



66m
children immunised

2020
2019
2018
2017
2016

2016-2018: 198m target: 300m

What we have achieved together, 2000–2018

>760 million children vaccinated through routine programmes

>960 million people immunised through vaccination campaigns

>13 million lives saved in the long term

>150 billion US\$ generated through the economic benefits of immunisation^a

433^b vaccine introductions and campaigns

a – As of the end of 2017.

b – Introductions and campaigns relate to the 13 Gavi-supported antigens. In the Gavi 1.0 and 2.0 strategic periods, introductions were completed for HepB mono and Tetra-DTP-HepB that are not counted here.

The Vaccine Alliance

Our 2016–2020 mission: saving children's lives and protecting people's health by increasing equitable use of vaccines in lower-income countries.

Our partnership combines the technical expertise of the development community with the business know-how of the private sector.



WHO regulates vaccines and supports country introductions, strengthening immunisation coverage and data quality.

UNICEF procures vaccines and supports countries in maintaining their cold chain, improving access and collecting data.

The World Bank helps support pioneering innovative finance mechanisms like the International Finance Facility for Immunisation (IFFIm) and the Advance Market Commitment (AMC).

Bill & Melinda Gates Foundation provides funding and expertise, pioneers innovative approaches and supports research and development into new vaccines.

Implementing country governments identify their immunisation needs, co-finance and implement vaccine programmes.

Civil society organisations help ensure that vaccines reach every child.

Vaccine and cold chain equipment manufacturers make available affordable, quality vaccines and cold chain equipment for implementing countries.

Donor country governments make long-term funding commitments and partner with Gavi in country.

Private sector partners contribute resources, expertise and innovation to help achieve our mission.

Research agencies help generate the evidence base and communicate the value of vaccines.

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This report refers directly to Gavi's strategy:

Our mission-led aspiration for 2016–2020

- 10% reduction Under-five mortality rate
- 5–6 million Future deaths averted
- > 250 million Future DALYs (disability-adjusted life years) averted
- > 300 million Children vaccinated with Gavi support
- 100% Vaccines sustained after countries transition

The vaccine goal

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Accelerate equitable uptake and coverage of vaccines

- Increase coverage and equity of immunisation
- Support countries to introduce and scale up new vaccines
- Respond flexibly to the special needs of children in fragile countries

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Increase effectiveness and efficiency of immunisation delivery

- Contribute to improving integrated and comprehensive immunisation programmes, including fixed, outreach and supplementary components
- Support improvements in supply chains, health information systems, demand generation and gender-sensitive approaches
- Strengthen engagement of civil society, private sector and other partners

The sustainability goal

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Improve sustainability of national immunisation programmes

- Enhance national and subnational political commitment to immunisation
- Ensure appropriate allocation and management of national human and financial resources to immunisation through legislative and budgetary means
- Prepare countries to sustain performance in immunisation after transition

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Shape markets for vaccines and other immunisation products

- Ensure adequate and secure supply of quality vaccines
- Reduce prices of vaccines and other immunisation products to an appropriate and sustainable level
- Incentivise development of suitable and quality vaccines and other immunisation products

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“There's no health for all without vaccines for all. WHO is proud to work with Gavi to ensure that all children, rich and poor, receive the same protection from vaccine-preventable diseases.”

Dr Tedros Adhanom Ghebreyesus

Director-General of the World Health Organization



“UNICEF is proud to be part of Gavi. Together, we are bridging the gap between life-saving vaccines and the millions of children who need them.”

Henrietta Fore

Executive Director of UNICEF

Welcome to Gavi's 2018 Annual Progress Report, the third in a series of five covering this strategic period. As the report will show, we are seeing continued positive progress, with countries reaching more children with a greater number of Gavi-supported vaccines. But it also identifies some challenging new trends which suggest that if we are to continue to make progress in our next strategic period, then a new approach is needed.

Since 2016 we have helped immunise nearly 200 million more children and are ahead of our mission target to reach 300 million children by 2020. In the 68 Gavi-supported countries the proportion of children receiving a first dose of a measles vaccine has risen by 3 percentage points, signalling that we are on track for that target. The breadth of protection has also increased, by 10 percentage points in the last year alone and 21 percentage points since the beginning of this strategy period. And the sustained progress in coverage of several new vaccines, including pneumococcal, rotavirus, inactivated polio and rubella containing vaccines, also speaks to the successful vaccine introduction and scale-up efforts. All this, and the progress Gavi has made in strengthening immunisation programmes, delivery systems and surveillance systems, as well as boosting vaccine stockpiles are helping to safeguard against disease outbreaks and reduce the threats to global health security, making the world a safer place for everyone.

However, despite immunising more children, 4% more in 2018 compared with 2015, the latest data suggests that the proportion of children receiving all three doses of DTP vaccines has plateaued during this period. This is partly due to acute problems that a small number of previously high performing countries have faced. But even taking this into account, it is now clear that shifts in population growth trends are presenting growing challenges.

Adaptability is at the core of Gavi's business model, and so our ability to evolve will enable us to continue to make positive progress, safeguard the world and ensure that no one is left behind.



Dr Seth Berkley sits with schoolchildren during a trip to Rakhine State, Myanmar
Gavi/2019/Dirk Gehl

Dr Seth Berkley, CEO



Since Gavi was created it has consistently succeeded in increasing coverage despite sustained population growth in Gavi-supported countries. But now because fertility rates are higher in fragile or conflict-affected countries, Gavi is facing a growing challenge as these are typically countries with weak health systems. So, as wealthier countries continue to transition out of Gavi support, the proportion of those remaining that are fragile will increase. This means that the number of children born annually in the countries that Gavi will support throughout the next strategy period is now expected to grow twice as fast. Because of this, just sustaining coverage, let alone achieving our ambition to increase coverage, will become more difficult.

The good news is that, as indicated in this report, in such countries, Gavi's investments in health system strengthening, provision of higher level of technical support and greater political engagement are paying off. Through this kind of increased investment, and a stronger focus on targeting communities and countries with low coverage and a high number of underimmunised children, we are seeing greater progress.

As the Gavi Board devised its strategy for the 2021–2025 strategic period, all this has helped serve as a backbone to a new approach which will help us make the last mile our first priority. With equity an organising principle, this new strategy, Gavi 5.0, will give a greater emphasis on providing differentiated, tailored and targeted support for countries. The enhanced focus on gender, communities, demand and innovation, and the increased support in prioritising high impact vaccines, and more vaccines, will enable us to reduce the number of children who receive no vaccines at all. And through our continued market shaping efforts and a bigger focus on programmatic sustainability and post-transition support, we will reduce the risk of backsliding and allow us to prevent millions of vulnerable children from missing out even if they don't live in Gavi-supported countries.

All this stands us in good stead to not only meet our goals for the current period but to tackle these growing challenges, and whatever new ones we face, in the coming years. Adaptability is at the core of Gavi's business model, and so our ability to evolve will enable us to continue to make positive progress, safeguard the world and ensure that no one is left behind.

For Gavi, one of the most notable highlights of 2018 was a marked increase in the level of country-ownership. This sends a positive signal that governments are increasingly recognising how investing in health can not only help lift vulnerable communities out of poverty, but that it's also good for the economy. For Gavi this is a critical part of its mission to reach more children, because we cannot do it without them.

One clear indication of this was the level of domestic investment in immunisation, with 94% of Gavi-supported countries paying their co-financing obligations by the end of 2018 – the highest proportion since co-financing was introduced. Similarly, with 16 countries now having transitioned out of Gavi support and fully-financing their vaccination programmes, we have seen 40 new vaccine introductions fully-financed by the governments of transitioned and transitioning countries.

With a total of US\$ 124 million invested in co-financing and US\$ 283 million in self-financed vaccine programmes, this not only represents a clear commitment by governments, but also demonstrates how the Gavi model of helping countries to build and fund sustainable immunisation programmes really does work.

However, with one in ten children still not receiving a full course of a basic diphtheria-tetanus-pertussis-containing vaccine, we need to do more. That means stepping up our political engagement, to get ministers of health and finance on board, and intensifying efforts to identify and reach pockets of inequity that exist within countries. But in addition to this, with more countries seeking support to help boost demand, we are now also looking at what more can be done at the community level.

One issue that will become an increasing focus in Gavi's next strategic period, is how we can address the gender-related barriers that can often act as obstacles to improving access to immunisation.



Dr Ngozi Okonjo-Iweala talks with health workers during trip to Ethiopia
Global Fund/2019

Dr Ngozi Okonjo-Iweala, Board Chair



One issue that will become an increasing focus in Gavi's next strategic period, is how we can address the gender-related barriers that can often act as obstacles to improving access to immunisation. Whether cultural, social or religious, it has become clear that such barriers can play a major role in preventing female caregivers, on whom the responsibility often falls, from getting their children immunised. By ensuring service delivery is sensitive to such barriers, such as through the improved interpersonal communications of frontline health workers or by increasing awareness through continued community engagement, we can address these barriers and ensure no one is left behind.

Whether it is at the government or the community level, country engagement is key to Gavi's continued progress. It seems quite appropriate then that Gavi's 2020 London Replenishment is launched this year surrounded by African Heads of State and Ministers at the 7th Tokyo International Conference on African Development, an event that was originally created to promote Africa's development, peace and security. While Gavi is on track to achieve its current targets, its long-term success does not just rest with donor and Alliance partner support. Ultimately, it is only by empowering countries that we can protect the lives and the futures of the next generation.



The Gavi model at work

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

Inequity

19.4 million children worldwide miss out on basic vaccines. 78% of these children live in Gavi-supported countries.



Leveraging economies of scale

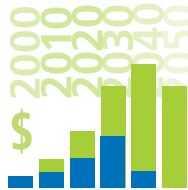
Responding to demand for vaccines from the world's poorest countries, where 60% of the world's children live, meeting the greatest public health need.



Long-term financing

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

- country co-financing of vaccines;
- direct contributions from public- and private-sector donors;
- diverse set of innovative finance mechanisms.



Shaping markets

Creating healthy market dynamics. Ensuring sufficient supply of appropriate, affordable and quality vaccines and cold chain equipment.



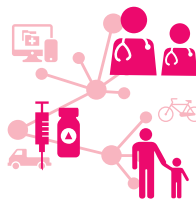
Accelerating access to vaccines

Supporting life-saving vaccines in routine immunisation programmes, campaigns and global stockpiles.



Strengthening vaccine delivery platforms

Creating a solid platform for immunisation and other primary health services, contributing to universal health coverage.



Sustaining immunisation

As countries become more prosperous, they invest more in their immunisation programmes. Populations become healthier and more productive.



Equity

Eventually, countries are able to fully finance their own immunisation programmes.

More children everywhere have access to more vaccines and enjoy improved health.

How the Vaccine Alliance works

Gavi, the Vaccine Alliance is a public-private partnership that brings together key global immunisation actors around our shared mission: to save children's lives and protect people's health by increasing equitable use of vaccines in lower-income countries. All partners contribute to the Gavi business model and are accountable for its performance.

By leveraging economies of scale, Gavi is able to create more stable markets for vaccines. This approach results in more countries having the ability to maintain and grow their immunisation programmes after Gavi financial support ends.

All countries co-finance a share of their Gavi-supported vaccines incrementally as a country's income grows until it is in a position to cover the full cost of all its vaccines; an approach unique in development aid.

Gavi's predictable, long-term funding base provides vaccine manufacturers, private-sector partners and implementing countries with the security they need to invest in immunisation. Manufacturers invest in vaccine production if they are confident there is a market for their products, while countries, given the right support and backing, are encouraged to launch new immunisation programmes. Private-sector donors provide innovative solutions to help improve vaccine delivery systems.

Gavi's support for immunisation has helped countries introduce vaccines against a range of life-threatening diseases and to improve their health systems. Higher immunisation coverage leads to healthier, more productive populations, greater prosperity and potentially greater access to other primary healthcare interventions. This, in turn, means countries are better able to pay for their own vaccine programmes and eventually transition out of our support. Together we have already immunised more than 760 million children and saved over 13 million lives. We are on track to help Gavi countries to immunise 300 million children between 2016 and 2020 – averting 5–6 million future deaths.

While this is impressive, it does not end there. The impact of immunisation stretches far beyond preventing disease and is an important anchor for primary healthcare; vaccinated, healthy children are more likely to be well-nourished, perform better at school and grow up to become productive adults. Moreover, immunisation programmes put delivery and surveillance systems in place that benefit the entire health system, creating a solid platform for universal health coverage. They are essential in safeguarding against disease outbreaks and protecting global health security, making the world a safer place for everyone.

We multiply our impact by collaborating with all key stakeholders in global health. Alliance partners work closely together at all levels – global, regional and national – through coordination teams, joint appraisal processes and interagency coordination committees. Through such collaboration, the partners' engagement framework, involving more than 60 partners, brings increased collaboration, transparency and accountability to our work and has led to an expansion of the Alliance.

Our support

Gavi provides three main types of support to recipient countries.



Read more online
gavi.org/support



Gavi/2015/Bart Verweij

Vaccine support

The Vaccine Alliance currently supports 17 antigens for use in routine immunisation programmes and preventive campaigns, as well as emergency stockpiles. By the end of 2018, we had helped 77 countries carry out over 430 vaccine introductions and campaigns and funded more than 119 million vaccine doses through global stockpiles.



Gavi/2018/AA PIMAGE/Beiderhose/STG

Health system strengthening

Gavi supports countries in strengthening their health systems. Part of this support facilitates the introduction of more modern and environmentally-friendly cold chain equipment to make sure that vaccines can safely reach everyone who needs them. Since our inception in 2000, we have provided health system strengthening grants to 69 countries; we ordered more than 20,000 items of cold chain equipment in 2018.



Gavi/2017/Asad Zaidi

Technical assistance

Through the partner's engagement framework (PEF), we channel resources to Alliance partners for technical support to countries, based on needs identified by the countries themselves. We give particular priority to the countries with the largest number of underimmunised children. Spending on targeted country assistance (TCA) increased from US\$ 69.8 million in 2017 to US\$ 86.5 million in 2018.

Managing risks to leave no one behind

With an ambitious mission in some of the world's poorest and most fragile countries, the Alliance is naturally exposed to a wide range of risks, some of which need to be consciously taken to reach every child with vaccines and leave no one behind. Robust risk management is therefore vital to confidently take the risks required to achieve our mission, safeguard our investments and ensure sustainable impact. Everybody in the Alliance is expected to proactively identify and manage risks to Gavi's mission to anticipate potential future events, manage expectations, reduce vulnerabilities and harness opportunities for impact.



In 2018, we have continued to foster a strong culture of risk-awareness both at management and at Board-level, by sharing the Alliance's philosophy and approach to responsible risk-taking and by providing easy access to risk-related information. We also continued to integrate discussions on strategy, risk and performance – allowing a coherent view of progress, current challenges and potential risks to future performance – and to embed risk management in daily operations, planning and decision-making. There is now a strong foundation for risk management with a high level of risk-awareness, staff incorporating risk more routinely in their thinking, and risk being more integrated and embedded in key processes. We have also engaged Alliance Partners more closely and systematically on risk, and shared approaches and experiences on risk management with peer organisations.

Our annual Risk & Assurance Report discusses the most critical risks (Gavi's top risks) that have a high likelihood of occurrence and could potentially impact the ability of the Alliance to achieve its mission and strategic goals. In 2018 this showed that Gavi's overall risk profile had remained relatively stable with all 15 top risks from the previous year still included plus two additional top risks. These top risks are being actively managed throughout the year by risk owners and colleagues across the Alliance and reviewed by the Secretariat's Risk Committee, chaired by the CEO with senior leadership from across the organisation. The report also highlighted four risks outside of our risk appetite, continuing to require intensive mitigation efforts. The report was seen by the Board as an important tool to challenge Gavi's strategy and to highlight where risks remain, and as such served as input for discussions on setting the new strategy for the next strategic period.



Read more online
gavi.org/about/risk-management/

Nurse Mbeugué Diop at a "case de santé" in rural Niomre, northern Senegal, part of a team providing basic primary healthcare, including vaccinations, to remote rural villages.
 Gavi/2018/Simon Davis

Gavi's approach to Safeguarding: respecting colleagues and beneficiaries

Following the reports of poor safeguarding practice within the Aid sector in early 2018, Gavi moved quickly to review all processes, policies and safeguards against sexual abuse, harassment and abuse of power, both internal and external to the organisation.

This included discussions with core partners and updating our supplier contracts, our code of conduct and the Gavi ethics hotline.

Together with the Global Fund, Gavi appointed a shared ombudsperson to which all Gavi staff, consultants and interns can turn for independent counsel and advice, and which reports to management annually on an aggregated basis on staff concerns.

Gavi's website makes clear the ways in which anonymous reports can be made and how they will be investigated.

Respectful workplace training for employees, consultants and interns was instigated to ensure Gavi's culture of tolerance and respect is further strengthened.

Gavi and the Global Fund were proud to attend the UK-hosted Safeguarding Summit in October 2018, and to make a public

announcement of joint commitments in support of cross-sectoral efforts to rid the sector of malpractice and regain public trust.

Gavi is hyper-vigilant on this important work, and no cases of abuse of power, sexual abuse or harassment were reported in 2018.



Health workers from the Dakar North District immunisation "outreach" in Nabisouikr, one of Dakar's slum areas
Gavi/2018/Simon Davis

Enablers to our strategy

Together with our partners, we support countries in strengthening the **leadership, management and coordination** of their national immunisation programmes through support to institutional capacity for programme management and monitoring and helping countries improve availability, quality and use of data to inform their decision-making.

Our **resource mobilisation** model is multifaceted, relying on a mix of country co-financing and other domestic investments in immunisation, long-term donor funding and active market shaping efforts. Harnessing the capacity of the private sector, both in the form of financial contributions and through technical assistance, is a fundamental part of our model. We also draw on a range of innovative finance instruments to support our programmes.

Advocacy - Political commitment at the global, national and subnational level is essential if we are to improve immunisation coverage and equity. Together with our partners, we work to ensure that the value of vaccines is recognised and that immunisation remains a priority at all levels. Raising awareness of the links between immunisation, good health and economic prosperity is an important part of our advocacy efforts.

Our **monitoring and evaluation** systems help to make sure that our support delivers the expected results and that we are using our resources effectively. They also highlight potential problems and allow us to adjust our approach if necessary. In addition to conducting regular evaluations of our investments, we work with partners to strengthen in-country surveillance, programme monitoring and management functions.



Successful launch of HPV vaccination in São Tomé et Príncipe, in the school of Bombom in the Mezoche region

Gavi/2017/Thierry Vincent

Measuring our performance

Mission and strategic goals

The Vaccine Alliance's 2016–2020 mission is to save children's lives and protect people's health by increasing equitable use of vaccines in lower-income countries.

To achieve our mission, we rely on a five-year strategy with five mission indicators, four strategic goals and a set of key performance indicators that help us track our progress.



