Inc.

**Seth Berkley (Honorary)**

CEO Gavi, the Vaccine Alliance

# ANNEX 2: CONTRIBUTIONS PLEDGED (US\$ MILLIONS)

## Includes pledges made as of 31 December 2014

**General notes:** non US\$ contributions for 2000–2014 are expressed in US\$ equivalents using the exchange rates on the date of receipt.

Non-US\$ direct, Matching Fund and AMC pledges for 2015–2034 are expressed in US\$ equivalents using the exchange rates at 31 December 2014, except for those pledges for which contributions have already been received (these are expressed in US\$ equivalents using the exchange rates on the dates of receipt) and non-US\$ pledges that have been hedged to mitigate currency risk exposure (these are expressed in US\$ equivalents using the exchange rates stated in the hedge agreements).

**Source:** Gavi, the Vaccine Alliance 2015

DONOR	Contributions/pledges <sup>a</sup>											
	2000–2010						2011–2015					
	Direct contribution	Matching Fund	AMC	IFFIm	Total	As % of grand total <sup>b</sup>	Direct contribution	Matching Fund	AMC	IFFIm	Total	As % of grand total <sup>b</sup>
<b>Donor governments and the European Commission</b>												
Australia	29				29	<1%	242			31	274	4%
Brazil <sup>c</sup>									1	1	<1%	
Canada	152		125		277	7%	120		75	195	3%	
Denmark	32				32	<1%	13			13	<1%	
European Commission	58				58	1%	61			61	<1%	
France	19			191	209	5%	130			323	6%	
Germany	22				22	<1%	200			200	3%	
India							3			3	<1%	
Ireland	30				30	<1%	12			12	<1%	
Italy			158	107	265	6%			266	157	423	6%
Japan							36			36	<1%	
Luxembourg	6				6	<1%	5			5	<1%	
Netherlands	216			14	230	5%	154			73	227	3%
Norway	526		2	41	569	14%	589		48	97	734	10%
Republic of Korea	0.4				0.4	<1%	4			4	<1%	
Russian Federation			8		8	<1%			40	40	<1%	
South Africa				4	4	<1%				5	5	<1%
Spain	43			58	101	2%				57	57	<1%
Sweden	123			10	132	3%	246			11	257	3%
United Kingdom <sup>d</sup>	137		22	152	312	7%	1,423	78	317	518	2,336	31%
United States of America	647				647	15%	733			733	10%	
<b>Donor governments and the European Commission total:</b>	<b>2,039</b>		<b>316</b>	<b>576</b>	<b>2,931</b>	<b>70%</b>	<b>3,971</b>	<b>78</b>	<b>746</b>	<b>1,273</b>	<b>6,068</b>	<b>81%</b>
<b>Foundations, organisations and corporations</b>												
Bill & Melinda Gates Foundation <sup>e</sup>	1,213		20		1,233	29%	1,237	50	30	1,317	18%	
His Highness Sheikh Mohamed bin Zayed Al Nahyan							33			33	<1%	
OPEC Fund for International Development (OFID)							1			1	<1%	
<b>Subtotal:</b>	<b>1,213</b>		<b>20</b>		<b>1,233</b>	<b>29%</b>	<b>1,271</b>	<b>50</b>	<b>30</b>	<b>1,351</b>	<b>18%</b>	
A & A Foundation								2		2	<1%	
Absolute Return for Kids (ARK)								2		2	<1%	
Anglo American plc								3		3	<1%	
Children's Investment Fund Foundation								32		32	<1%	
Comic Relief								17		17	<1%	
Dutch Postcode Lottery								3		3	<1%	
ELMA Vaccines and Immunisation Foundation								2		2	<1%	
JP Morgan								2		2	<1%	
"la Caixa" Foundation	16				16	<1%		10		10	<1%	
LDS Charities							2	4		6	<1%	
Lions Clubs International								15		15	<1%	
Other private donors	12				12	<1%	5			5	<1%	
<b>Subtotal:</b>	<b>28</b>				<b>28</b>	<b>&lt;1%</b>	<b>7</b>	<b>91</b>		<b>97</b>	<b>1%</b>	
<b>Foundations, organisations and corporations total<sup>f</sup>:</b>	<b>1,241</b>		<b>20</b>		<b>1,261</b>	<b>30%</b>	<b>1,277</b>	<b>141</b>	<b>30</b>	<b>1,448</b>	<b>19%</b>	
<b>GRAND TOTAL:</b>	<b>3,280</b>		<b>336</b>	<b>576</b>	<b>4,191</b>	<b>100%</b>	<b>5,248</b>	<b>219</b>	<b>776</b>	<b>1,273</b>	<b>7,516</b>	<b>100%</b>

<sup>a</sup>Some contributions may be received by Gavi in years different to those in which the pledges were made.

<sup>b</sup>The percentages in this column refer to each donor's share of the total amount pledged rather than a percentage share of the expected need for the period.

<sup>c</sup>In June 2011, Brazil pledged US\$ 20 million to IFFIm. Grant agreement discussions are still ongoing.

<sup>d</sup>Matching Fund (UK): of the GBP 50 million (equivalent to US\$ 78.1 million) received or to be received, a total of GBP 11.5 million (equivalent to US\$ 17.9 million) has yet to be matched by other/private sector donor contributions.

<sup>e</sup>Matching Fund (Bill & Melinda Gates Foundation): of the US\$ 50 million received, a total of US\$ 0.1 million has yet to be matched by other/private sector donor contributions.

<sup>f</sup>In-kind contributions are not included in the foundations, organisations and corporations total; as of 31 December 2014, the following organisations have contributed (or pledged) in-kind contributions: Vodafone (€ 1.2 million) and Lions Clubs International Foundation (US\$ 3 million).

DONOR	Contributions/pledges <sup>a</sup>											
	2016–2020						2021–2034					
	Direct contribution	Matching Fund	AMC	IFFIm	Total	As % of grand total <sup>b</sup>	Direct contribution	Matching Fund	AMC	IFFIm	Total	As % of grand total <sup>b</sup>
<b>Donor governments and the European Commission</b>												
Australia				74	74	3%				149	149	7%
Brazil <sup>c</sup>				5	5	<1%				14	14	<1%
Canada												
Denmark												
European Commission	201				201	8%						
France				501	501	19%				649	649	29%
Germany												
India	1				1	<1%						
Ireland												
Italy			211	175	386	15%				175	175	8%
Japan												
Luxembourg												
Netherlands				20	20	<1%						
Norway				119	119	5%						
Republic of Korea	2				2	<1%						
Russian Federation			32		32	1%						
South Africa				5	5	<1%				6	6	<1%
Spain				60	60	2%				60	60	3%
Sweden				13	13	<1%				3	3	<1%
United Kingdom <sup>d</sup>	25		146	1,030	1,201	46%				1,183	1,183	53%
United States of America												
<b>Donor governments and the European Commission total:</b>	<b>229</b>		<b>388</b>	<b>2,002</b>	<b>2,619</b>	<b>99%</b>				<b>2,239</b>	<b>2,239</b>	<b>100%</b>
<b>Foundations, organisations and corporations</b>												
Bill & Melinda Gates Foundation <sup>e</sup>												
His Highness Sheikh Mohamed bin Zayed Al Nahyan												
OPEC Fund for International Development (OFID)												
<b>Subtotal:</b>												
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"la Caixa" Foundation												
LDS Charities												
Lions Clubs International		15			15	<1%						
Other private donors												
<b>Subtotal:</b>		<b>15</b>			<b>15</b>	<b>&lt;1%</b>						
<b>Foundations, organisations and corporations total<sup>f</sup>:</b>		<b>15</b>			<b>15</b>	<b>&lt;1%</b>						
<b>GRAND TOTAL:</b>	<b>229</b>	<b>15</b>	<b>388</b>	<b>2,002</b>	<b>2,634</b>	<b>100%</b>				<b>2,239</b>	<b>2,239</b>	<b>100%</b>