Mission indicators

Five mission indicators reflect our overall aspiration for the 2016–2020 period. They measure our impact on numbers of immunised children, future deaths prevented, under-five mortality rates and years lost due to disability or death in the countries we support. We also track what proportion of countries successfully maintain all their recommended vaccine programmes after our financial support stops – a reflection of our strategy's increasing emphasis on ensuring sustainability of immunisation.

Strategic goals

Gavi's four strategic goals for the 2016–2020 period are:

- to accelerate equitable uptake and coverage of vaccines (“**the vaccine goal**”);
- to increase the effectiveness and efficiency of immunisation delivery as an integrated part of strengthened health systems (“**the health systems goal**”);
- to improve sustainability of national immunisation programmes (“**the sustainability goal**”);
- to shape markets for vaccines and other immunisation products (“**the market shaping goal**”).

Disease dashboard

As our goal is to reduce the overall disease burden in Gavi-supported countries, we also track the trends of three vaccine-preventable diseases, all of which can be prevented with Gavi-supported vaccines: measles, rotavirus and hepatitis B.



Read more online
gavi.org/about/strategy

Mission indicators

Vaccine Alliance partners and countries are making great strides towards the achievement of our five mission indicators. By the end of 2018, we were on track to reach all our 2020 mission targets.

Key:

- On track
- Moderate delays/challenges
- Significant delays/challenges
- No established target/data not available

1 Children immunised



2015: n/a 2020 target: 300m

Sources: WHO/UNICEF Estimates of National Immunization Coverage; United Nations Population Division; World Population Prospects, 2019

What we measure

The number of children immunised with the last recommended dose of a Gavi-supported vaccine delivered through routine systems^a. People immunised through campaigns and supplementary immunisation activities are not included.

2018 performance

Countries immunised 66 million additional children in 2018 – often with more than one Gavi-supported vaccine. Although this is down from 67 million in 2017, Gavi is still on track to help countries immunise an additional 300 million children in the 2016–2020 strategy period. 198 million unique children have been immunised between 2016 and 2018.

5 Vaccines sustained after Gavi support ends



2015: n/a 2016–2020 target: 100%

Source: WHO/UNICEF Estimates of National Immunization Coverage, 2019

What we measure

The percentage of countries that continue to deliver all recommended vaccines included in their routine programmes after they transition out of Gavi financing. This indicator covers all vaccines recommended by national authorities for routine immunisation, not only those supported by Gavi.

2018 performance

All transitioned countries continued to deliver all their recommended routine vaccination programmes throughout 2018.

2 Future deaths prevented



2015: n/a 2020 target: 5–6m

Source: Vaccine Impact Modelling Consortium, 2019

What we measure

The number of anticipated future deaths prevented as a result of vaccination with Gavi-funded vaccines in the countries we support.

2018 performance

Countries prevented approximately 1.7 million future deaths in 2018, thanks to Gavi-supported vaccines. Together with the approximately 1.3 million averted deaths in 2017, this puts us well on track to help countries avert 5–6 million future deaths in the 2016–2020 period.

a – To ensure that we do not double-count children who receive more than one vaccine, we only take into account the Gavi-supported vaccine with the highest coverage level in each country. Some figures from previous years have been updated due to revisions of historical data.

3 Under-five mortality rate



2015: 64/1,000 2020 target: 58/1,000

Sources: The United Nations Inter-agency Group for Child Mortality Estimation; United Nations Population Division; World Population Prospects, 2019

What we measure

The average probability of a child born in any of the Gavi-supported countries dying before they reach the age of five.

2018 performance

The under-five mortality rate fell from 61 to 59 deaths per 1,000 live births between 2016 and 2017, putting us on track to reach our target of 58 deaths per 1,000 live births by the end of 2020. 2018 estimates will be available in late 2019.

4 Future DALYs averted



2015: n/a 2020 target: 250m

Source: Vaccine Impact Modelling Consortium, 2019

What we measure

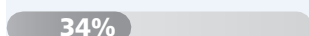
The number of anticipated future disability-adjusted life years (DALYs) averted as a result of vaccination with Gavi-supported vaccines. DALYs measure the number of healthy years lost due to disability or premature death.

2018 performance

Countries averted approximately 80 million DALYs in 2018 thanks to our support, having averted approximately 63 million in 2017. We are on course to achieve our target of 250 million DALYs averted by 2020.

Disease dashboard

Measles



2015: 50% 2020 target: n/a

Source: WHO vaccine-preventable disease surveillance system, 2019

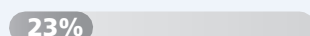
What we measure

The percentage of Gavi-supported countries reporting fewer than five measles cases per million people annually.

2018 performance

34% of Gavi-supported countries reported fewer than five measles cases per million people in 2018. This is a decrease of 16 percentage points from 2017, underlining the recent significant increase in measles cases, both in Gavi-supported countries and globally.

Rotavirus



2015: 24% 2020 target: n/a

Source: WHO rotavirus laboratory network, 2019

What we measure

The median proportion of acute gastroenteritis hospitalisations in children under one year in Gavi-supported countries testing positive for rotavirus.

2018 performance

The median proportion of acute gastroenteritis hospitalisations in children under one year testing positive for rotavirus was 23%. Less than half of all Gavi-supported countries reported in 2018; so far, 62% of the countries have introduced rotavirus vaccine. Available data suggests that the rotavirus disease burden has remained largely constant since 2015.

Hepatitis B



2015: 83% 2020 target: n/a

Source: WHO regional hepatitis B control initiatives and other surveys, 2019

What we measure

The percentage of Gavi-supported countries with low prevalence of hepatitis in children under five.

2018 performance

No nationally representative hepatitis B prevalence surveys have been conducted since 2015.

Gavi-supported countries: at a glance

Overview of key country data, including immunisation coverage and child mortality rates, Gavi-funded vaccine programmes and transition status.

Country	Surviving infants surviving to 1 year (2018)	Child mortality rate deaths <5 years per 1,000 births (2018)	Immunisation coverage (DTP3/pentavalent 3rd dose) (2018)	Gavi-supported vaccine introductions (2018)				Previous (2000–2017)										Gross national income per capita, US\$ (2016)	Transition status (2018) (see note below)
				R = routine	C = campaign	D = demonstration project	Other	Pentavalent	Rotavirus	Pneumococcal	Human papillomavirus	Inactivated polio	Japanese encephalitis	Measles	Measles-rubella	Meningitis A	Yellow fever		
African region																			
Angola	1,181,147	81	59%	MR	C			R	R	R		R					3,440	1	
Benin	391,492	98	76%	MR	R			R		R	D	R				C	RC	820	1
Burkina Faso	710,604	81	91%	IPV	R			R	R	R	D			R	C	RC	C	640	1
Burundi	418,446	61	90%	MR	C			R	R	R	D	R		R	C			280	1
Cameroon	839,303	84	79%					R	R	R	D	R			C	C	RC	1,200	1
Central African Republic	152,723	122	47%					R		R		R			RC	RC		370	1
Chad	605,689	123	41%	MenA	C			R				R		C		RC	R	720	1
Comoros	25,150	69	91%					R				R						760	1
Congo ^b	166,651	48	75%					R	R	R		R					R	1,710	1
Côte d'Ivoire	843,977	89	82%	MR	RC	MenA	RC	R	R	R	D	R			C	C		1,520	1
Congo, DR	3,244,314	91	81%					R		R		R		C		C	R	420	1
Eritrea	101,581	43	95%	IPV	R	MR	RC	R	R	R			R					Low	1
Ethiopia	3,409,051	59	72%	HPV	R			R	R	R	D	R		C		C		660	1
Gambia	84,126	64	93%					R	R	R	D	R		R	C	C		440	1
Ghana	845,100	49	97%	IPV	R	MR	C	R	R	R	D			R	C	RC	RC	1,380	1
Guinea	429,652	86	45%					R				R			C	RC		490	1
Guinea-Bissau	62,162	84	88%					R	R	R		R			C	R		620	1
Kenya	1,426,681	46	92%					R	R	R	D	R			C		R	1,380	1
Lesotho	53,074	86	93%					R	R	R		R			C			1,210	1
Liberia	151,080	75	84%	Meas	C			R	R	R	D	R					RC	370	1
Madagascar	835,186	44	75%					R	R	R	D	R						400	1
Malawi	595,673	55	92%	IPV	R			R	R	R	D			R	C			320	1
Mali	742,997	106	71%					R	R	R	D	R				RC	RC	750	1
Mauritania	140,633	79	81%	MR	RC			R	R	R		R			C			1,120	1
Mozambique	1,051,066	72	80%	MR	RC			R	R	R	D	R		R				480	1
Niger	990,155	85	79%					R	R	R	D	R				RC	R	370	1
Nigeria	6,976,955	100	57%					R		R		R		C		C	RC	2,450	1
Rwanda	379,559	38	97%	IPV	R			R	R	R	R			R	C			700	1
São Tomé and Príncipe	6,493	32	95%					R	R	R	D	R		R	C		R	1,730	1
Senegal	530,303	45	81%	HPV	R			R	R	R	D	R		R	C	C	C	950	1
Sierra Leone	235,594	111	90%	IPV	R			R	R	R	D			R			RC	490	1
South Sudan	362,351	96	49%					R				R				C		820	1
Togo	248,710	73	88%	MR	RC	IPV	R	R	R	R	D				C	RC		540	1
Uganda	1,553,355	49	93%	Rota	R			R		R	R	R				C		660	1
Tanzania, UR	1,987,168	54	98%	IPV	R	HPV	R	R	R	R	D			R	C			900 ^c	1
Zambia	600,826	60	90%	IPV	R			R	R	R				R	C			1,300	1
Zimbabwe	425,548	50	89%	HPV	R ^d	HPV	C	R	R	R	D					RC		940	1

a – GNI for 2016 in US\$, Atlas method, unless otherwise indicated.
 b – In 2018, the Board decided that Congo would regain eligibility from 1 January 2019.
 c – Covers mainland United Republic of Tanzania only.
 d – The introduction also targeted a multi-age cohort (MAC), which is a one-time immunisation of multi-age cohorts (e.g. 10–14 years), followed by an annual routine immunisation of a single cohort (e.g. 9 years) to achieve wider protection and stronger herd effect.
 e – Excludes Abkhazia and South Ossetia.
 f – Excludes Transnistria.

Low = Estimated to be low-income (GNI US\$ 1,005 or less).

Low/Mid = Estimated to be lower-middle-income (GNI US\$ 1,006–3,955).

Up/Mid = Estimated to be upper-middle-income (GNI US\$ 3,956–12,235).





Country

Surviving infants surviving to 1 year (2018)
 Child mortality rate deaths <5 years per 1,000 births (2017)
 Immunisation coverage (DTP3/pentavalent 3rd dose) (2018)
 Gavi-supported vaccine introductions (2018)
 R = routine
 C = campaign
 D = demonstration project

Previous (2000-2017)
 Pentavalent
 Rotavirus
 Pneumococcal
 Human papillomavirus
 Inactivated polio
 Japanese encephalitis
 Measles
 Measles-rubella
 Meningitis A
 Yellow fever
 Gross national income* per capita, US\$ (2016)
 Transition status (2018) (see note below)

Country	Surviving infants surviving to 1 year (2018)	Child mortality rate deaths <5 years per 1,000 births (2017)	Immunisation coverage (DTP3/pentavalent 3rd dose) (2018)	Gavi-supported vaccine introductions (2018)	Previous (2000-2017)	Gross national income* per capita, US\$ (2016)	Transition status (2018)
Region of the Americas							
Bolivia	239,869	35	83%		R R R R	3,070	4
Cuba	114,609	5	99%			Up/Mid	4
Guyana	15,133	31	95%	HPV C	R R R R	4,250	4
Haiti	256,304	72	64%	Pneu R	R R R R	780	1
Honduras	204,289	18	90%		R R R R	2,150	4
Nicaragua	131,249	17	98%		R R R	2,050	3
Eastern Mediterranean region							
Afghanistan	1,145,602	68	66%	Rota R Meas C	R R R R C	580	1
Djibouti	19,882	62	84%		R R R R	Low/Mid	2
Pakistan	5,634,007	75	75%	Meas C	R R R R C	1,510	2
Somalia	585,631	127	42%		R R R R	Low	1
Sudan	1,290,187	63	93%		R R R R RC C	2,140	2
Yemen	830,543	55	65%		R R R R C	1,040	1
European region							
Armenia	40,767	13	92%		R R R D R	3,760	4
Azerbaijan	163,493	23	95%		R R R R	4,760	4
Georgia	53,423	11	93%		R R R D	3,810 ^e	4
Kyrgyzstan	152,963	20	94%	IPV R	R R R	1,100	2
Republic of Moldova	40,386	16	93%	IPV R	R R R D	2,120 ^f	4
Tajikistan	271,595	34	96%	IPV R	R R R	1,110	2
Uzbekistan	682,168	23	98%	IPV R	R R R R	2,220	3
South-East Asian region							
Bangladesh	2,858,293	32	98%		R R D R R C	1,330	2
Bhutan	12,717	31	97%		R R R R	2,510	4
Korea, DPR	350,031	19	97%		R R R R R C	Low	1
India	23,409,481	39	89%		R R R R R C	1,680	3
Indonesia	4,744,310	25	79%	JE C	R R D R R C	3,400	4
Myanmar	907,785	49	91%	JE R	R R R R C R C	1,190	2
Nepal	548,141	34	91%		R R D R RC R R	730	1
Sri Lanka	333,359	9	99%		R R R R	3,780	4
Timor-Leste	36,017	48	83%		R R R R	2,180	3
Western Pacific region							
Cambodia	356,436	29	92%		R R D R C R C	1,140	2
Kiribati	3,102	55	95%		R R R R	2,380	4
Lao PDR	160,027	63	68%		R R D R C R	2,150	3
Mongolia	74,907	17	99%		R R R R	3,550	4
Papua New Guinea	223,587	53	61%		R R R R RC	Low/Mid	3
Solomon Islands	20,848	21	85%	MR R	R R D R C	1,880	2
Vietnam	1,571,668	21	75%	IPV R	R R R R C	2,050	3

Note: As Gavi only supports oral cholera and multivalent meningococcal meningitis vaccines through global stockpiles, these are not included among the country introductions. Gavi only opened its support window for typhoid vaccine at the end of 2017, with the first introductions expected in 2019.

Sources: Gavi, the Vaccine Alliance; UNDP; WHO/UNICEF Estimates of National Immunization Coverage; World Bank; World Development Indicators database.

Transition status
 1 - Initial self-financing
 2 - Preparatory transition
 3 - Accelerated transition
 4 - Fully self-financing

Strategic goal indicators

We measure progress towards our 2016–2020 strategic goals through a set of objectives and indicators. This page gives a quick overview of our performance to date.

More information about each indicator and Gavi's achievements in 2018 is available in the strategic goal chapters.

Key:

- On track
- Moderate delays/challenges
- Significant delays/challenges
- No established target/data not available

Accelerate vaccines

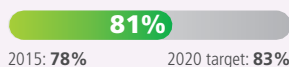
Routine immunisation coverage

Percentage of children in Gavi-supported countries that have received:

3rd dose of pentavalent vaccine^a

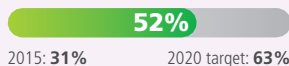


1st dose of measles-containing vaccine



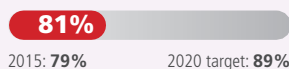
Breadth of protection

Average coverage across all Gavi-supported vaccines



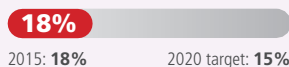
Equity: geographic distribution

Percentage of districts in Gavi-supported countries with at least 80% pentavalent vaccine coverage



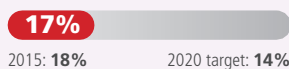
Equity: wealth distribution

Average difference in pentavalent vaccine coverage between the richest and poorest quintiles



Equity: maternal education

Average difference in pentavalent vaccine coverage between children of educated and non-educated mothers

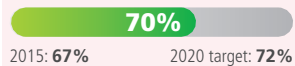


Vaccine goal ➔ p. 11

Strengthen capacity

Supply chain performance

Average score achieved by Gavi-supported countries in WHO's effective vaccine management assessment, which measures supply chain performance

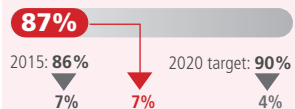


Data quality

Percentage of countries meeting our benchmark for quality of immunisation coverage data



1st dose pentavalent vaccine coverage^a & drop-out rate between 1st & 3rd dose^a



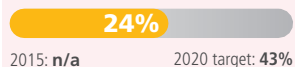
Integrated health service delivery

Percentage of countries meeting the benchmark for integrated service delivery



Civil society engagement

Percentage of countries meeting the benchmark for civil society engagement

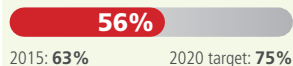


Health systems goal ➔ p. 18

Improve sustainability

Countries on track to successful transition

Percentage of transitioning countries that are on track to do so successfully



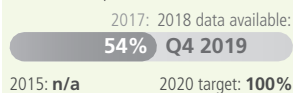
Co-financing

Percentage of countries with a co-financing obligation to Gavi that meet their commitments



Country investments in routine immunisation

Percentage of Gavi-supported countries that have increased their investment in routine immunisation per child relative to 2015



Institutional capacity

The average composite score in institutional capacity in Gavi-supported countries

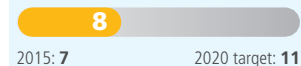


Sustainability goal ➔ p. 23

Shape markets

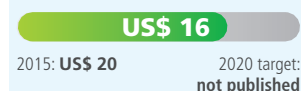
Sufficient and uninterrupted supply

Number of Gavi vaccine markets where supply meets demand



Vaccine price reduction

Weighted average price of fully immunising a child with pentavalent, pneumococcal and rotavirus vaccines



Innovation

Number of vaccines and immunisation products with improved characteristics procured by Gavi



Healthy market dynamics

Number of vaccine markets classified as having moderate or high healthy market dynamics



Market shaping goal ➔ p. 27

Notes:

a – In the current strategy period, Gavi uses DTP coverage as a proxy measure for pentavalent vaccine coverage.

The source for each indicator is given in the respective strategic goal chapter.

Some figures from previous years have been updated due to revisions of historical data.



The vaccine goal

accelerate equitable uptake and coverage of vaccines

2018 at a glance:

- Average coverage of Gavi-funded vaccines in the countries we support climbed to 52%, up from 42% in 2017.
- Coverage with a full course (three doses) of pentavalent vaccine across Gavi-supported countries dropped back slightly to 81% in 2018 compared to 82% in 2017.
- The proportion of districts where pentavalent coverage is at or above 80% fell to 81% from 83% in 2017.
- The average difference in coverage between the poorest and richest fifth of the population across all Gavi-supported countries remained unchanged but four countries reported new data showing reduced inequity across income groups.
- We supported 46 vaccine launches in 2018 – a 31% increase from 2017 – but still six short of the target for the year.

Gavi/2018/Simon Davis

Reaching more children

With support from the Alliance, countries are continuing to reach large numbers of children with vaccines. In 2018, more than 64 million children in Gavi-supported countries received a third dose of diphtheria-tetanus-pertussis-containing vaccine (DTP3), around the same number as in 2017. This represents 55% of the total number of children immunised with DTP3 worldwide in 2018. At the same time, the number of children who are unimmunised or underimmunised with DTP3 in these countries increased slightly to 15 million in 2018. We need to further accelerate progress to achieve our coverage and equity goals by the end of the 2016–2020 period.

Average DTP3 coverage has increased by just one percentage point in the current five-year strategy period – below the target of a one percentage point increase per year. However, aggregate figures mask differences across countries. While most Gavi-supported countries have seen steady progress over the past few years, coverage in the 16 countries classified as fragile has stagnated at 73% since 2014.

As immunisation rates rise, and the benefits of vaccination spread to a growing number of children in Gavi-supported countries, this helps to build a platform for strengthening primary healthcare and increasing access to health services.

Many challenges remain

National coverage rates can also hide inequities within countries. An estimated 25–50% of all underimmunised children are “zero-dose children”, who have not even received the first dose of the essential childhood vaccine containing DTP. While reliable data is scarce, estimates suggest that the percentage of zero-dose children has not gone down since 2010. The bulk of our progress on coverage has come from reducing drop-out rates rather than reaching those who were previously unimmunised.

A growing number of the children who are underimmunised live in urban areas, particularly slums, and fragile settings. As the Alliance strives to reach the unreached, our focus on equity – and in particular on reaching those who have not received a single dose of any vaccine and who face the highest risk of disease – is more central than ever.

As the number of refugees worldwide reaches record numbers, immunising refugee children is vital. The Alliance is working hard to deliver vaccines where they are needed. Following a mass influx of refugees from South Sudan, Uganda received additional vaccine doses for 2018 and increased operational support to immunise its refugee populations. We also helped Bangladesh to protect the Rohingya population with vaccines.

Vaccine introductions

New vaccine introductions are important for widening protection. The 2018 number increased by just over a third compared with 2017 but fell short of the target. We are however still on track to complete all 220 planned introductions by the end of the current strategic period.

The 2018 shortfall was mainly due to supply shortages, together with weak financial management and country challenges. The meningococcal A campaign and routine introduction in Nigeria, and the introduction of a second dose of measles vaccine in Ethiopia, were deferred to 2019 due to changing country priorities and lack of readiness. There is good news on coverage with newly-introduced vaccines, which reached an average 95% of the target population within two years of introduction – up from 92% in 2017.

Campaigns, particularly for measles, represent a significant proportion of the total number of introductions. While campaigns are an important tool to reach those who might otherwise miss out, they also have the potential to undermine routine services. Campaigns that do not reach underimmunised children raise questions about their value. We are helping countries to improve the quality of campaigns through more careful planning and to reach more underimmunised children and bring them into the routine system.

Our vaccine portfolio

Vaccine	Purpose	Gavi supports	Introductions and campaigns 2018		
			Introductions and campaigns 2018	Introductions and campaigns from programme start to 2018	Total reached from programme start to 2018
Pentavalent vaccine	Protects against five major infections in one shot: diphtheria, tetanus, pertussis (whooping cough), hepatitis B and <i>Haemophilus influenzae</i> type b (Hib).	Routine immunisation	0	73 ^a	>467m
Pneumococcal vaccine	Helps prevent the primary cause of bacterial pneumonia, a leading cause of vaccine-preventable deaths among under-fives.	Routine immunisation	1	59	>183m
Rotavirus vaccine	Protects against a leading cause of severe diarrhoea, which kills hundreds of thousands of children each year.	Routine immunisation	2	45	>100m
Human papillomavirus (HPV) vaccine	Protects against the main cause of cervical cancer. Vaccination is vital in poor countries where access to cancer screening and treatment is limited.	Routine immunisation	4	10	>3.9m girls
		Demonstration projects	0	30	
		Multi-age cohort introductions (MACs)^b	1	1	
Inactivated polio vaccine (IPV)	Protects against a highly contagious viral infection, mainly affecting children under the age of five, which can lead to paralysis or even death.	Routine immunisation	14 ^c	71	>112m
Japanese encephalitis vaccine	Prevents 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.	Routine immunisation	1	5	>1.6m
		Catch-up campaigns^d	1	5	>16m
Measles and measles-rubella vaccines	Measles vaccine helps prevent against measles infection and associated complications, which claimed close to 110,000 lives in 2017. Rubella vaccine protects against congenital rubella syndrome. Every year, 100,000 children are born with malformations and disabilities caused by the disease – the vast majority in Gavi-supported countries.	Routine immunisation	0	19	>76m
		Measles second dose	0	19	>76m
		Measles-rubella (MR) first and/or second dose	7	21	>42m
		Campaigns			
		Measles follow-up ^e MR mass, catch-up ^f and follow-up	3 7	14 33	>249m >275m
Outbreak response fund Managed by the Measles & Rubella Initiative	~4.1m reached in 2018		~54.1m		
Meningitis A vaccine	Protects against seasonal epidemics of meningitis A, which threatens 450 million people in Africa's meningitis belt. Survivors can face brain damage, deafness and other disabilities.	Routine immunisation	1	8	>9m
		Campaigns			296m
		Mass Catch-up	1 2	22 6	
Meningitis vaccine stockpile	Protects against a variety of meningococcal strains (A, C, W and Y) that continue to cause outbreaks across parts of Africa and elsewhere in the world.	Stockpile	accessed 2x by 2 countries	accessed 50x by 14 countries	>21m doses distributed
Oral cholera vaccine	Prevents cholera, an acute intestinal infection caused by contaminated food or water. It can lead to severe dehydration and, in its extreme form, can be fatal.	Stockpile	accessed 24x by 12 countries	accessed 76x by 24 countries	>35m doses distributed
Typhoid vaccine	Typhoid fever is a life-threatening disease caused by the bacterium <i>Salmonella</i> Typhi. It is mainly transmitted through contaminated food or water. Symptoms include prolonged fever, headache, nausea, loss of appetite, constipation and sometimes diarrhoea. If typhoid is not treated, it can kill up to 30% of those infected.	Routine immunisation	0 ^g	0	0
Yellow fever vaccine	Helps prevent a deadly viral disease spread by mosquitoes. Death rates can be as high as 50% among those severely affected.	Routine immunisation	0	17	>117m
		Mass campaigns	0	14	133m
Yellow fever vaccine stockpile		Stockpile	accessed 6x by 3 countries	accessed 59x by 20 countries	>62m doses distributed

a – Five of the 73 countries introduced pentavalent vaccine independently of Gavi support.

b – Multi-age cohorts (MACs) are a one-time immunisation of multi-age cohorts (e.g. 9–14 years), followed by an annual routine immunisation of a single cohort (e.g. 9 years) and are intended to achieve wider protection and stronger herd effect.

c – An additional 12 countries re-introduced IPV in 2018, following supply-related programme disruptions.

d – For children aged 9 months to 14 years, on the condition that countries subsequently co-finance introduction of the vaccine into the routine system.

e – Nationwide follow-up campaigns generally target children aged 9–59 months every 2–4 years.

f – Initial, nationwide catch-up campaigns target all children aged 9 months to 14 years.

g – Typhoid conjugate vaccines were Board-approved in late 2017, applications opened mid-2018 and one country applied for support. One request was also approved for TCV-use in outbreak response. The first Gavi-supported introduction and catch-up campaign will occur in 2019.

A closer look at 2018:

The performance indicators: vaccine coverage

1 Routine immunisation coverage

What we measure: percentage of children reached with the third dose of pentavalent vaccine, which protects against diphtheria, tetanus, pertussis (DTP3), hepatitis B and Hib, and the first dose of measles vaccine in Gavi-supported countries.

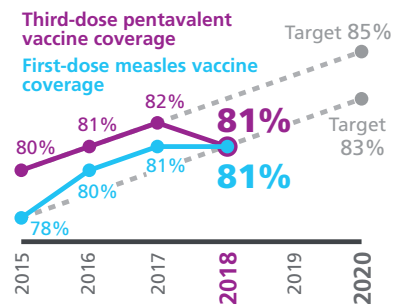
These two vaccines are included in the routine schedules of all Gavi-supported countries. Coverage estimates for both provide a reliable indicator of the proportion of children with access to basic immunisation services.

2018 performance: average coverage of the first dose of measles vaccine in Gavi-supported countries has plateaued at 81%. While third-dose pentavalent vaccine coverage increased between 2015 and

2017, it has since fallen slightly – leaving us off track to reach our 2020 target.

This stationary trend is particularly evident in the 16 countries classified as fragile, where coverage has remained at just 73% since 2014. Four transitioned countries saw coverage fall in 2018 – a reminder that even countries that transition with high coverage may backslide.

As a result of population growth and despite flatlining coverage rates, countries are continuing to immunise the same number of children as before. The total number of children who received a third dose of DTP-containing vaccine in Gavi-supported countries held steady at over 64 million in 2018.



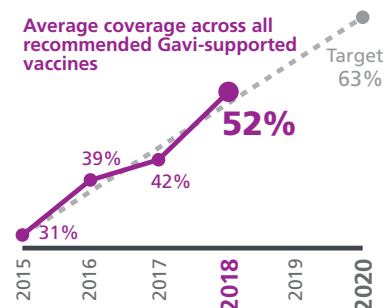
Source: WHO/UNICEF Estimates of National Immunization Coverage, 2019

2 Breadth of protection

What we measure: percentage of children reached with the last dose of vaccines recommended across all Gavi-supported countries and the last dose of three vaccines specific to certain regions.

2018 performance: coverage for these vaccines averaged 52% in 2018, an increase of 10 percentage points compared with 2017. Progress was in line with our target in 2018 – and we are on track to reach our 2020 target of 63%.

Sources: WHO/UNICEF Estimates of National Immunization Coverage; WHO/UNICEF Joint Reporting Form, 2019



Pneumonia and diarrhoea: tackling the deadliest diseases for children

Pneumonia and diarrhoea are leading killers of children, especially in the poorest countries. Together, these two diseases lead to nearly one in every four deaths in children under five. Pneumococcal vaccine can prevent the most common bacterial causes of pneumonia, while rotavirus vaccine protects against the deadliest form of diarrhoea.



Pneumococcal vaccine

By the end of 2018, 59 Gavi-supported countries – more than 80% of those eligible to do so – had introduced pneumococcal vaccine into their routine programmes. In October, Haiti introduced the vaccine into its routine programme, helping to protect children in the poorest and most fragile country in the Americas.

India continued to roll out pneumococcal vaccine state by state, building on the phased introduction in 2017. By the end of 2018, over 25% of the birth cohort had been immunised.

In 2018, the Gavi Board approved support for catch-up vaccination campaigns in support of future introductions. In addition, the price of one pneumococcal vaccine was further reduced to US\$ 2.95 per dose.

Mother brings her daughter for pentavalent, pneumococcal and polio vaccinations, Louga district health centre, northern Senegal

Gavi/2018/Simon Davis

Rotavirus vaccine

Shortages in supply of the rotavirus vaccine delayed a number of planned introductions in 2018. Nonetheless, Afghanistan and Uganda successfully introduced the vaccine, bringing the total number of Gavi-supported countries protecting children with the vaccine to 45. India is also rapidly scaling up its rotavirus vaccine programme nationwide, providing increased protection for the world's largest birth cohort.

The Alliance has worked hard to address supply constraints and minimise the impact in implementing countries (see Market Shaping). In 2018, presentations from new vaccine manufacturers became available, helping to improve the resilience of the rotavirus market.

Read more online
gavi.org/support/nvs

Supporting vaccines to fight cancer

Most people know that vaccines prevent infectious disease. However, many do not know of the important role that vaccines play in protecting people against certain types of cancer which are caused by viruses. Every year, 1.4 million cancer cases in low-income countries occur due to viral infections, many of which can be avoided by vaccination.

Gavi supports safe and effective vaccines against two major infectious causes of cancer: cervical cancer caused by human papillomavirus and liver cancer by hepatitis B. WHO estimates that universal vaccination against hepatitis B and HPV could prevent 1.1 million cancer cases every year.

More on HPV vaccine market, p. 29

Human papillomavirus vaccine

Infection with human papillomavirus is the main cause of cervical cancer, which kills some 311,000 women every year – mainly in low-income countries. Gavi started to support the HPV vaccine, which can prevent 70–90% of all cervical cancer cases, in 2012.

Since the first demonstration programme in 2013, countries have vaccinated more than 3.9 million girls with the Alliance's support. Despite continued supply shortages, four countries introduced the vaccine into their routine programmes in 2018. The United Republic of Tanzania, which introduced the vaccine nationally in April, plans to immunise more than 700,000 girls aged 14 years, while Zimbabwe's multi-age cohort vaccination strategy is expected to reach more than 800,000 girls between 10 and 14 years. Ethiopia reached 1.2 million girls and Senegal 196,000 girls.

Hepatitis B vaccine

Hepatitis B vaccine (one ingredient in the five-in-one pentavalent vaccine) protects against a virus which can cause liver cancer – the second most lethal type of cancer in men after lung cancer.

When Gavi was set up in 2000, less than 5% of all low-income countries had introduced hepatitis B vaccine nationally. Today, all 73 Gavi-supported countries are providing the vaccine through their routine pentavalent immunisation programmes.

Average coverage with a third dose of pentavalent vaccine across Gavi-supported countries reached 81% in 2018, slightly down from 82% in 2017.

Zero-dose children: most in need, hardest to reach

Of all the children in Gavi-supported countries, those in most urgent need of vaccines are the ones who have received none at all – the zero-dose children. We know that approximately 20% of children in the countries supported by the Alliance are underimmunised – they have not received all three doses of a DTP-containing vaccine. Of these, we estimate that between one quarter and one half have never received any vaccination through routine delivery systems. Good data on these children is not available: by definition, these are people who have little or no contact with any health or other official services. However, lack of any DTP vaccination – which we do have data on – is a reasonable proxy measure for tracking our ability to reach zero-dose children.

Unimmunised children fall into the category of “hardest to reach”. Living outside formal settlements, these children are largely invisible to governments, their births and very existence often unregistered. We know that a large number are in urban areas – often living in slums. Others are in remote rural areas and may be displaced, by conflict, natural disaster or local disputes. Many have no access to services; others may have access but for economic, social or other reasons may not be able to use them.

Globally, there are an estimated 13.5 million DTP zero-dose children; 10.4 million (around 75%) are in Gavi-supported countries. Reaching these children is proving more difficult than anticipated, as they often belong to marginalised communities that suffer not



Gavi/2018/Hervé Lequeux

only from lack of access to infrastructure and services, but also political and social neglect. Some are not recognised, nor registered, by their governments, making it even harder to find and reach them.

Future planning: the vaccine investment strategy

Every five years, Gavi reviews both licensed vaccines and those that are expected to be licensed as part of its work to develop a new vaccine investment strategy (VIS). The strategy uses an evidence-based, consultative process to prioritise support for additional vaccines for the Gavi portfolio. The five-year cycle is intended to provide predictability and transparency for all Alliance partners, including countries and manufacturers. The VIS for 2021–2025 was developed and presented to the Gavi Board in 2018.

The 2018 strategy looked at three categories of potential investment: endemic disease prevention, epidemic disease preparedness and response, and polio eradication. These were assessed through the lens of their impact on public health goals, such as expanding routine immunisation, strengthening global health

security and enabling disease eradication. Vaccines are also assessed for their contribution to reducing antimicrobial resistance.

In November, the Gavi Board prioritised six candidate vaccines for investment by the Alliance: hepatitis B birth dose to prevent chronic hepatitis B infection; DTP-containing booster doses to provide ongoing protection (given between the ages of 9 and 15 years); oral cholera vaccine for endemic use; human rabies vaccine for post-exposure prophylaxis; conditional approval for multivalent meningococcal conjugate vaccine to expand protection beyond meningitis serogroup A; and conditional approval for respiratory syncytial virus (RSV) vaccine to prevent one of the most common causes of bronchiolitis and pneumonia in children in their first year of life.

Some of these candidate vaccines are aimed at older, or broader, age ranges of children and in some cases adults. As they are developed, prequalified and introduced, this may require Gavi-supported countries to explore new ways of reaching these target populations.

The Board also approved a set of evaluation criteria for epidemic preparedness and response as part of the VIS. Priority was given to further analysis of pandemic influenza and a learning agenda to assess the feasibility and impact of immunising healthcare workers with seasonal influenza vaccine to support epidemic and pandemic influenza preparedness was agreed.

On polio eradication, the Board was supportive of continued investment in inactivated polio vaccine (IPV) beyond 2020, subject to a new five-year Gavi strategy and funding availability.

A closer look at 2018:

The performance indicators: equity in vaccine coverage

3 Geographic distribution

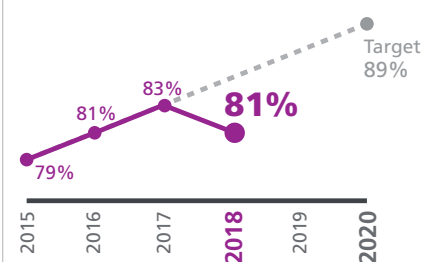
What we measure: average percentage of districts across the countries we support in which coverage with a third dose of pentavalent vaccine is equal to or greater than 80%. As part of an increased effort to ensure accurate subnational data is available for measuring equity, WHO and UNICEF have started to report geographically disaggregated coverage data on an annual basis.

2018 performance: the proportion of districts in Gavi-supported countries in which coverage of three doses of pentavalent vaccine is equal to or above 80% dropped from 83% in 2017 to 81% in 2018. We are currently not on track

to achieve our 2020 target of 89%. This indicator does not cover the same set of countries each year, so tracking progress is challenging.

The Alliance works as part of the newly-formed Equity Reference Group (led by the Gates Foundation and UNICEF), which aims to generate innovative ideas to accelerate progress on equity in immunisation across four key contexts: urban poor, remote/rural areas, conflict and gender-related barriers. The group has started making recommendations for global and national decision-makers.

Equity: geographic distribution



Sources: WHO/UNICEF Estimates of National Immunization Coverage; WHO/UNICEF Joint Reporting Form, 2019

4 Wealth distribution

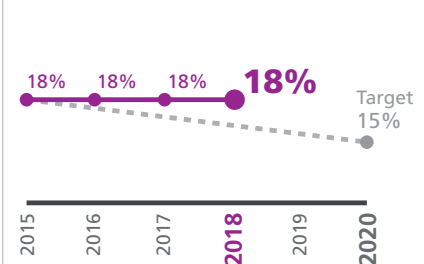
What we measure: average difference in coverage with a third dose of pentavalent vaccine between the poorest 20% of the population and the richest 20% across the Gavi-supported countries where recent data is available.

2018 performance: the average difference between immunisation coverage in the richest and poorest quintiles in Gavi-supported countries has remained at 18% since 2015. The lack of movement on

this indicator means that we are not on track to reach our 2020 target of 15%.