# ANNEX 3: COMMITMENTS FOR COUNTRY PROGRAMMES 2000–2020<sup>a</sup> (US\$ MILLIONS)

Country	NVS	HSS	ISS	OS	INS	VI grant	CSO <sup>b</sup>	HPV	PS grant	Graduation grant	Total
Afghanistan	123.0	50.0	14.0	3.6	1.7	2.5	3.6				198.4
Albania	2.1				0.1	0.3					2.5
Angola	89.3		3.0		1.3	1.8					95.4
Armenia	3.7	0.3	0.1		0.1	0.4			0.0		4.5
Azerbaijan	9.3	1.2	0.7		0.2	0.3					11.7
Bangladesh	362.5	13.7	23.3	33.6	6.1	8.3					447.5
Benin	76.7	9.3	0.2	1.7	0.4	0.5		0.2			89.0
Bhutan	1.2	0.2			0.0	0.3					1.7
Bolivia	20.8	2.1	0.3		0.9	0.3					24.4
Bosnia & Herzegovina	2.1				0.1	0.1					2.3
Burkina Faso	114.3	9.5	9.8	5.2	0.9	2.5					142.2
Burundi	72.1	22.1	3.7		0.4	0.9	0.5	0.2			99.7
Cambodia	35.3	10.3	2.0	3.2	0.6	0.9					52.3
Cameroon	129.1	8.0	8.0	2.5	1.0	2.1		0.2			150.8
Central African Republic	17.8	3.2	1.9		0.1	0.4					23.4
Chad	34.6	5.0	2.6	4.9	0.4	0.2					47.8
China	22.0				15.9	0.8					38.7
Comoros	1.3	1.8	0.1		0.0	0.3					3.6
Congo	18.4		1.7		0.2	0.5					20.7
Congo DRC	368.9	56.8	25.8	9.7	2.7	5.1	9.8		0.4		479.1
Côte d'Ivoire	69.0	8.2	8.9	5.5	1.6	0.9		0.2			94.4
Cuba		2.4			0.4						2.7
Djibouti	3.3		0.2		0.0	0.3					3.9
Eritrea	12.6	2.8	0.4		0.1	0.5					16.5
Ethiopia	599.3	137.9	23.4	45.6	2.7	6.0	3.3				818.2
Gambia	20.4	0.0	0.7	0.7	0.1	1.0		0.2			23.1
Georgia	4.1	0.4	0.1		0.1	0.4					5.1
Ghana	218.3	27.7	5.3	9.5	0.9	1.9	0.8	0.2			264.5
Guinea	26.8	2.1	2.9	2.3	0.3	0.6					35.1
Guinea-Bissau	8.6	1.9	0.5		0.1	0.4					11.6
Guyana	3.4		0.1			0.3					3.7
Haiti	14.4	3.3	1.3		0.4	0.7					20.1
Honduras	29.5	8.0	0.1		0.5	0.2				0.4	38.6
India	291.5	107.0			18.4	0.4					417.3
Indonesia	68.7	24.8	12.6		9.9	7.6	3.9				127.5
Kenya	328.6	9.9	6.4		1.1	1.8		0.2			348.0
Kiribati	0.3					0.3					0.6
Korea DPR	20.0	30.4	2.2		0.7	0.6					54.0
Kyrgyzstan	13.3	5.8	0.8		0.2	0.3					20.4

CSO, civil society organisation support; HPV, human papillomavirus vaccine demonstration cash support; INS, injection safety support; ISS, immunisation services support; HSS, health system strengthening support; NVS, new and underused vaccine support; OS, operational support; PS grant, product switch grant; VI grant, vaccine introduction grant

<sup>a</sup>Commitments represent endorsements of multi-year programme budgets made by the Gavi Board (or Executive Committee).

These endorsements do not constitute a liability to pay but instead send a positive signal that Gavi intends to fund a programme over its entire life span subject to performance and availability of funds.