However, some positive trends were observed in 2018. Four out of eight countries with new surveys reported reduced inequity across income groups. For instance, Guinea, Pakistan and Senegal showed an average reduction in wealth inequity of 12 percentage points. Due to the low availability of recent data, accurately measuring changes remains difficult.

Equity: wealth distribution



Sources: Latest available household surveys, such as demographic health surveys and multiple indicator cluster surveys, 2019

5 Maternal education

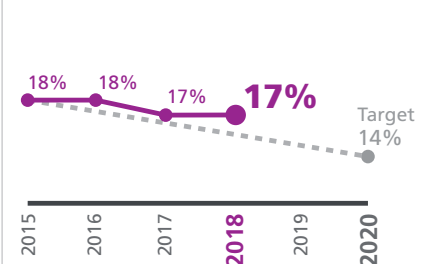
What we measure: average difference in coverage between children of non-educated mothers or other female caregivers, and those whose mothers have at least completed secondary school. We use three doses of pentavalent vaccine as the basis for this indicator, which includes all Gavi-supported countries where recent survey data is available.

2018 performance: the average difference between coverage of the third dose of pentavalent vaccine among children of

educated and non-educated mothers in Gavi-supported countries has stalled at 17% – just one percentage point below the 2015 baseline. Recent surveys in Guinea, Pakistan and Senegal showed an average drop in maternal education inequity by eight percentage points; we will need similar levels of progress across more countries to reach our 2020 target of 14%.

The lack of availability of recent data makes it difficult to track this indicator accurately.

Equity: maternal education



Sources: Latest available household surveys, such as demographic health surveys and multiple indicator cluster surveys, 2019

Investing to prevent disease outbreaks

The risk of outbreaks of infectious disease is continuing to increase, as factors such as climate change, accelerated urbanisation and globalisation combine to create a perfect storm for diseases to spread rapidly through human populations. Outbreaks of vaccine-preventable diseases are also often an indicator of weaknesses in national immunisation programmes.

The Alliance collaborates with a range of partners to prevent and control outbreaks of disease. These partnerships – including the Global Task Force for Cholera Control, the

WHO Eliminate Yellow Fever Epidemics (EYE) Strategy, the Measles & Rubella Initiative and the Global Polio Eradication Initiative – help to develop and support a more integrated approach to global health security.

In this reporting period (2016–2018), Gavi has invested more than US\$ 72 million in disease surveillance, a key component in detecting outbreaks. This support has helped equip health facilities with surveillance software, cover operational costs of routine surveillance and finance appropriate training for staff.

Immunising against antimicrobial resistance (AMR)

Gavi support is estimated to have averted the need for as many as 14 million antibiotic doses for pneumonia alone between 2011 and 2015. In addition, rotavirus vaccination helps avoid the unnecessary and ineffective use of antibiotics often prescribed for this viral diarrhoeal disease. For 2016–2020, Gavi has also committed to vaccinating hundreds of millions more children against two important drivers of antibiotic use: meningococcal meningitis and pneumonia. This is expected to avert the need for over 100 million doses of antibiotics.

Emergency stockpiles

Gavi is the sole funder of emergency stockpiles of yellow fever, oral cholera and meningococcal meningitis vaccines. The Alliance has also committed to financing an Ebola vaccine stockpile once a vaccine has been licensed, prequalified and recommended by WHO.

To ensure a rapid response to outbreaks, Gavi-supported countries have access to stockpile vaccines free of charge. Countries can also

request funding to cover the operational costs of campaigns. Non Gavi-supported countries facing emergency outbreaks can draw on stockpiles immediately, but they are required to pay for the vaccines used once the outbreak is over. Since 2017, Gavi has served as an observer to the International Coordinating Group (ICG) on Vaccine Provision, contributing to better coordination between stockpile use and routine immunisation programmes.



Gavi/2019/Frederique Tissandier

Yellow fever

Several outbreaks of yellow fever occurred in 2018, including in Nigeria where there have been episodic outbreaks since September 2017. Nigeria was able to access vaccines from the Gavi-funded stockpile on four separate occasions in 2018; in total, more than 6.5 million doses were shipped to the country.

Other countries affected by yellow fever outbreaks included Congo and Ethiopia. Although at the time not eligible for Gavi support, Congo was granted exceptional approval to access the vaccine stockpile without the need to repay the procurement cost due to its change in GNI and impending return to Gavi eligibility. The situation in Ethiopia was especially concerning, as the country has not introduced yellow fever into its routine immunisation programme, along with South Sudan, Sudan and Uganda.

Phased preventive mass immunisation campaigns that had been put on hold due to supply constraints were resumed in 2018, including those in Ghana and Nigeria, following an improved supply situation. A campaign in Sudan was approved and planned in 2018 but implementation did not begin before the end of the year.



Meningitis

Mass campaigns across the central African “meningitis belt” using the Gavi-supported meningitis A vaccine have dramatically reduced the number of cases of meningococcal meningitis in the 26 countries in the region. However, much remains to be done to consolidate these gains.

The number of countries introducing meningitis A vaccine as part of their routine programmes has slowed down. Just one additional country rolled out the vaccine in 2018, bringing the total to eight, with one more introduction planned in 2019. Another 17 countries need to introduce the vaccine to protect people against this strain of meningococcal meningitis.

At the same time, other meningococcal meningitis strains – particularly serogroups C and W – which are not prevented by the current vaccine have become more dominant. This year, the Gavi Board conditionally approved support for the multivalent conjugate vaccine which protects against meningococcal meningitis A, C and W (see Vaccine investment strategy, p. 14). However, it may be several years before the appropriate products are available and it is therefore essential that more countries introduce the existing meningitis A vaccine.

This year, the meningococcal meningitis vaccine stockpile was accessed by two countries (Fiji and Nigeria) to help manage outbreaks of the disease.

Nigerian healthworkers, with support from WHO and partners, distribute Gavi-funded yellow fever vaccine WHO/2018

Cholera

Since Gavi first supported the global cholera stockpile in 2013, there has been a steady increase in demand from countries. In 2018, more than 17 million doses were shipped with Gavi support, an increase of some 75% from 2017. Our support for the oral cholera vaccine (OCV) enables countries to respond to outbreaks and protect people in at-risk areas.

This year, vaccination campaigns were often carried out in response to humanitarian crises, such as in Yemen and among the Rohingya refugee population in Bangladesh. For the first time since the outbreak started in 2016, Yemen decided to use OCV to reduce transmission; with Gavi’s support, 3.1 million doses for 1.6 million people were sent to 10 districts.

The momentum for action against cholera has accelerated this year, with the World Health Assembly’s adoption of a resolution on cholera prevention and control, aimed at reducing cholera deaths by 90% by 2030. Cholera carries a unique political stigma and countries are often reluctant to declare outbreaks. Increasingly, affected countries are developing national multisectoral cholera control plans, including OCV to protect people while scaling up long-term investment in water, sanitation and hygiene (WASH).

Ongoing supply constraints limit the ability of countries to use OCV and limited supply is prioritised for outbreak response efforts which are often linked to protracted humanitarian emergencies. This makes it more difficult to plan and deliver widespread preventive campaigns using OCV.

Measles

While 2018 saw some progress in efforts to protect more children against measles, including successful immunisation campaigns in some of the largest Gavi-supported countries, the overall picture was not positive. The global number of reported cases more than doubled from 2017. Stagnating coverage rates led to multiple measles outbreaks worldwide, including in Gavi-supported countries such as India and Madagascar. Just 14 of the initial 73 Gavi-supported countries have been certified as having eliminated measles as a public health problem.

To prevent measles, a country has to achieve and sustain at least 95% coverage, but first

dose vaccination rates have stalled at 81%. Second dose coverage is increasing but stands at just 54% in Gavi-supported countries.

Focusing on the six countries with the highest number of underimmunised children led to successful immunisation campaigns in Nigeria and Pakistan – using polio eradication workers and systems, and enhanced collaboration between Alliance partners. This resulted in unprecedented levels of coverage: 89% in Nigeria and 93% in Pakistan, close to the 95% level required to confer herd immunity.

These campaigns are good news, but they are no substitute for sustainable routine

immunisation. However, given the importance of increasing the number of people protected from measles, the Board agreed to allow greater flexibility in the use of operational cost support funds. Burundi, Lesotho, Senegal and Zambia are among the countries expected to make use of this new flexibility.

Vaccine hesitancy is a growing problem worldwide, including in Gavi-supported countries. In Indonesia, for example, rumours and false information regarding the halal status of the vaccine led to poor results for a measles-rubella campaign.

Polio

2018 was not a good year for the global fight to eradicate polio. Wild poliovirus transmission continued in Afghanistan and Pakistan. In addition, more than 100 cases of vaccine-derived poliovirus were identified in east, central and west Africa, in the Indonesian province of Papua and in Papua New Guinea. This is clear evidence of weakness in routine immunisation systems in the affected countries.

Nonetheless, there was some positive news: 2018 was the first year in which sufficient supply of inactivated polio virus (IPV) was available, and nearly all introductions which had been delayed or interrupted as a result of supply issues were resumed in the course of the year. Fourteen countries introduced IPV into their routine immunisation system, leaving only Mongolia and Zimbabwe to introduce the vaccine in 2019.

Gavi continues to invest in the polio eradication effort, in close collaboration and support of the Global Polio Eradication Initiative. In June, the Board agreed to fund IPV with core resources of some US\$ 200 million for the 2019–2020 period and endorsed increased engagement in countries with polio transition and planning for a post-polio eradication world.

The Board also agreed to continue IPV support post-2020 as part of the vaccine investment strategy (see p. 14), recognising the importance of the vaccine as a global public good to achieve and sustain polio eradication.

Children in Bangladesh receive typhoid vaccine
Gavi/2018

Typhoid

2018 was the first year in which countries could apply for Gavi support through a new window for typhoid conjugate vaccine (TCV), with the first routine introductions scheduled to take place in 2019. Gavi funding is available for routine immunisation and for catch-up immunisation when countries introduce the vaccine. Pakistan was the first country to apply for routine support, partly in response to widespread transmission of an extensively drug-resistant strain. TCV is expected to be introduced there in 2019. Zimbabwe was also approved for TCV support for use against a drug-resistant typhoid outbreak in Harare. Many other countries have indicated interest to introduce TCV, and we expect demand to increase in the coming years.

Between 11 and 21 million people are thought to contract typhoid each year, most of them in low-income countries. The continuing rise of drug resistant typhoid is a growing concern. TCV can help prevent its spread and reduce the use of costly, last-line treatments for patients with typhoid fever.



Japanese encephalitis

In 2018, Indonesia introduced the Japanese encephalitis vaccine on the island of Bali through a campaign and into the routine immunisation system. Since support for the vaccine began, five Gavi-supported countries affected by Japanese encephalitis have introduced the vaccine to prevent the effects of this potentially deadly disease. By the end of 2018, more than 18 million children had been immunised.

The Alliance has worked closely with individual partners to accelerate access to the vaccine, which has a long manufacturing lead-time. WHO, UNICEF, PATH and the Bill & Melinda Gates Foundation all play a critical role in ensuring sufficient supply of the vaccine to countries.

Ebola

The Democratic Republic of the Congo (DRC) suffered two Ebola outbreaks in 2018. The first was contained with the help of an investigational vaccine – made available by the manufacturer in the context of an Advance Purchase Commitment with Gavi – but a second outbreak continued to spread beyond the end of the year, despite use of the vaccine. (see also Market Shaping p. 30).

Gavi is preparing to fund an Ebola stockpile as soon as the vaccine is licensed, prequalified and recommended by WHO. We also received a request to support preventative campaigns for health workers in countries neighbouring DRC.

Vaccine support to fragile countries

In 2018, Gavi continued to provide exceptional support to fragile countries, and to people who have been uprooted by conflict, natural disasters and humanitarian emergencies. During the course of the year, Gavi supported immunisation campaigns with cholera and pentavalent vaccines in Syria and Yemen as those countries continued to be fractured by conflict. In Yemen, we supported intensified efforts to control diphtheria and measles. We also provided assistance for typhoid vaccination in Zimbabwe and measles-rubella in South Sudan.

The number of forcibly displaced people worldwide rose to unprecedented levels of more than 70 million and the Alliance responded by helping to protect displaced populations from Bangladesh to Uganda. The Gavi fragility policy enables the Alliance to provide support for people who have been forced to leave their homes. In 2018, Gavi used this policy to add additional doses for refugees from South Sudan into Uganda's vaccine renewals request. In this way, the displaced population was able to access vaccines through regular health services as well as specific outreach services.

A large-scale multi-antigen campaign was supported by Gavi, UNICEF and the Ugandan Government, targeting all refugee children under 5 years in all the settlements and high-density refugee areas across the country with doses of pneumococcal, pentavalent and measles vaccines. We also helped Bangladesh to immunise Rohingya from Myanmar in Cox's Bazar with cholera, pentavalent and pneumococcal vaccines, and Rwanda to immunise Burundian refugees with measles, pentavalent, rotavirus and pneumococcal.

Looking ahead

As Gavi nears the end of its second decade, it is increasingly clear that a one-size-fits-all approach will not suffice to achieve our mission. The Alliance is working to ensure that we are flexible enough to meet country needs and target national and regional priorities. This includes countries in conflict and those with weak immunisation systems.

Identifying, finding and protecting children who have never received a single vaccination wherever they are will increasingly be a focus for the Alliance as we turn our attention to the next five-year strategic period. These

zero-dose children urgently need immunisation but for a combination of social, economic and political reasons they remain unprotected.

Many of them live in urban slums, others in remote rural areas and still more are displaced. All are disadvantaged. A growing number also live in middle-income countries (MICs), which are predicted to be home to more than half of all underimmunised children by 2025. The divide between rich and poor countries is no longer clear-cut. Within many MICs, there is growing evidence of inequality between the poorest and the better off. Many of these

countries are falling behind on immunisation, putting the health of current and future generations at risk. This too is likely to be a focus for Gavi's next five-year strategy.

At the same time, promising candidate vaccines for malaria, HIV and tuberculosis are in late-stage development and could become available in the next decade. Funding and support will be required for all three but such an investment will pay dividends in terms of its contribution to increasing individual protection and improving global health security.



Read more online
gavi.org/support/hss

Gavi/2018/Thomas Nicolon

The health systems goal

increase the effectiveness and efficiency of immunisation delivery as an integrated part of strengthened health systems

2018 at a glance:

- Coverage with one dose of pentavalent vaccine in Gavi-supported countries has increased slightly to 87% in 2018 from the baseline of 86% in 2015, leaving some 13% of children unreached by even one dose of this essential childhood vaccination.
- The number of zero-dose children has dropped by 7% since 2015.
- The average score for effective vaccine management (EVM)^a across Gavi-supported countries climbed to 70%, putting us on track to reach our 2020 target.
- 45% of Gavi-supported countries are meeting the benchmark for data quality – a drop of two percentage points from 2017.

a – EVM scores help countries to evaluate the performance of their immunisation supply chains, and benchmark against best practice.

Why systems matter

Strengthening immunisation delivery is vital to our goal of ensuring that every child receives a full course of vaccines. Delivery is becoming increasingly complex due to larger birth cohorts, an increased number of vaccines and already stretched health systems. A mix of fragility, migration, conflict and weak demand for vaccination adds further complexity.

Health system strengthening (HSS) support is a critical part of our work to improve immunisation coverage and equity. Technical assistance from a wide range of partners through the partners' engagement framework (PEF) is another. We also support countries through our cold chain equipment optimisation platform (CCEOP), helping to extend the reach of immunisation.

Gavi helps to identify districts with low coverage and a high number of unreached children, then helps countries target them with HSS support and technical assistance. Recently, support has become more focused on specific areas and communities, and on resolving coverage and equity bottlenecks. This strong focus on reaching underserved and marginalised populations is what sets the Alliance's approach to health system strengthening apart.

Health system strengthening support and technical assistance

Our annual disbursements of HSS support increased from US\$ 226 million in 2017 to US\$ 284 million in 2018. The average disbursement in 2018 was around US\$ 6 million per supported country. These grants are carefully focused to ensure impact and leverage investments from domestic resources, other donors and other Gavi support. This year, nearly 60% of grants were targeted to strategic focus areas such as supply chain, data, demand generation, and leadership, management and coordination, which we have identified as particularly important to achieve progress on coverage and equity.

We work closely with other donors, notably the Global Fund, to ensure our support is synergistic. Support is tailored to each country and can include grant alignment, joint investment planning and use of common fiduciary mechanisms.

HSS support and technical assistance are increasingly integrated and aimed at overcoming coverage and equity barriers. In 2018 the Central African Republic used technical assistance and HSS support to conduct an equity assessment, which highlighted the need for an urban immunisation strategy. The country developed and implemented a plan to reach underimmunised children in cities. It has recently completed a multiple indicator cluster (MIC) survey; preliminary results indicate

improvement in coverage across the country, up 20 percentage points to 74% since 2017. We supported the country to equip 50% of facilities with cold chain equipment for routine immunisation services (up from 20%).

Our health system support is coupled with increased funding for technical assistance – up from a budgeted US\$ 135 million in 2017 to US\$ 150 million in 2018. This includes funding for around 240 WHO and UNICEF country staff, 66 based at subnational level, focusing on the most challenging areas.

PEF has added new and more diverse partners who provide technical assistance to countries in their specialist areas. More than 50 partners, including a growing number of private sector partners, have provided Gavi-funded technical support around the world.

Meeting targets for timely HSS disbursements is still a challenge, largely due to the need to reduce fiduciary risk. The average time to disburse cash grants increased from 13 months in 2017 to 18 months in 2018. This reflects grants delayed for reasons beyond Gavi's control, such as political context and supply shortages. However, even where first grant disbursements are delayed, subsequent payments are not. We have identified this as a critical area for improvement and early signs are good.

Building systems to reach the unreached

All countries applying for HSS support are required not only to specify where underimmunised children live but also identify barriers to reaching them. Of the 56 countries with active HSS support in 2018, more than 70% have proposed targeting specific geographies or communities with a portion of their support. Countries are also increasingly requesting technical support at the subnational level.

Underimmunised, and unimmunised or “zero-dose,” children often belong to communities that suffer from a wider lack of access to infrastructure and services. When Gavi was established in 2000, most underimmunised children lived in rural communities. While some are still found in remote areas with inadequate access to services, urbanisation and growing fragility mean a rapidly growing share now live in urban slums and conflict settings.

[More on zero-dose children p. 14](#)

Urban areas

Rapid urbanisation in Gavi-supported countries has meant that 13% of the population now lives in urban slums. These areas often have very limited or non-existent public service provision and their populations are not always registered or recognised by governments.

In 2018, a working group which included the Gavi Secretariat, UNICEF, WHO, the Bill & Melinda Gates Foundation, Centers for Disease Control and Prevention (CDC), JSI Research & Training Institute, Inc. (JSI), USAID and civil society organisations, developed an urban toolkit to help countries understand the unique challenges of reaching underimmunised children in urban settings and develop specific interventions to reach them.