Country	NVS	HSS	ISS	OS	INS	VI grant	CSO <sup>b</sup>	HPV	PS grant	Graduation grant	Total
Lao PDR	17.7	4.0	1.4	1.0	0.3	0.8		0.2			25.4
Lesotho	3.8	2.7	0.1		0.1	0.3					7.0
Liberia	17.7	8.8	2.2		0.4	0.6		0.2			29.8
Madagascar	128.6	10.9	4.1		0.6	2.3		0.2			146.6
Malawi	163.2	25.8	2.0		0.7	2.0		0.2			193.9
Mali	123.3	4.6	5.0		0.7	0.9		0.2			134.6
Mauritania	15.3	2.4	0.7	1.0	0.2	0.4					20.1
Mongolia	5.7	0.5	0.5		0.1	0.1					6.9
Mozambique	141.3	25.0	1.7		0.8	3.0		0.2			172.0
Myanmar	96.4	32.8	7.7	11.4	2.1	5.0					155.3
Nepal	66.7	23.2	3.3		1.2	2.5		0.2			97.0
Nicaragua	25.8	3.2	0.4		0.5	0.2					30.0
Niger	78.9	44.0	8.1		0.9	2.1		0.3			134.2
Nigeria	323.7	44.7	47.3	81.8	12.6	15.9					526.0
Pakistan	657.3	23.5	48.8	21.7	7.4	10.4	7.7				776.8
Papua New Guinea	21.0	3.1	0.4	2.0		0.8					27.3
Republic of Moldova	4.5				0.1	0.4					5.0
Rwanda	100.7	15.9	3.0	3.3	0.4	1.1					124.3
São Tomé	0.8		0.1		0.0	0.4					1.3
Senegal	81.0	3.6	2.6	6.7	0.6	2.2		0.2			96.9
Sierra Leone	39.4	6.9	2.7		0.3	0.4		0.2			49.8
Solomon Islands	2.3	2.0		0.1		0.2		0.2			4.9
Somalia	7.2	11.5	1.2		0.2	0.3					20.5
South Sudan	12.0	34.8	5.9	2.5	0.2	0.4					55.8
Sri Lanka	22.4	4.5			0.7	0.5					28.1
Sudan	269.9	49.4	11.2	35.1	1.3	2.6					369.5
Tajikistan	20.1	1.3	2.4		0.3	0.6					24.7
Timor-Leste	0.8	3.0				0.1					3.9
Togo	27.8	4.9	3.0	1.7	0.3	0.7		0.2			38.7
Turkmenistan	1.0				0.2	0.1					1.2
Uganda	237.7	19.2	9.2		1.2	4.2					271.5
Ukraine	2.7				0.7	0.1					3.5
United Republic of Tanzania	253.8	13.5	11.4	12.8	1.0	8.5		0.2			301.3
Uzbekistan	46.5	17.2			0.7	1.9					66.3
Vietnam	106.7	40.7	1.9	14.9	3.2	2.1					169.5
Yemen	166.7	24.0	5.0	7.5	1.2	2.1					206.6
Zambia	98.0	6.4	3.9		0.7	1.8					110.7
Zimbabwe	66.1	5.8	1.6		0.9	0.5		0.2			75.1
<b>Total</b>	<b>6,690.7</b>	<b>1,090.0</b>	<b>362.0</b>	<b>331.6</b>	<b>113.5</b>	<b>131.1</b>	<b>29.5</b>	<b>4.2</b>	<b>0.4</b>	<b>0.4</b>	<b>8,753.3</b>

<sup>b</sup>CSO Type A not included as these approvals are not country specific.