Gavi also launched its first programme guidance on urban issues this year, outlining key considerations that should be considered when planning investments in urban immunisation programmes. A growing number of countries are now incorporating urban strategies into their HSS proposals.

Fragile settings

The number of displaced people worldwide reached record levels in 2018 and increasing numbers of people were affected by conflict. Recognising that many underimmunised children live in fragile settings, Gavi introduced a new fragility, emergencies and refugees policy in 2017. This allows us to adopt flexible approaches adapted to fragile settings, including up to 50% more HSS funding, greater flexibility in Alliance processes and support for immunisation through other implementing partners, as needed. Since the policy came into force in 2017, Gavi has invested more than US\$ 75 million in 12 countries.

Strategic focus areas

The bulk of Gavi's HSS support is intended to target strategic focus areas, which are critical to reaching the unreached. The Alliance has developed a strategy and metrics for each of these areas, to ensure HSS support and technical assistance are relevant and help drive innovation and learning, and that our investments are delivering results.

The strategic focus areas (SFAs) are:

- supply chain;
- data quality and use;
- demand generation;
- leadership, management and coordination;
- political will; and
- financial and programmatic sustainability.

Other key areas of investment are service delivery activities – including scaling up services for underserved populations – and human resources for health.

Gavi HSS support boosts equity in Pakistan



In Pakistan, Gavi HSS funds were used in conjunction with the World Bank to promote uptake of immunisation among more than five million families living in the poorest regions, including in urban settings. This has resulted in a 14 percentage-point improvement in average

EPI workers collecting immunisation data inside the walled city of Lahore, Punjab province, Pakistan
Gavi/2017/Asad Zaidi

DTP3 coverage rates across three of the four priority provinces. Country-wide coverage among the poorest children in also increased, from 30% to 49%, while coverage among children whose mothers are least educated climbed from 51% to 61%. We will need to see similar progress across more countries if we are to achieve our 2020 targets.

[See Gavi equity-related key performance indicators p. 15](#)

Measuring progress

Systematically measuring how health system investments translate into higher equitable coverage remains a challenge for the Alliance, as well as for the broader development community. Nevertheless, a recent evaluation of Gavi HSS support found a small, lagged positive association between our investments and increased immunisation coverage – a connection that appears to increase with time from the first disbursement.

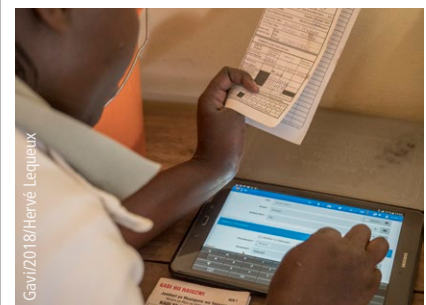
We are working hard to improve the way we track our HSS support, for instance by ensuring that all grants have grant performance frameworks (GPFs). These include a set of standard indicators to measure overall performance, as well as tailored indicators specific to the objectives of each grant.

The indicators, typically reported annually or biannually, are intended to provide a snapshot of the effectiveness of HSS grants in achieving their objectives. They should also facilitate proactive interventions, designed to accelerate progress or to address challenges.

Indicators that reflect the functions of the partners' engagement framework (PEF) are also reported annually. The PEF indicators measure progress towards a set of outcomes in each country that are expected as a result of Alliance partner support. Partners also report on targeted country assistance milestones for each country.

PEF indicators complement GPF measures by offering insights into the performance of a country's broader health system and

potential risks. For example, typical PEF function indicators measure the extent to which countries have policies in place at each level to reduce vaccine wastage, and whether they have a plan in place to manage adverse events following immunisation.



Gavi/2018/Hervé Lequeux

A closer look at 2018:

The performance indicators

1 Supply chain performance

What we measure: the average score achieved by Gavi-supported countries that have completed WHO's effective vaccine management (EVM) assessment. This indicator helps countries to evaluate their immunisation supply chain performance over time against best practice standards, as well as to identify and respond to shortcomings. Among the features assessed are vaccine management, storage capacity, human resources and information systems.

Strong supply chains are essential for countries to ensure vaccines are available wherever and whenever they are needed, and that they are stored consistently at the temperatures required to remain potent and safe.

2018 performance: Gavi-supported countries achieved an average EVM score of 70% in 2018, up from 68% in 2017. We are on track to achieve the agreed 2020 target of 72%.

All nine countries that conducted a new EVM assessment in 2018 showed an improvement in their composite score, with an average improvement of 11 percentage points. 25% of countries had EVM scores equal to or above 80% – the WHO-defined standard for a well-functioning supply chain – compared with 15% in 2016.

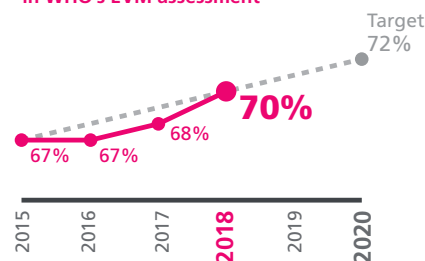
Most of the recent improvements were seen in the four areas targeted by Gavi investments: storage and transport; buildings and equipment; vaccine management; and maintenance.

The Alliance is working with a range of private-sector partners to introduce



Read more online
www.gavi.org/support/hss/immunisation-supply-chain/

Average score achieved by countries in WHO's EVM assessment



Source: WHO effective vaccine management global data analysis, 2019

innovative supply chain solutions, including drone vaccine delivery and cutting-edge temperature monitoring devices.

[More on private-sector partnerships p. 32](#)

Demand for better cold chain equipment

A robust, functioning cold chain is critical to ensuring that vaccines can be delivered safely and regularly to the communities where they are needed without losing their efficacy. Because the cold chain is a specific requirement for vaccines, Gavi has always been a major funder of cold chain equipment.

Through the CCEOP, launched in 2016, Gavi helps countries with the purchase, deployment and installation of high-performing, environmentally sound cold chain equipment, as well as the training of healthcare workers and technicians in maintenance practices.

The investments are starting to bear fruit. Vaccine storage and transport capacity is one

of the components of WHO's effective vaccine management (EVM) score that has improved the most in the current period, averaging above 80% across countries. By the end of 2018, nearly 20,000 modern and effective cold chain units, such as solar refrigerators, had been ordered, 17,000 of which had been delivered and 11,000 installed in 14 countries.

Country demand is strong: around 80% of eligible countries had applied for CCEOP support and 30 had been approved by the end of 2018. While deployment times are still longer than we would like, they have been reduced from 20 to 14 months since 2017.

More than a quarter of the sites that have received cold chain equipment are facilities that were previously completely unequipped. Extending the cold chain in this way enables more facilities to offer reliable immunisation services where this was not previously possible.

An evaluation led by the Clinton Health Access Initiative (CHAI) in Kenya revealed that the CCEOP service bundle reduced timelines for deployment by 120 days but increased costs relative to a Ministry-led installation. The Alliance will in future offer countries the option of installing devices themselves.

[More on CCEOP p. 30](#)

Gender barriers

In some communities, gender-related barriers can present serious obstacles to improving immunisation coverage. While average immunisation rates for girls and boys are similar, gender norms and other gender-related barriers can prevent female caregivers from getting their children immunised.



Mother rests with her child following immunisation session in Ghana

Gavi/2018/Tony Noel

Gavi is intensifying its work to identify and address specific gender-related barriers. Ongoing work includes an update of the gender policy, mainstreaming gender-related interventions into Gavi's data and demand SFAs (for example improving service quality such as interpersonal communication of frontline health workers and increasing awareness through community engagement), updates to guidelines on HSS and new vaccine support.

There is growing evidence that countries are incorporating gender into their immunisation and health systems planning. For example, proposals for HSS support show greater understanding of gendered barriers, and a desire from countries to address these barriers, through specific interventions.

The example of Senegal shows how these barriers can be addressed. In Dakar, health

centres open at weekends to improve access for women who commute with their children during the week for informal work. The approach has been so successful some health centres had to open a second immunisation post to meet demand. Teams also provide outreach services in market places and underserved areas to target children and older girls for HPV immunisation.

Gavi has also made progress in addressing gender within the Secretariat. In 2018, the Global Health 50/50 report named Gavi among the highest scorers in gender responsiveness and advancing gender equity. The report measured gender-related policies of more than 140 organisations working in global health. Gavi also became the first international not-for-profit organisation to obtain certification from the Equal Salary Foundation.

2 Data quality

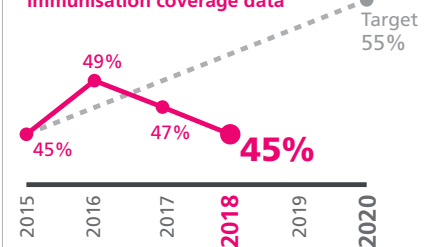
What we measure: proportion of Gavi-supported countries with a less than 10 percentage point difference between different estimates of immunisation coverage.

This indicator reflects the degree of consistency between available estimates of immunisation coverage. "Administrative coverage" refers to estimates based on national-level data reported annually by the country itself. "Survey coverage" refers to estimates based on data collected as part of household surveys, such as the demographic health survey, which is usually carried out every three to five years.

2018 performance: 45% of countries reported administrative coverage data within 10 percentage points of survey coverage, compared with 47% in 2017. This means that we are off track to achieve our 2020 target of 55%.

Revisions of previous years' coverage estimates in the latest WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) are a reminder that measurement remains a key challenge. In a continued effort to improve data quality, and with support from Gavi's data strategic focus area, WHO and UNICEF are conducting a review of the WUENIC methodology, including comparisons with multiple alternative methods.

Percentage of countries meeting our benchmark for quality of immunisation coverage data



Sources: WHO/UNICEF Estimates of National Immunization Coverage; multiple indicator cluster surveys; demographic health surveys; other household surveys, 2019

Strategic focus area: data

Demand from countries for PEF technical assistance to improve data quality and use increased significantly from approximately US\$ 8 million in 2017 to close to US\$ 12 million in 2018, in addition to substantial amounts of health system support funding.

Gavi supports countries to transition to electronic district health information systems (DHIS2) and expand their use of digital health

tools. More than 50 countries now use DHIS2 for immunisation, reflecting successful coordination and collaboration across the Alliance and other health programmes. The University of Oslo has recently been contracted under PEF to support 25 countries in the development of DHIS2 as well as help them strengthen national health information systems and build capacity for the effective use of data.

In addition, Gavi has developed target software standards for electronic Logistics Management Information Systems (LMIS) to ensure that all future Gavi investments in this space meet a minimum standard including interoperability with DHIS2. For both DHIS2 and LMIS, Gavi is collaborating closely with the Global Fund to ensure there is strong coordination and alignment of support.

3 Coverage with a first dose of pentavalent vaccine and drop-out rate between the first and third dose

What we measure: coverage with a first dose of pentavalent vaccine and the drop-out rate between the first and third dose in countries we support.

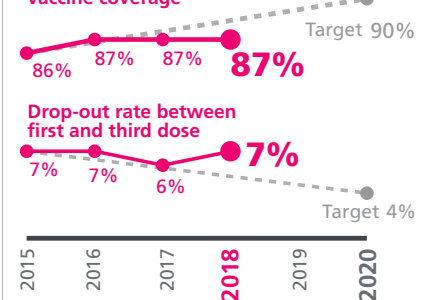
Taken together, these two measures provide a good indication of the ability of the health system to deliver immunisation services. High first-dose coverage coupled with low rates of drop-out from the first to the third dose suggest a strong health system, capable of reaching and fully immunising children with the required number of doses. A weaker

delivery system may succeed in reaching a child with the first dose but not the third.

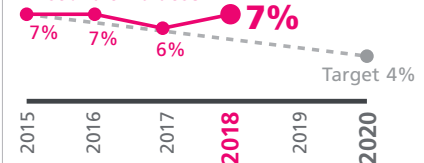
2018 performance: coverage with a first dose of pentavalent vaccine in Gavi-supported countries remained at 87% for the third successive year, having increased from 86% in 2015. We are not on track to reach our 2020 target of 90%.

The drop-out rate was 7%, compared with 6% in 2017. We are off track to achieve our target of 4% for this indicator.

First-dose pentavalent vaccine coverage



Drop-out rate between first and third dose



Sources: WHO/UNICEF Estimates of National Immunization Coverage; United Nations Population Division, 2019

Strategic focus area: demand generation

Demand-related barriers are emerging as a significant contributor to low coverage rates. Data from India, Nigeria and Pakistan show that a range of social, cultural and gender-related barriers make it hard for some communities to access immunisation. Poor quality services are another challenge. Negative frontline worker attitudes, as well as factors such as a lack of supplies and toilets, and queues, deter some parents from returning.

Globally, vaccine hesitancy is a major concern and has been reported in more than 90% of countries. Frontline workers are key to building parental confidence as conflicting advice can be especially damaging. Hesitant parents are more likely to seek out information on vaccines on the Internet and from other sources where misinformation and rumours can

spread rapidly. WHO recently named vaccine hesitancy as a top ten risk to global health.

Alliance partners have created the Demand Hub to coordinate technical assistance, develop tools and guidance, and build national capacity for demand generation. Partners have developed a new framework to help guide health system strengthening grants and technical assistance with a menu of interventions that emphasises innovation and working with non-traditional partners.

Gavi has developed several innovative partnerships to address demand-side barriers. We are working with Living Goods and Last Mile Health to scale up immunisation in Kenya, Liberia and Uganda through digitally empowered health workers. This

will help improve access to immunisation for more than eight million people by deploying 50,000 community health workers to serve 34 million people by 2021.

In Ethiopia, Malawi and Rwanda, we are working with Girl Effect to build demand for HPV vaccine and empower girls to use health services. Learnings and tools are shared globally through a country-focused toolkit. In Uttar Pradesh, India, Gavi is partnering with Unilever to model maternal and paternal roles and promote successful parenting. Early results are promising, showing increased uptake of immunisation and handwashing with soap. The programme is now scaling up to reach 580,000 families in 14 districts, directly benefiting two million people by the end of 2020.

4 Integrated health service delivery

What we measure: percentage of countries we support meeting our benchmark for integrated delivery of antenatal care and immunisation services.

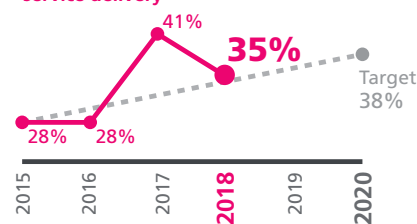
A country meets this benchmark if coverage levels for four interventions – antenatal care and administration of neonatal tetanus, pentavalent and measles vaccines – are within 10 percentage points of each other, and all above 70%.

If these complementary services are achieving similar levels of coverage, it generally follows that the linkages and coordination between them are strong.

2018 performance: Some progress has been made in this area but this year the measure slipped back to 35% from 41% the previous year, and below the target of 38% for 2020.

Gavi fully promotes integrated approaches combining, for example, rotavirus, pneumococcal, human papillomavirus and measles programmes with comprehensive plans to reduce the burden of diarrhoea, pneumonia and cervical cancer. Gavi's support for measles campaigns also helps to deliver vitamin A and deworming. Support for the cholera vaccine stockpile also strengthens multisectoral disease control efforts. Future vaccines in the VIS bring more opportunities for integrated multisectoral approaches.

Percentage of countries meeting the benchmark for integrated service delivery



Sources: WHO/UNICEF Estimates of National Immunization Coverage; UNICEF global statistics database, 2019

Primary healthcare: the gateway to universal health coverage

Immunisation already has the highest and most consistent reach of all routine health interventions in most Gavi-supported countries. By extending the reach of service delivery, supply chains, data systems and other critical health systems components to underserved communities, Gavi is improving access both to immunisation services and to the wider primary healthcare system.

Primary healthcare (PHC) is critical to delivering the Sustainable Development Goals (SDGs) and making universal health coverage (UHC) achievable and affordable. It is the principal entry point into the health system and the primary platform to prevent disease. Over 90% of the most cost-effective health interventions can be delivered through PHC.

Immunisation is a universal intervention and already reaches more households than any other health intervention. This makes it an ideal platform from which to reach everyone with a basic package of primary healthcare interventions.

5 Civil society engagement

What we measure: percentage of countries we support that meet our benchmarks for civil society engagement in national immunisation programmes to improve coverage and equity.

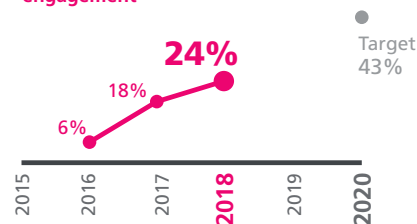
We use three criteria to assess the level of civil society engagement:

- inclusion of civil society organisations (CSOs) in national immunisation plans with clearly stated activities;

- defined allocations in the Expanded Programme on Immunization (EPI) budget for CSO plans and activities (or justification given as to why these are not included); and
- documented evidence that CSO plans have been completed and/or are being implemented.

2018 performance: 24% of Gavi-supported countries met all three criteria, up from 18% in 2017. However, we are not on track to meet the target of 43% in 2020.

Percentage of countries meeting the benchmark for civil society engagement



Source: Gavi, the Vaccine Alliance, 2019

Looking ahead

As relatively well performing countries transition out of Gavi support, many of those that remain will inevitably have significant health systems challenges. While countries are immunising more children every year, the number of zero-dose and underimmunised children has not fallen, due to population growth and the challenges of reaching underserved communities. The Alliance will increasingly need to tailor support to different types of countries: strong performers, weak systems, large countries, and those affected by conflict and other fragile situations. We will also focus more on helping countries to ensure they are identifying and reaching zero-dose and underimmunised children. There are significant systemic barriers to reaching the underimmunised, many of which go far beyond immunisation.

These barriers often reflect wider health, societal or political challenges.

Investing in immunisation and health systems will remain critical to support countries as they build and strengthen their human resources, infrastructure and other systems. Enhanced coordination and collaboration with other stakeholders will be critical. Innovation will remain a key enabler to address many challenges, from better vaccine delivery and demand generation to data availability and quality.

Immunisation is one of the few health interventions that could realistically be universally available by 2030, in line with the SDG aspiration to leave no one behind. Achieving this goal would require an intensified focus on reaching the unreached, especially

zero-dose children, both by ensuring the availability and quality of services and generating robust demand among all communities for immunisation services.



Gavi/2018/Tony Noel



Gavi/2014/GMB Akash

The sustainability goal

improve sustainability of national immunisation programmes

2018 at a glance:

- 94%^a of countries paid their co-financing obligations before the end of 2018 – the highest proportion since our co-financing policy was introduced.
- Countries contributed a total of US\$ 124 million towards the co-financing of Gavi-supported vaccines.
- Gavi-supported countries fully self-financed 40 vaccine programmes originally introduced with our funding – up from 27 in 2017.
- In addition to co-financing, transitioned and transitioning countries have self-financed vaccine programmes introduced with Gavi support valued at US\$ 301 million, up from US\$ 160 million in 2017.

^a – This excludes Ethiopia, Kenya and Pakistan as their co-financing deadlines are aligned to their fiscal years.

Co-financing

Gavi has pioneered co-financing as a means of increasing country ownership of and domestic investment in immunisation programmes. Our co-financing policy requires all countries to co-procure a portion of their vaccine doses, with domestic financing increasing as their gross national income (GNI) rises. Fifteen countries^b have transitioned to full self-financing so far; all are maintaining and fully self-financing their vaccine programmes.

As more countries transition from Gavi support, we are focusing on their ability to continue to pay for their vaccine programmes, as well as maintain their level of programmatic sustainability. The Alliance will help to ensure that country approaches are efficient and cost-effective and that countries have the institutions required to maintain performance after transitioning.

^b – In 2018, 16 countries were fully self-financing. In 2018, the Board decided that Congo would regain eligibility as of 1 January 2019.



Read more online
gavi.org/support/sustainability

Tailored approaches to support transitioned and transitioning countries

While most countries have transitioned with high coverage rates and strong financing, there are important lessons to be learned from the challenges faced by transitioning countries. Some have yet to introduce several vaccines into their routine schedules, while others are struggling to maintain coverage.

Gavi is enhancing our engagement and adopting different approaches based on country needs and risks. In 2017, the Board requested tailored strategies for five “high risk” countries facing deep-rooted, systemic obstacles to transition: Angola, Congo, Nigeria, Papua New Guinea and Timor-Leste. The aim was to adjust course and help avoid the challenges of weak institutions, inadequate service delivery and high dependency on partners and donors.

Strategies for Angola, Nigeria and Timor-Leste were developed. For Nigeria we extended the transition phase, developing a new long-term strategy with clear accountabilities. In Angola, we are working with the World Bank to improve service delivery in districts with low coverage rates, increase health worker capacity, strengthen governance and modernise supply chains.

The Alliance is helping “low-risk” transitioned countries to address challenges in regulation, vaccine procurement, programme management, vaccine hesitancy and vaccine

introductions. In 2018, we started to provide post-transition support to mitigate risks. Bhutan, Guyana and Moldova were approved for support until 2020. These countries have been working to reduce risks post-transition by leveraging domestic resources to strengthen and sustain immunisation programmes beyond the Gavi window using the best that technology currently has to offer.

In Guyana, post-transition support will help reach the most remote populations using innovative approaches such as drones, strengthen surveillance capacity and upgrade health facilities at strategic border locations to immunise migrants from Venezuela. The government is co-investing in these activities and has committed to sustain them.

Elsewhere, post-transition support is enabling introductions of new vaccines. In Bhutan, this support was used to train health workers for pneumococcal and rotavirus vaccine introductions, while the government fully financed the vaccines and cold chain expansion.

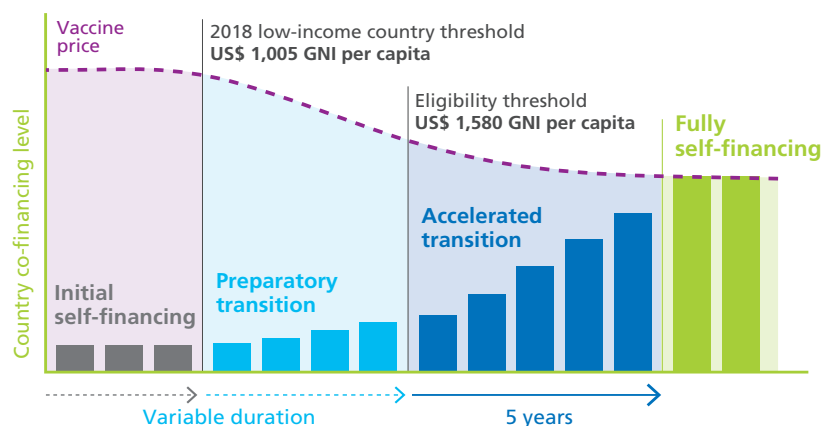
New models of support have been developed and introduced. In Angola (see p. 38), Gavi has worked closely with the World Bank on the immunisation portion of a loan for maternal and child health. In Timor-Leste, twinning with Sri Lanka has provided technical input on logistics, supply chain, health worker training and vaccine introduction management.

The path towards self-sufficiency

Gavi's approach to sustainability and transition is unique among development agencies. All the countries we support are required to pay a portion of the costs of their vaccines. Co-financing payments are not made to Gavi but to the vaccine supplier, either directly or through a procurement agency, such as UNICEF or the Pan American Health Organization (PAHO).

The size of the co-financing contributions is based on each country's ability to pay, as measured by its gross national income (GNI) per capita. For the purposes of co-financing and transitioning, countries are classified into groups as illustrated here.

Gavi's co-financing model



Strategic focus area: leadership, management and coordination of immunisation programmes

There has been a steady increase in uptake of support for leadership, management and coordination (LMC) of immunisation programmes in the past two years. A total of 36 countries have now received LMC support which can take the form of an embedded EPI management partner; enhanced EPI performance management; South-to-South twinning; EPI management training programmes; and/or strengthened coordination. Partners have brought innovation, moving away from classroom-based training towards a mentoring, problem-solving approach. An independent study showed that Gavi-supported countries consider LMC one of the priority areas for technical assistance. To date, the most popular form of support has been enhanced EPI performance management, which has been provided to six countries.

In May 2018, 24 immunisation programme managers from five Gavi-supported countries joined the first Leadership and Management

Programme training course in Kigali, Rwanda. The course was run together with the Yale University Global Health leadership initiative, the Rwanda-based University of Global Health Equity, PATH and Gavi.

It is a 9-month, executive-style certificate programme for mid- to senior-level government officials with responsibility for the EPI programme. It focuses specifically on EPI management and has an innovative approach with an online curriculum, three in-person forums hosted in Rwanda and a mentored "breakthrough" project (a project selected by the EPI delegates that they want help with through the programme). The first course included delegates from four Anglophone African countries and India to facilitate greater peer-to-peer and South-to-South learning and growth opportunities.

Separately, embedded management partners or peer coaches are working together with EPI teams in Malawi, Kyrgyzstan and

Dr Patrick Ndimubanzi, Rwandan Minister of State, in charge of Public Health and Primary Health Care, UGHE Vice Chancellor Dr Agnes Binagwaho and Gavi Deputy CEO Anuradha Gupta during launch of the Yale UGHE PATH EPI Leadership and Management Programme training course.

Gavi/2018/Karel Prinsloo



Zambia. The pool of prequalified partners able to provide LMC support has been expanded and will continue to grow on an ongoing basis. Special attention is paid to developing and mobilising local partners.

Global public goods and partnerships for sustainability

The need for post-transition engagement has prompted Gavi and its partners, including WHO, UNICEF, the World Bank and the Gates Foundation, to lead several initiatives aimed at fostering greater country collaboration and networking. Around US\$ 10 million was set aside to fund multinational initiatives and peer-to-peer knowledge sharing during 2018-2020.

Self-financing countries are the best sources of knowledge for each other and for other countries heading towards Gavi transition. The Alliance works to strengthen intercountry cooperation and encourage transitioned and transitioning countries to share challenges and solutions on financing, procurement and programme management through peer-to-peer networking initiatives. These include the Vaccine Procurement Practitioners Network, the Learning Network for Countries in Transition and various arrangements.

Support to self-financing countries also includes a flagship course on transition, financing



Vaccination campaign in Senegal
Gavi/2017

and sustainability designed, launched and implemented jointly with the World Bank and the Global Fund. Furthermore, Gavi co-invests in the generation and scale-up of improved health and immunisation financing data through national health accounts, strengthening of domestic resource mobilisation, planning and budgeting capacities.

Enhancing programme sustainability

The main risk for transitioning countries is that they will not have sufficiently strong financing or health systems to maintain immunisation once they transition from Gavi support, or that changes of senior personnel can slow progress. The Alliance is increasingly focused on pre-empting and responding to this risk in a systematic way. Programmatic sustainability is a key consideration in assessing applications for grants and planning investments before the accelerated transition phase. This ensures grants are designed to build effective, sustainable and equitable health systems. For example, technical assistance grants to Sudan included activities to prepare for transition planning; the government started to develop a 5-year portfolio view, streamlining country needs into a single planning process that defines expected outcomes at the end of Gavi support.

A closer look at 2018:

The performance indicators

1 Countries on track to successful transition

What we measure: percentage of countries in the accelerated transition phase that are on track to transition successfully. A country is on track if:

- at least 75% of predefined transition activities (such as having a functional national regulatory agency) have been completed on time;
- DTP3 coverage has increased over the last three years (if a country has already achieved at least 90% DTP3 coverage, this level should have been sustained for three years); and
- it is meeting its co-financing obligations and did not default on payments in the previous year.

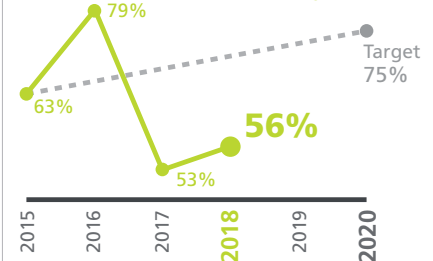
2018 performance: by the end of the year, 56% of countries in the accelerated transition phase were on track to transition successfully. While this is below the target of 75%, the countries that missed the criteria – Nigeria, Papua New Guinea, Solomon Islands and Vietnam – did so because of low coverage. An alternative calculation which includes all the transitioned and transitioning countries shows a better performance of 70%.

Nigeria and Papua New Guinea now have tailored transition strategies with targeted investments to improve coverage outcomes. A 19 percentage point decline in coverage in Vietnam in 2018 was the result of a pentavalent product switch and associated supply shortages which have now been resolved. For the Solomon Islands, the 2018 coverage figure of 85% is below a reported figure of 94% for 2016, but is more or less in line with a newly published estimate of 83% for 2017.

In total, transitioning and transitioned countries fully self-financed 40 vaccine programmes, compared to 27 in 2017. Countries' self-financing in 2018, combined with India's co-financing contributions, amounted to US\$ 301 million – a substantial increase from US\$ 160 million in 2017. This increase is largely driven by India where catalytic support has helped unlock domestic financing, with the country self-financing US\$ 238 million in 2018, up from US\$ 112 million in 2017.

By the end of 2018, 16 countries – Angola, Armenia, Azerbaijan, Bhutan, Bolivia, Congo, Cuba, Georgia, Guyana, Honduras,

Percentage of transitioning countries that are on track to do so successfully



Sources: Gavi, the Vaccine Alliance; WHO/UNICEF Estimates of National Immunization Coverage, 2019

Indonesia, Kiribati, Mongolia, Republic of Moldova, Sri Lanka and Timor-Leste – had transitioned out of our support.

As of January 1st 2019, Congo will regain eligibility and Syria, which has never been a Gavi country, will become eligible for Gavi support.

All transitioned countries are fully financing all vaccine programmes introduced with Gavi support and 11 of these countries have already achieved DTP3 coverage rates of 90% or above.

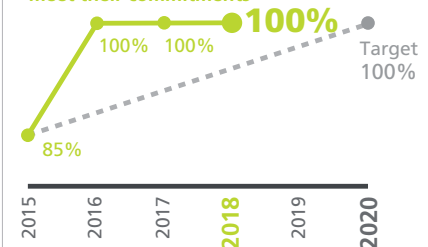
2 Co-financing

What we measure: percentage of countries that fulfil their co-financing commitments by the end of the year, or which pay their arrears in full within 12 months.

2018 performance: all countries met their 2017 co-financing commitments in that year or paid all their arrears in 2018. In addition, 49 out of 52 countries (94%) fulfilled their 2018 obligations in a timely manner. Only three countries – Cameroon, Ghana and Sierra Leone – defaulted on their 2018 payments, the lowest proportion since the co-financing policy was introduced. The Alliance will step

up its engagement with all three countries in 2019 to help develop tailored plans for payment of the arrears and mitigate the risk of future defaults. Collectively, countries paid 95% of their co-financing obligations before the end of 2018 (compared with 90% the year before) and co-financed or self-financed 226 programmes – up from 197 the previous year.

Percentage of countries with a co-financing obligation to Gavi that meet their commitments



Sources: UNICEF Supply Division; the PAHO Revolving Fund; Gavi, the Vaccine Alliance, 2019

3 Country investments in routine immunisation

What we measure: percentage of countries that have increased their investment in routine immunisation per child, relative to 2015. This indicator takes into account every vaccine in a country's national programme, not just those supported by Gavi. It also includes expenditure on related products, such as injection supplies.

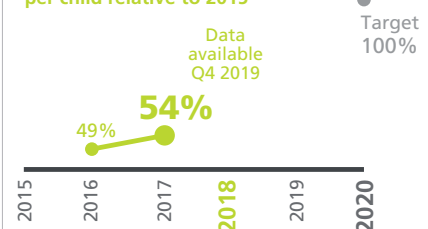
2018 performance: 54% of Gavi-supported countries increased their investment in routine immunisation between 2016 and 2017. Data for 2018 will be available in November 2019. The target for 2020 is that

immunisation investment per child will have increased in all Gavi-supported countries.

Other sources also show evidence of growing vaccine investments in low-income countries. For instance, the 2018 Global Vaccine Action Plan (GVAP) Report showed a 130% increase in government expenditure in the African region since 2010.

Sources: WHO/UNICEF Joint Reporting Form; United Nations, Department of Economic and Social Affairs, Population Division; World Bank, World Development Indicators, 2019

Percentage of Gavi-supported countries that have increased their investment in routine immunisation per child relative to 2015

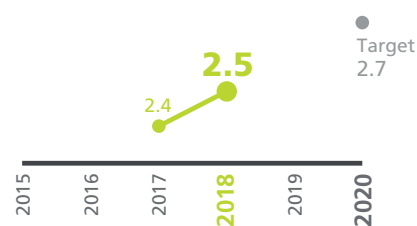


4 Institutional capacity

What we measure: average score of Gavi-supported countries measured against our criteria for national decision-making, programme management and monitoring. Through this indicator, we assess the performance and effectiveness of bodies that manage immunisation, including the Expanded Programme on Immunization (EPI), interagency coordinating mechanisms and national immunisation technical advisory groups (NITAGs).

2018 performance: Gavi-supported countries achieved an average score of 2.5 out of a maximum 4.0 in the institutional capacity assessment, up from 2.4 in 2017. This means that the Alliance is on track to reach its 2020 target of 2.7.

Average composite score for institutional capacity in Gavi-supported countries



Source: Gavi, the Vaccine Alliance, 2019

Nigeria – tackling transition challenges



Faced with challenging and complex risks to transition, the Board approved a long-term strategy for Nigeria, built on a state-centric and cross-governmental approach. The federal government committed to invest US\$ 2 billion in vaccine programmes to match US\$ 1 billion of Gavi investment. The board also approved an extension of Nigeria's transition from 2021 to 2028 supported by an ambitious plan to reach DTP3 coverage of 84% by 2028 and increase equity. Nigeria has high levels of inequity; DTP3 coverage ranges from 10% to 93%. Targeted approaches will be adopted to address these inequities, including focused investments and capacity building at subnational levels, supported by

innovative data use, demand-generation, outreach services and vaccine management.

Gavi and the government agreed an accountability framework to monitor key transition success factors including effective use of resources and funding for vaccines and primary healthcare. Progress will be reviewed annually by both sides. There are early signs that increased political attention and funding for immunisation and primary healthcare is starting to boost vaccine uptake. Gavi health system support will be focused on a small number of states whose governors have agreed to comply with requirements including co-funding.

Strategic focus area: political will

Political will is an important factor in managing risk and a key driver in helping to ensure immunisation is prioritised by countries. Gavi works to build political will using four strategic objectives through interventions tailored to each country context. The Alliance seeks to build sustainable coverage and equity by: strengthening legislative and regulatory frameworks; sustainable immunisation financing; strengthening EPI leadership,

performance and accountability; and building vaccine confidence and promoting demand for immunisation. The Alliance also works closely with civil society organisations (CSOs) to help build political will for immunisation.

Eight countries have been identified for priority support: Angola, Chad, Congo, Ghana, Haiti, Nigeria, Papua New Guinea and Sudan. In each case, specific workplans are being defined, acknowledging that building political will

requires long-term engagement. Ghana, for example, is a high-performing country from a programmatic perspective but macroeconomic events and limited fiscal space have made it difficult for Ghana to procure vaccines and meet Gavi's co-financing obligations. The Ghana workplan focuses on ensuring sustainable health financing for immunisation.

Looking ahead

Gavi will continue to work with countries to define risks to sustainability and tailor engagement strategies, as well as adapting to changing circumstances. Early engagement of countries in long-term planning for transition will help build resilience in the face of economic, fiscal and political challenges.

Greater emphasis will be placed on improving sustainability and capacity to achieve equity in coverage. For instance, countries in earlier stages of transition would be encouraged to prioritise systemic, long-term change and recurrent costs; countries in later stages would be encouraged to

focus on investments with a shorter-term impact or those where systemic change is urgently needed prior to transition. Also, a stronger focus on developing institutional and human capacities will be required.

The Alliance's systemic approach to transition provides opportunities for collaboration among countries, development partners and experts. This will enhance access to and coverage of priority interventions, align transition initiatives and health investments, strengthen global health systems and increase health outcomes and impact. Gavi will continue to promote intercountry cooperation and support, including peer-to-peer networking.

Some countries may enter the transition phase earlier than expected as a result of rapid economic growth, often driven by high commodity prices. They will need to make long-term improvements to immunisation programmes while their economies remain vulnerable to short-term downturns. This means developing the right institutions and systems, as well as enhancing leadership and programme skills. By preparing countries for self-sufficiency earlier, it should be possible to lessen the impact of systemic and programmatic weaknesses on their performance.



The market shaping goal

shape markets for vaccines and other immunisation products

2018 at a glance:

- Three vaccine markets were assessed as having moderate health, unchanged from 2017.
- The weighted average price to fully immunise a child with pentavalent, pneumococcal and rotavirus vaccines fell to US\$ 15.90, a 4% drop from 2017 and a 21% reduction since 2015.
- An additional two improved vaccine products were procured, both of which will help reduce pressure on cold chain systems.
- The Alliance made good progress towards its goal of broadening market shaping activities by supporting and advancing vaccine innovation.
- We also took further steps towards securing a strategic stockpile of licensed Ebola vaccine, when available.

Market shaping: how it works and why it matters

Fostering healthy vaccine markets is an essential part of Gavi's strategy. The Alliance collaborates closely with countries, manufacturers and other partners to ensure they have the information they need to align supply with demand and deliver appropriate vaccines to the people who need them at sustainable prices. We work with countries to accurately forecast their demand and with manufacturers to deliver the required products in a timely and predictable manner. By shaping markets to meet the needs of Gavi-supported programmes in a sustainable manner, our donor investments go further, and our impact is maximised.