**General note:** values have been adjusted to the final actual disbursement values.

**Source:** Gavi, the Vaccine Alliance, 2015

# ANNEX 4: BOARD APPROVALS FOR COUNTRY PROGRAMME EXPENDITURE 2000–2015<sup>a</sup> (US\$ MILLIONS)

Country	NVS	HSS	ISS	OS	INS	VI grant	CSO <sup>b</sup>	HPV	PS grant	Graduation grant	Total
Afghanistan	121.3	50.0	14.0	3.6	1.7	2.5	3.6				196.7
Albania	2.1				0.1	0.3					2.5
Angola	89.3		3.0		1.3	1.8					95.4
Armenia	3.7	0.3	0.1		0.1	0.4			0.0		4.5
Azerbaijan	9.3	1.2	0.7		0.2	0.3					11.7
Bangladesh	318.0	13.7	23.3	33.6	6.1	8.3					403.1
Benin	75.8	4.5	0.2	1.7	0.4	0.5		0.2			83.2
Bhutan	1.1	0.2			0.0	0.3					1.6
Bolivia	20.8	2.1	0.3		0.9	0.3					24.4
Bosnia & Herzegovina	2.1				0.1	0.1					2.3
Burkina Faso	114.3	6.6	9.8	5.2	0.9	2.5					139.4
Burundi	72.0	20.7	3.7		0.4	0.9	0.5	0.2			98.2
Cambodia	35.3	10.3	1.8	3.2	0.6	0.9					52.1
Cameroon	127.3	8.0	8.0	2.5	1.0	2.1		0.2			149.0
Central African Republic	17.8	3.2	1.6		0.1	0.4					23.2
Chad	34.6	5.0	2.6	4.9	0.4	0.2					47.8
China	22.0				15.9	0.8					38.7
Comoros	1.3	1.3	0.1		0.0	0.3					3.0
Congo	18.4		1.7		0.2	0.5					20.7
Congo DRC	363.9	56.8	25.8	9.7	2.7	5.1	9.8		0.4		474.2
Côte d'Ivoire	69.0	5.7	8.9	5.5	1.6	0.9		0.2			92.0
Cuba		1.3			0.4						1.7
Djibouti	3.3		0.2		0.0	0.3					3.9
Eritrea	10.5	2.8	0.4		0.1	0.5					14.4
Ethiopia	512.3	137.9	23.4	35.8	2.7	6.0	3.3				721.4
Gambia	19.4	0.0	0.7	0.7	0.1	1.0		0.2			22.1
Georgia	3.7	0.4	0.1		0.1	0.4					4.7
Ghana	191.9	17.4	5.3	9.5	0.9	1.9	0.8	0.2			227.8
Guinea	26.2	2.1	2.9	2.3	0.3	0.6					34.5
Guinea-Bissau	5.2	1.6	0.5		0.1	0.3					7.7
Guyana	3.4		0.1			0.3					3.7
Haiti	9.4	1.1	1.3		0.4	0.7					12.9
Honduras	29.5	6.0	0.1		0.5	0.2				0.2	36.4
India	291.5	68.4			18.4	0.4					378.7
Indonesia	61.8	15.4	12.6		9.9	7.6	3.9				111.2
Kenya	328.6	9.9	6.4		1.1	1.8		0.1			348.0
Kiribati	0.3					0.3					0.6
Korea DPR	19.2	15.5	2.2		0.7	0.6					38.2
Kyrgyzstan	11.7	3.1	0.8		0.2	0.3					16.2

CSO, civil society organisation support; HPV, human papillomavirus vaccine demonstration cash support; INS, injection safety support; ISS, immunisation services support; HSS, health system strengthening support; NVS, new and underused vaccine support; OS, operational support; PS grant, product switch grant; VI grant, vaccine introduction grant

<sup>a</sup>Approvals are a subset of commitments that have been approved by the Board. Only such approved amounts can be disbursed subject to all other conditions for disbursement being met by the countries. Approvals are typically granted for the current year and one further year.

Country	NVS	HSS	ISS	OS	INS	VI grant	CSO <sup>b</sup>	HPV	PS grant	Graduation grant	Total
Lao PDR	17.3	4.0	1.4	1.0	0.3	0.8		0.2			25.0
Lesotho	3.3	1.4	0.1		0.1	0.3					5.3
Liberia	17.4	7.3	2.2		0.4	0.6		0.2			28.1
Madagascar	111.7	10.9	4.1		0.6	2.3		0.2			129.7
Malawi	150.3	19.3	2.0		0.7	2.0		0.2			174.5
Mali	114.4	4.6	5.0		0.7	0.9		0.2			125.7
Mauritania	15.3	0.8	0.7	1.0	0.2	0.4					18.4
Mongolia	5.1	0.5	0.5		0.1	0.1					6.3
Mozambique	111.4	10.7	1.7		0.8	3.0		0.2			127.7
Myanmar	62.4	32.8	7.7	11.4	2.1	3.7					120.0
Nepal	57.3	23.2	3.3		1.2	2.5		0.2			87.6
Nicaragua	25.8	2.6	0.4		0.5	0.2					29.4
Niger	78.9	21.2	8.1		0.9	2.1		0.2			111.3
Nigeria	287.2	44.7	47.3	69.3	12.6	15.9					477.0
Pakistan	648.9	23.5	48.8	21.7	7.4	10.4	7.7				768.4
Papua New Guinea	21.0	1.1	0.4	2.0		0.8					25.3
Republic of Moldova	4.5				0.1	0.4					5.0
Rwanda	98.9	10.0	3.0	3.3	0.4	1.1					116.6
São Tomé	0.8		0.1		0.0	0.4					1.3
Senegal	71.4	3.6	2.6	6.7	0.6	2.2		0.1			87.3
Sierra Leone	39.4	4.2	2.7		0.3	0.4		0.2			47.1
Solomon Islands	1.6	1.0		0.1		0.2		0.1			3.1
Somalia	7.2	11.5	1.2		0.2	0.3					20.5
South Sudan	9.6	18.1	5.9	2.5	0.2	0.4					36.7
Sri Lanka	21.4	4.5			0.7	0.5					27.1
Sudan	208.2	30.4	11.2	24.1	1.3	2.6					277.9
Tajikistan	17.0	1.3	2.4		0.3	0.6					21.7
Timor-Leste	0.8	0.9				0.1					1.7
Togo	27.8	3.7	3.0	1.7	0.3	0.7		0.2			37.4
Turkmenistan	1.0				0.2	0.1					1.2
Uganda	223.1	19.2	9.2		1.2	4.2					256.9
Ukraine	2.7				0.7	0.1					3.5
United Republic of Tanzania	249.6	7.4	11.4	12.8	1.0	8.5		0.2			290.9
Uzbekistan	43.7	7.4	0.0		0.7	1.9					53.7
Vietnam	106.7	37.1	1.9	14.9	3.2	2.1					165.9
Yemen	165.2	13.9	5.0	7.5	1.2	2.1					195.0
Zambia	98.0	2.7	3.9		0.7	1.8					107.0
Zimbabwe	58.3	4.1	1.6		0.9	0.5		0.2			65.6
<b>Total</b>	<b>6,231.9</b>	<b>862.0</b>	<b>361.5</b>	<b>298.3</b>	<b>113.5</b>	<b>129.8</b>	<b>29.5</b>	<b>3.7</b>	<b>0.4</b>	<b>0.2</b>	<b>8,030.7</b>