At the beginning of this strategic period, Gavi set out its approach to achieve "moderate" or "high" market health ratings in six vaccine markets. By working with our partners to make vaccine markets work more efficiently in the interests of people in countries eligible for Gavi support, we anticipated that our approach would deliver savings of US\$ 1.3 billion during the 2016–2020 strategic period while ensuring a sufficient and secure supply of quality vaccines at appropriate and sustainable prices.

Throughout the current strategic period our approach has continued to evolve, largely in response to challenges in the supply of some key vaccines. To this end the Alliance has increased its support for new processes which deliver improved cold chain equipment and other logistical elements to countries. As a growing number of countries

transition from Gavi support, we are also working to ensure these improvements are sustainable in the longer term.

Innovation plays an increasingly important role in the Alliance's work and we have been developing a strategic approach to prioritise vaccine innovation for Gavi-eligible countries. The goal of this work and indeed that of the market shaping strategy overall is to help ensure that people in lower-income countries see the benefits of appropriate vaccines and associated technologies as rapidly and sustainably as possible.

In 2018, Gavi carried out a review to assess whether its market shaping activities could be having unexpected or unintended consequences in vaccine markets. In particular, the review looked at whether Gavi's work could lead to:

1. reduced investment in vaccine research and development for low-income countries,
2. price increases in non Gavi-eligible or former Gavi countries,
3. compromised supply security,
4. reduced diversity of products or manufacturers, or
5. increased price volatility.

The review, published in a report titled, *Market shaping externalities*, found no definitive evidence of unexpected or unintended consequences. On the contrary, the review identified several potential positive externalities. Going forward, Gavi will continue to monitor the impact of its market shaping activities.

Our objectives

The overriding goal of the Vaccine Alliance's work on market shaping is to help ensure that vaccine markets work better for low-income countries and that the maximum possible number of people receive the life-saving and health-protecting benefits of immunisation.

During the current strategic period, the Alliance is building on previous efforts to take a more ambitious approach to shaping markets for existing and new products. While we are continuing to ensure a sufficient and secure supply of innovative, quality vaccines at appropriate and sustainable prices for lower-income countries, we are increasingly taking a broader, longer-term view of vaccine markets and looking at ways to support product innovation.

As part of our broader approach to market shaping, we are actively working to ensure that vaccines and other immunisation products are suitable for developing country markets and that these markets are sustainable.

The objectives of our market shaping work can be summarised as follows:

- ensure adequate and secure supply of quality vaccines;
- reduce prices of vaccines and other immunisation products to an appropriate and sustainable level;
- incentivise development of suitable and quality vaccines and other immunisation products; and
- maximise the number of healthy vaccine markets.



Read more online
gavi.org/about/market-shaping

A closer look at 2018:

2018 performance indicators

1 Sufficient and uninterrupted supply

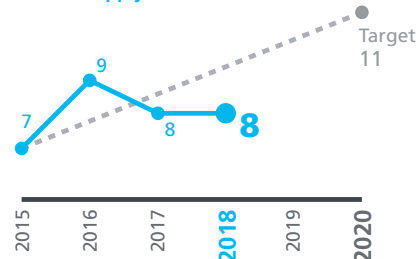
What we measure: number of Gavi vaccine markets where supply of appropriate vaccines is both sufficient and uninterrupted to meet demand.

2018 performance: by the end of the year, eight vaccine markets were reported to have sufficient and uninterrupted supply of appropriate vaccines – the same number as in 2017.

Markets meeting the definition of sufficient and uninterrupted supply were: Japanese encephalitis, measles, measles-rubella, meningitis A, oral cholera, pentavalent, pneumococcal and yellow fever. This is 73% of the 2020 target of 11 markets.

Sources: Gavi, the Vaccine Alliance; UNICEF Supply Division, 2019

Number of Gavi vaccine markets where supply meets demand



2 Cost of fully vaccinating a child with pentavalent, pneumococcal and rotavirus vaccines

What we measure: the weighted average vaccine price of fully immunising a child with pentavalent, pneumococcal and rotavirus vaccines.

2018 performance: by the end of 2018, the cost of immunising a child with a full course of pentavalent, pneumococcal and rotavirus vaccines averaged US\$ 15.90. This represents a reduction of 21% relative to the 2015 baseline figure of US\$ 20.01 and a 4% drop from the 2017 price of US\$ 16.63.

The 2018 price reduction has been driven by

recent falls in the cost of both pneumococcal and rotavirus vaccine. The price of one pneumococcal vaccine was reduced at the beginning of the year, thanks to a 2016 agreement, while the weighted average price of rotavirus vaccine fell by around 10% when a new supplier entered the market. The price of pentavalent vaccine has remained more or less stable following a substantial (43%) drop in 2017; this status quo has been achieved as a result of sustained effort on the part of Alliance partners to ensure that prices are sustainable for countries and manufacturers.

Weighted average price of fully immunising a child with pentavalent, pneumococcal and rotavirus vaccines



Source: UNICEF Supply Division, 2019

3 Innovation

What we measure: number of vaccines and other related products with improved characteristics procured compared with the baseline year.

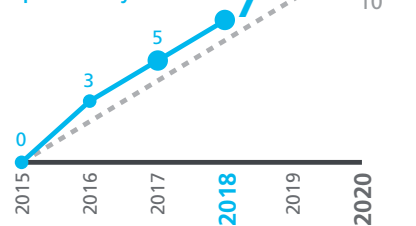
2018 performance: since 2015, seven new products with improved characteristics that are WHO prequalified have been procured by Gavi, including two in 2018. Our 2020 target is a total of 10 new products.

The new products procured in 2018 comprised an oral cholera vaccine approved and labelled

for controlled temperature chain use (allowing storage for up to 14 days at temperatures not exceeding 40°C) and a pneumococcal vaccine in a four-dose vial presentation.

Both of these products will help reduce pressure on countries' cold chains. The cholera vaccine can be transported and stored for a limited period outside the traditional cold chain, as long as temperatures are controlled. The pneumococcal product offers volume-reduction benefits and as such will help to reduce cold chain capacity requirements.

Number of vaccines and immunisation products with improved characteristics procured by Gavi



Source: Gavi, the Vaccine Alliance, 2019

4 Healthy market dynamics

What we measure: number of Gavi vaccine markets classified as benefiting from high or moderate health. Each vaccine market is rated as having high, moderate or low market health, or as having no healthy market dynamics.

2018 performance: three vaccine markets were assessed as having moderate or high market dynamics in 2018, no change from 2017.

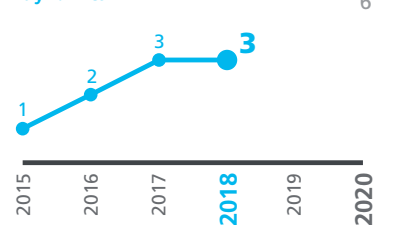
The market for pentavalent vaccine is mature and maintained its "moderate" market rating. As noted above, there was a substantial price drop in 2017, but careful and ongoing monitoring is needed to ensure long-term sustainability in the supply of this vaccine.

The yellow fever vaccine market also kept its "moderate" market rating. Increased levels of supply meant that demand for both routine immunisation and campaigns was met throughout the year, but as is the case in other markets, careful planning and monitoring are required to ensure that this balance is sustained.

While the pneumococcal vaccine market retained its "moderate" rating in 2018, there is a need to increase the number of suppliers if further improvements in the market dynamics for this vaccine are going to be achieved.

The remaining eight vaccine markets were classified as having "low" market health or inadequate supply.

Number of vaccine markets classified as having moderate or high healthy market dynamics



Sources: Gavi, the Vaccine Alliance; UNICEF Supply Division; SG4 partners' analyses of multiple market data sources, 2019

Some supply challenges persist

The continuing stability in the markets for eight important vaccines is positive news, especially in the case of yellow fever vaccine which has experienced supply challenges in the recent past. However, supply problems continue to cause imbalance between supply and demand in the markets for three remaining vaccines: human papillomavirus (HPV), inactivated poliovirus (IPV) and rotavirus.

Supply shortages of the HPV vaccine are forecast to continue in the short- to medium-term. This is because of unprecedented uptake of HPV support in Gavi-eligible countries coupled with increased demand for HPV vaccines from higher-income countries. The latter is being driven by wider adoption of gender-neutral vaccination programmes, expansion to older age groups and a shift in preference towards the nine-valent vaccine. Alliance partners have been working with both existing and pipeline manufacturers

in order to increase manufacturing capacity to meet worldwide demand.

2018 saw encouraging signs that the supply of IPV is starting to improve after a difficult period. Nonetheless, constraints continued to be felt, particularly in the lack of availability of IPV for catch-up campaigns. Prices increased in response to scale-up costs incurred by manufacturers. The situation is expected to ease in the medium term.

Significant bottlenecks in the supply of rotavirus vaccine were also alleviated to some extent during 2018, thanks to the collaborative efforts of Alliance partners.

Boy at the Malahang Health Clinic receives polio vaccine in Lae, Marobe Province, Papua New Guinea
Gavi/2018/AAPIMAGE-Brendan Esposito



Working together – how Alliance partners tackled rotavirus shortages



Gavi/2018/Simon Davis

When one rotavirus vaccine manufacturer reduced its allocation to the Gavi market at short notice and another had an issue with production, Alliance partners stepped in to help prevent major supply interruptions and stock-outs. This meant that despite the disruption, during 2018 most children received their vaccinations as planned.

For its part, UNICEF worked with manufacturers to speed up the delivery of vaccines to countries most in need of supplies. The Gavi Secretariat and WHO worked with other partners to ensure that countries had the information they needed in order to adjust their immunisation schedules and reduce the impact of any potential shortfalls. At the same time, two new suppliers entered the market.

This was the Vaccine Alliance at its most effective, with each partner playing its role in helping to minimise potential risks to the immunisation plans of countries and to the health of children. As a result of the hard work of all involved, stock-outs were avoided and few children missed out on their vaccinations.

Most countries that plan to introduce rotavirus vaccine during the coming year should still be able to do so, by switching suppliers if necessary to fill potential gaps. Where delayed introductions are inevitable, the Alliance is working closely with manufacturers to ensure these hold-ups are minimised. In the longer term, new vaccine presentations – due to be launched in the next few years – will help to overcome supply constraints and improve the market's resilience.

Prioritising innovation in vaccine products

Gavi's market shaping work during 2018 has laid the foundation for significant innovation in both product and market development. Integral to Gavi's ambitions in this field is the Vaccine Innovation Prioritisation Strategy (VIPS) which is designed to promote innovation in vaccine products that better meet the needs of countries. Launched at the end of 2017, VIPS aims to prioritise innovative technologies in the development process and to provide clarity to manufacturers and Alliance partners as to which vaccine products merit investment and support.

As a first step in this process, in 2018, Alliance partners successfully completed a detailed landscaping exercise which identified and assessed existing and pipeline innovations for vaccine products using an analytical evaluation framework. The intention is to draw up a short list of the most promising innovative technologies by mid-2019 and then to conduct further analysis during the second half of 2019 in order to match the shortlisted technologies to priority antigens. The end result will be a list of priority vaccine products for future development.

VIPS brings together the knowledge and experience of key Alliance members. WHO, PATH, the Bill & Melinda Gates Foundation and UNICEF have all been involved in this project, together with the Gavi Secretariat. This important area of work reflects Gavi's efforts to engage with an increasingly sophisticated and maturing market for vaccine products. It is also very much at the heart of ongoing discussions on future directions as we prepare for "Gavi 5.0" following the end of the current strategic period.

Improving demand forecasting for healthier vaccine markets

Ongoing supply challenges in the markets for HPV, IPV and rotavirus vaccine, as described previously, serve to illustrate just how difficult it can be to meet demand with adequate supply and to accurately forecast changing market conditions.

Throughout the year, Gavi has worked hard to improve the accuracy of its demand forecasts. Additional sources of information have been sought and included wherever possible. We have also worked closely with those countries applying for grant renewals, closely reviewing the assumptions on which their applications are based in order to ensure that their plans strike an appropriate balance between the realistic and the appropriately ambitious.

In addition, in preparing our strategic demand scenarios for each vaccine market, we are increasingly adopting an approach whereby we identify key moments in the life cycle for each market rather than relying on a standard cycle. This should help to further improve the accuracy and reliability of demand forecasts for individual vaccines.

Optimising the cold chain

Ensuring that vaccines are transported and stored within a specified temperature range is vital to preserving their quality and efficacy. During 2018, Gavi has continued to work through its Cold Chain Equipment Optimisation Platform (CCEOP) to increase demand and supply of appropriate, affordable refrigerators and freezers in those countries where cold chain systems are outdated or lack capacity.

There are currently eight manufacturers who between them supply 57 types of WHO certified cold storage equipment. Forty of these have been introduced into the market since the CCEOP was launched in 2016. Over the same period, the price of the ice-lined refrigerator and solar direct drive equipment has fallen by an average of 10% (as measured by tender prices offered to UNICEF).

Recognising the importance of the role of the cold chain in improving coverage and equity in immunisation, Alliance partners are continually striving to increase the diversity of supply of products, maintain high product standards, encourage a more competitive market and to achieve sustainable prices, all in the interests of lowering the total cost of ownership for countries.

Ebola – a testing time for immunisation and health

In May, the first Ebola outbreak of 2018 was declared in Equateur province in the Democratic Republic of the Congo (DRC). Although this outbreak was swiftly brought under control with the help of a new investigational vaccine (rVSV-ZEBOV), a second and more extensive outbreak was declared in August, this time in North Kivu province, DRC.

The investigational rVSV-ZEBOV vaccine was made available by the manufacturer – in the context of collaboration with other donors and an Advance Purchase Commitment agreement between Gavi and the manufacturer – and was instrumental in containing both outbreaks and in averting several hundred deaths. The vaccine was given to 3,481 people in Equateur, including healthcare workers and contacts (direct and indirect) of Ebola cases. By the end of 2018, more than 54,000 people at risk of infection (i.e. healthcare workers, direct and indirect contacts) had received the vaccine in North Kivu alone. Frontline and healthcare workers in neighbouring areas in Goma, as well as in Rwanda, South Sudan and Uganda, have also been vaccinated.

The early indications are that the vaccine is highly effective at preventing infection and death. Ten days after vaccination, efficacy was estimated at 97% against infection and 100% against death among those infected.

Efforts to replenish and further increase stocks of investigational Ebola vaccine continued throughout the year and into 2019 as the North Kivu outbreak remains ongoing. At the same time, the Gavi Secretariat has been working closely with Alliance partners to ensure that as soon as the Ebola vaccine is licensed, prequalified and WHO-recommended, it can be procured. Funding for operational costs related to Ebola in 2018 totalled US\$ 4.9 million.



Gavi/2018/Pascal Emmanuel Barollier

Looking ahead



Gavi/2018/AAPIMAGE-Brendan Esposito

When it comes to the smooth functioning of vaccine markets, events of 2018 have shown that it is necessary to focus on both demand-side and supply-side issues. We will continue to work on both sides of this equation as we engage with manufacturers and with recipient country governments.

The Eliminate Yellow Fever Epidemics (EYE) strategy provides a good example of how a dual focus can work in practice; implementation of the EYE strategy will help us to better understand and plan for changes in vaccine demand while enhancing the alignment of partners. A new approval process is being developed for the oral cholera vaccine, which we expect to have a similar impact.

During 2019, Gavi will continue working to engage with industry and to improve the health of vaccine markets and the diversity of suppliers. As part of this process, we plan to conduct manufacturer roadshows in conjunction with Alliance partners to achieve the detailed exchanges necessary for market shaping.

In the coming years, as a growing number of countries transition from Gavi support, we fully expect that the role of the Secretariat in shaping markets will need to change and adapt. Even though the number of Gavi-eligible countries will fall, and there will be inevitable changes in vaccine markets, we also fully expect to still be playing a vital role in developing and shaping those markets.



Gavi/2018/Oscar Seykens

Funding and finance

Funding from donors and investors

Increased donor commitment despite a changing landscape

Donors have continued to show their support for immunisation – and their trust in Gavi – by committing US\$ 1.9 billion in 2018, bringing the total to date to US\$ 17.1 billion since 2000.

This continued support comes at a time of significant changes in the political landscape and global health agenda. Leadership changes in G7 and G20 countries, as well as changing development priorities, have led many donor countries to re-evaluate their commitments. Despite this, 96% of all commitments made in 2015, including multi-year pledges, were translated into grant agreements by the end of 2018.

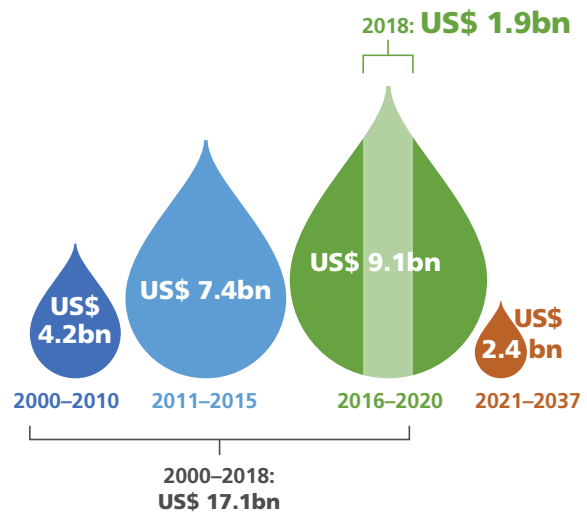
Diversifying Gavi’s donor base

In 2018, Gavi continued to broaden engagement from donors with contributions from the European Commission and 17 donor governments: Canada, China, Germany, India, Ireland, Italy, Japan, the Kingdom of Saudi Arabia, Luxembourg, the Netherlands, Norway, the Principality of Monaco, the Republic of Korea, the Sultanate of Oman, Sweden, the United Kingdom and the United States of America. Iceland and Kuwait Fund for Arab Economic Development joined the list of donors for the first time, while Denmark, one of the founding donors, renewed its contribution and the Republic of Korea made a new pledge. Since the last replenishment, 10 new sovereign donors have joined Gavi.

 **Read more online**
gavi.org/funding

Donor commitments to Gavi, 2000–2037

Sovereign donors and the European Commission in 2018



Source: Gavi, the Vaccine Alliance, 2019
 (Data as of 31 December 2018)

For full details, see **Annex 3: Contributions pledged to Gavi**, p. 42

Innovative finance

Gavi's ability to finance itself with a diverse set of funding instruments has been critical to its success. 75% of Gavi funding comes from direct contributions, while 25% comes from innovative finance instruments.

IFFIm & CEPI: accelerating funding for new vaccine development

The Coalition for Epidemic Preparedness Innovation (CEPI) has turned to the International Finance Facility for Immunisation (IFFIm) to boost its funding base. As a partnership with a mission to develop new vaccines to help prevent future epidemics of infectious diseases, CEPI is aligned with Gavi's own strategic goals.