<sup>b</sup>CSO Type A not included as these approvals are not country specific.

**General notes:** Approvals for Gavi Phase I (2000–2006) have been adjusted to reflect the final actual disbursement values. Approvals totalled US\$ 5,457.4 million in 2013, US\$ 1,309.6 million in 2014 and US\$ 1,263.7 million in 2015.

Source: Gavi, the Vaccine Alliance, 2015

# ANNEX 5: COMMITMENTS AND BOARD APPROVALS FOR INVESTMENT CASES

## COMMITMENTS FOR INVESTMENT CASES 2003–2018<sup>a</sup> as of 31 December 2014 (US\$ millions)

Programme	Vaccines	Operational costs	Total
Measles <sup>b</sup>	60.4	140.6	201.0
Meningitis	60.5	28.2	88.7
Maternal and Neonatal Tetanus	16.3	45.3	61.6
Polio	143.3	48.0	191.3
Yellow fever	120.8	36.4	157.2
Cholera	114.5		114.5
Other		0.5	0.5
<b>Total</b>	<b>515.7</b>	<b>299.0</b>	<b>814.7</b>

## BOARD APPROVALS FOR INVESTMENT CASE EXPENDITURE 2003–2014<sup>c</sup> as of 31 December 2014 (US\$ millions)

Programme	Vaccines	Operational costs	Total
Measles <sup>b</sup>	60.4	140.6	201.0
Meningitis	60.5	28.2	88.7
Maternal and Neonatal Tetanus	16.3	45.3	61.6
Polio	143.3	48.0	191.3
Yellow fever	120.8	36.4	157.2
Cholera	8.5		8.5
Other		0.5	0.5
<b>Total</b>	<b>409.8</b>	<b>299.0</b>	<b>708.7</b>

<sup>a</sup>Commitments represent endorsements of multi-year programme budgets made by the Gavi Board (or Executive Committee). These endorsements do not constitute a liability to pay but instead send a positive signal that GAVI intends to fund a programme over its entire life span subject to performance and availability of funds.

<sup>b</sup>Excludes US\$ 25 million paid to the United Nations for the Measles-Rubella Initiative.

<sup>c</sup>Approvals are a subset of commitments that have been approved by the Board. Only such approved amounts can be disbursed subject to all other conditions for disbursement being met by the countries. Approvals are typically granted for the current year and one further year.

Source: Gavi, the Vaccine Alliance, 2015



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Gavi prepares an Annual Financial Report (AFR) for the year ended 31 December 2014. The AFR combines the audited financial statements for the Gavi "Alliance", IFFIm, IFFIM Sukok Company and the Gavi Campaign. It will be published in September 2015 following Board approval and available on the Gavi website: [www.gavi.org/funding/financial-reports](http://www.gavi.org/funding/financial-reports)

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Mother and child in South Sudan  
which became the final Gavi-  
supported country to introduce  
the pentavalent vaccine in 2014.  
Gavi / 2014 / Mike Pflanz







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