The arrangement draws on IFFIm's capacity to raise capital market financing using long-term contributions from donor countries in order to increase funding for immunisation efforts. Since 2006, IFFIm has applied this "frontloading" model to accelerate funding for Gavi's immunisation and health system strengthening programmes. Under the new arrangement, IFFIm will issue bonds on international capital markets on CEPI's behalf aided by new pledges from the Government of Norway. Norway also hosts the CEPI Secretariat.

IFFIm: new markets to support Gavi's mission

In 2018, the Islamic Development Bank Group (IsDB) announced plans to purchase a Sukuk issued by IFFIm. The Sukuk, a certificate that complies with Islamic financing principles, will be purchased on a privately-placed basis by the IsDB. The transaction is being arranged by First Abu Dhabi Bank.

IFFIm also garnered support from the Government of Brazil with a grant of US\$ 20 million. Brazil's commitment of US\$ 1 million per year for 20 years makes it the 10th donor to IFFIm overall and the second BRICS donor after South Africa.



Read more online
gavi.org/funding/iffim
gavi.org/funding/amc

AMC: 10 years of accelerating pneumococcal vaccines

In its tenth year of implementation, the Advance Market Commitment (AMC) for pneumococcal vaccines has facilitated the procurement of a total of 149 million doses of pneumococcal conjugate vaccine (PCV) for low-income countries.

So far, 60 out of 73 AMC-eligible countries (82%) have been approved to introduce pneumococcal vaccines. By the end of 2018, 59 countries had introduced PCV into their routine programmes, including Haiti, which rolled out the vaccine in 2018. Additionally, Bhutan was approved to access the AMC price for PCV and is expected to introduce the vaccine in early 2019. Bhutan will be the second formerly Gavi-supported country to fully self-finance a routine PCV introduction, after Mongolia.

Pfizer's 2018 price reduction from US\$ 3.05 to US\$ 2.95 per dose will contribute additional savings of US\$ 52.79 million over the duration of the existing four supply agreements.

Private sector partnerships

Our approach to partnerships with the private sector is constantly evolving as we strive to deliver immunisation programme improvements that are both sustainable and at scale. In recent years our approach is increasingly focused on reducing bottlenecks in vaccine uptake: we identify specific country needs and then seek to connect those needs to resources and expertise from business and industry. We continuously test, iterate and adapt our approach based on what we learn from each project. By forging partnerships between countries, industry leaders and innovative start-ups, we aim to diversify our donor and supplier base while mitigating risk.



Gavi/2017/Asad Zaidi

Accelerating private sector engagement

During 2018, Gavi made significant progress towards the evolution of its private sector approach, which in the 2016–2020 strategic period is focused on three key areas:

Additional funding for immunisation

OBJECTIVE To diversify funding by leveraging private sector partners to amplify Gavi's reach and advocacy in key markets.

CATALYST The Gavi Matching Fund, which incentivises private sector investment. Supported by the Bill & Melinda Gates Foundation and the Government of the Netherlands, the Gavi Matching Fund has available funds totalling US\$ 87 million for the current strategic period.

RESULTS Gavi has engaged with more than 40 private sector partners and innovators – 25% of which come from emerging markets and Gavi-supported countries – garnering a matched amount of US\$ 165 million in additional resources.

Expertise and optimisation

OBJECTIVE To work with industry leaders to adapt proven technologies and services to country realities.

CATALYST A "cluster" approach which focuses effort in three main strategic areas: supply chain, data management, and demand generation.

RESULTS Gavi has initiated several scalable partnerships drawing on the expertise and resources of industry leaders like UPS, Unilever and Google.org. The Vaccine Alliance has also helped deploy close to 20 projects with the support of private sector partners.

Scalable innovation

OBJECTIVE To focus approaches to foster innovation and support innovators.

CATALYST The INFUSE (INnovation For Uptake, Scale and Equity) ecosystem which facilitates access to solutions in vaccine delivery by identifying proven technologies and helping bring them to scale in Gavi-supported countries.

RESULTS Since 2016, INFUSE has helped convene more than 60 leaders in technology, innovation, health, government and finance, and has selected 18 "pacesetters", whose technologies and approaches could – if scaled – help transform immunisation delivery.

New partnerships, innovative approaches

Implementing digital immunisation records with Mastercard

Gavi's new partnership with Mastercard leverages the latter's expertise and technology to digitally identify, register and track children across multiple health facilities using biometrics. The solution, called the Wellness Pass, relies on a credit card-like vaccination card that stores children's immunisation data. The secure digital identification cards are also linked to financial services for the caregiver. The partnership aims to deploy the Wellness Pass in five pilot countries, starting with Mauritania.

Expanding access to vaccines with The Audacious Project

A new partnership with The Audacious Project, Last Mile Health and Living Goods, launched in 2018, aims to provide more than eight million people living in remote areas across Kenya, Liberia and Uganda with access to life-saving vaccines. The project leverages existing community health worker platforms to improve immunisation coverage through digitally-enabled community health workers, who use smartphones to capture a child's immunisation status in real time with a time-stamped GPS identifier. The phones also send automated vaccination reminders by SMS. The real-time data helps pinpoint and plug immunisation gaps, while optimising the performance of remote community health workers.

Investing in Africa's health system with the UBA Foundation

In 2018 the UBA Foundation, the corporate social responsibility arm of the United Bank for Africa Group, teamed up with Gavi to raise awareness of immunisation across Africa and mobilise resources towards strengthening health systems on the continent. The partnership will leverage UBA's in-house resources and network of partners and clients to advocate for immunisation in Nigeria, which would contribute to preventing at least one million deaths by 2028 if the country reaches its vaccine coverage targets. The partnership aims to then move to other African countries, providing multifaceted support to immunisation and primary health.

Partnering for impact

Improving immunisation data

Gavi's project with Orange SA uses the "M-Vaccin" phone app to inform parents in Côte d'Ivoire about the importance of vaccination and to remind them when their children's vaccinations are due. The technology will empower more than 1,700 health workers to capture community data and use it to create family-specific vaccine schedules and improve monitoring. The mobile-based solution aims to target 29 districts, reaching more than 800,000 children most at risk.

Zipline technician checks the wings of drone before test launch in Rwanda
Gavi/2018/Karel Prinsloo



Creating more efficient supply chains

2018 saw Gavi's partnership with UPS go from strength to strength thanks to its African supply chain partner, Freight in Time (FIT). The UPS-FIT partnership is improving vaccine availability at the health facility level across Uganda. After eight months of operation, vaccine stock-outs decreased from 79% to 7%, while vaccine coverage increased by 33%. What's more, improved supply chain responsiveness has meant that 96% of participating facilities placed monthly vaccine orders on time.

Silicon Valley start-up, Zipline, continued to tackle the challenge of "the last mile" by using drones to deliver vaccines and other medical provisions to hard-to-reach health centres. Gavi, Zipline and the UPS Foundation launched the world's first drone delivery network in 2016 in Rwanda and in 2018, this partnership expanded its services to include emergency medical supplies, such as rabies vaccine.

Generating demand for vaccines

Gavi's partnership with Unilever's leading health soap brand, Lifebuoy, has made good progress in Uttar Pradesh, India. By leveraging Unilever's marketing expertise, the "Safal Shuruuat" or "successful beginnings" programme, which jointly promotes both handwashing with soap and immunisation, reached more than 300,000 people over a nine-month period. Implemented by a leading experiential marketing company and engaging digitally-enabled male and female facilitators, the programme has helped raise retention rates of Mother and Child Protection Cards and improved awareness of the importance of immunisation, which in turn has resulted in higher rates of coverage for key vaccines. Rates of handwashing with soap have also improved significantly, providing further protection against disease for young children.

Addressing today's challenges with tomorrow's solutions

Since its launch in 2016, INFUSE has matured into an ecosystem of innovation, helping to identify emerging technologies with the capability to create transformational change in health. It has become a true accelerator, laying the foundation for innovations that yield sustainable, measurable results.

In 2018, INFUSE's annual call for innovations helped identify proven, tech-enabled solutions around data and digital identity, both key enablers of Gavi's "reach every child" ambition.



Gavi/2016/Isaac Griberg

INFUSE 2018 pacesetters

element

Element: An AI-powered, mobile-based, software-only platform for biometric identity that can operate entirely offline using cameras on smartphones and tablets.



Simprints: A biometric solution that aims to solve challenges to immunisation coverage by linking children to health records through their own or their mother's fingerprints.

ONN

ONA: An Open Smart Register Platform (OpenSRP) digital health card technology which allows frontline health workers to electronically register and track health services.



iCivilAfrica: A mobile app that records birth certificates, capturing the information in a unique Bubble Tag™ and sending it by encrypted SMS to health authorities.

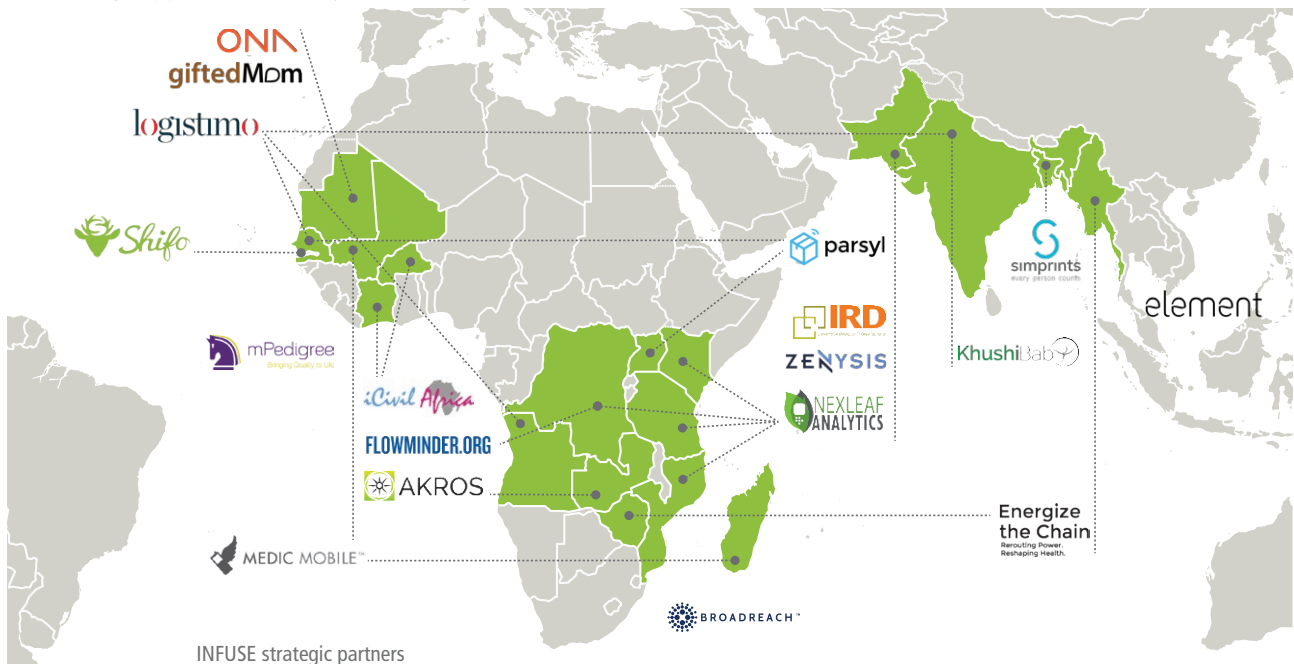
“Through the co-creation space of approaches like INFUSE, Gavi taps its convening power to create an ecosystem that makes emerging innovations in global health far more effective.”

Radhika Malpani, Board Member, Senior Director of Engineering, Google

[Read more online](http://gavi.org/infuse)
gavi.org/infuse

INFUSE connects Pacesetters with other Gavi partners to create an innovation ecosystem

Bolstering support for new ways of working in the innovation space



INFUSE strategic partners



INFUSE and Parsyl update: already setting the pace on tackling the last mile

Vaccines travel thousands of miles to reach remote communities—but temperature fluctuation in transportation can destroy products. 2017 INFUSE Pacesetter **Parsyl Inc.** aims to reduce that risk with its wireless sensing devices and data analytics platform. It allows health officials in Senegal and Uganda to track and monitor cold chain conditions during vaccine distribution. The pioneering Parsyl Trek technology provides visibility on the entire vaccine supply chain, helping reduce wastage and reach more children and adolescents with safe, effective vaccines.



Health worker carries vaccines monitored with Parsyl technology
Parsyl Inc/2018

In 2018, Gavi, with the help of Canada's support to INFUSE, matched the contributions from Parsyl's donors, Unorthodox Philanthropies and the Gogel Family Foundation. This additional funding supported the deployment of 62 Parsyl Trek devices in Uganda, in a total of 33 health facilities, including 30 health centres and three districts. In Senegal, 77 devices were deployed in 34 health facilities including 23 health centres, 10 districts and one region.

The platform allows global health supply chain partners to answer critical questions about what happens to vaccines during shipment, transport and storage. With the technology to identify the exact causes and locations of vaccine degradation, they can make informed decisions around supply chain improvement.

Gavi Mid-Term Review: empowering the next generation

In December, more than 300 leaders of the global health community, including representatives from governments, civil society and the private sector, came together for the Gavi Mid-Term Review (MTR) in Abu Dhabi, United Arab Emirates (UAE).

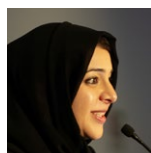
During this high-level conference, partners heard how Gavi has helped to foster healthy vaccine markets, pursue innovative solutions for vaccine delivery, build resilient health systems and ensure sustainability through co-financing. Other key sessions explored the obstacles and barriers to achievement of Gavi's 2015 replenishment meeting goals. Above all, participants looked to the future and debated the path forward beyond 2020 and how best to empower new generations through improved health.

Forging new partnerships

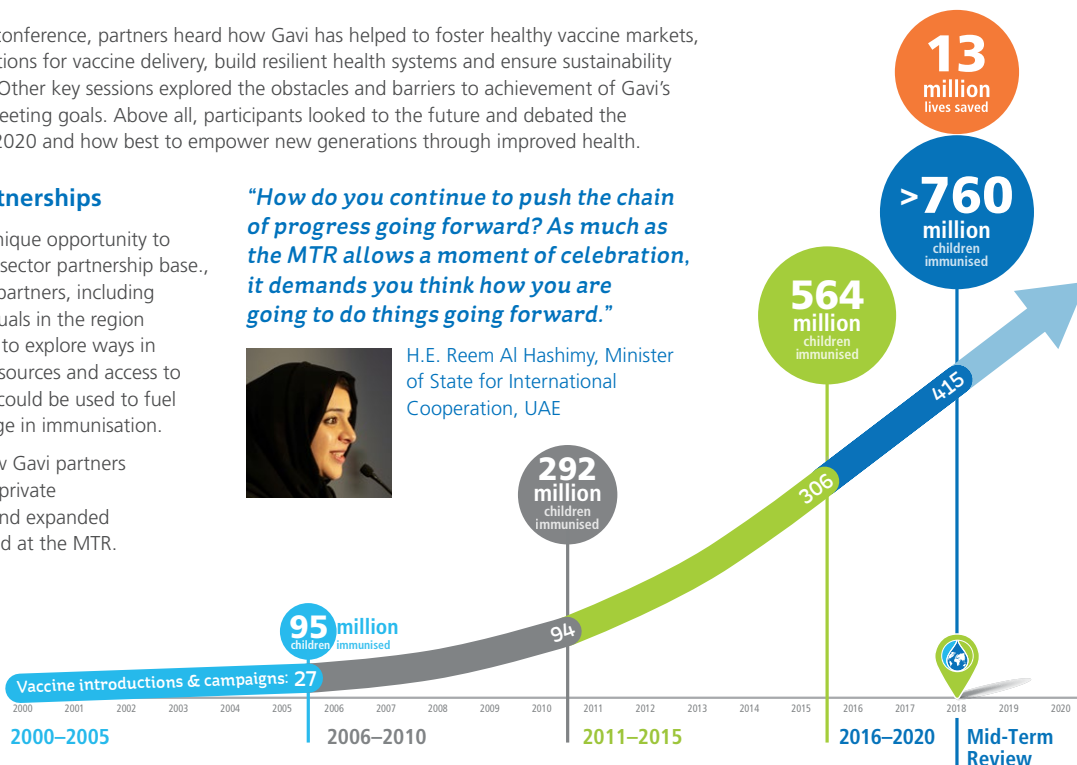
The MTR provided a unique opportunity to broaden Gavi's private sector partnership base., Current and potential partners, including high-net-worth individuals in the region met in special sessions to explore ways in which new financial resources and access to emerging innovations could be used to fuel transformational change in immunisation.

They also explored how Gavi partners with innovators in the private sector including new and expanded partnerships announced at the MTR.

"How do you continue to push the chain of progress going forward? As much as the MTR allows a moment of celebration, it demands you think how you are going to do things going forward."



H.E. Reem Al Hashimy, Minister of State for International Cooperation, UAE



"The Gavi model works. We've been able to save many lives. Vaccines work, but the cooperation model between Gavi and governments REALLY works."

H.E. Jakaya Kikwete, former President of the United Republic of Tanzania



"We have given a lot of attention to the basic care of the health system. This has contributed to the success we have achieved with the partnership with Gavi."

Carlos Agostinho do Rosário, Prime Minister of Mozambique



"Vaccination is one of the great successes of public health and we owe it to Gavi."

H.E. Mahamadou Issoufou, President, the Niger

"Touching the future": an interactive MTR innovation experience

With innovation at the heart of Gavi's model and the UAE's Vision plus their Expo 2020, the MTR provided the perfect opportunity to showcase the transformative power of innovation in immunisation and health systems.

A visit to the "Touching the future" exhibition allowed participants to experience at first-hand some of the new cutting-edge technologies that are currently being developed to improve immunisation coverage and equity. The series of immersive innovation zones showcased many of the new approaches that will be essential to solving challenges in health care, focusing on four main areas: vaccine delivery, health worker empowerment, health centre modernisation and country storytelling.



Visitor sees what it takes to deliver vaccines using VR technology

Gavi/2018/Oscar Seykens



"By applying our technology to humanitarian and development challenges, we can help optimise and scale life-saving programmes in underserved communities around the world."

Michael Froman, Vice Chairman and President of Strategic Growth, Mastercard



"Gavi is spearheading the way development work should be done by investing in cost-effective changes that really work and monitoring progress. Now we're looking at the progress in saving millions of children's lives, but also at the future to see how the landscape is changing."

Ola Rosling, President, Gapminder

DATA TELLS THE ULTIMATE STORY

Without accurate information, how do we know if we are meeting our immunisation goals?



Data archives at the Patan Hospital's Academy of Health Science in Kathmandu, Nepal

Gavi/2015/Sam Phillips

The collection, processing, use and interpretation of immunisation data are fundamental to the work of the Vaccine Alliance. Without detailed and accurate information on the numbers of children vaccinated, and vaccine stocks, it is extremely difficult to improve coverage levels, identify those still missing out on life-saving immunisations and evaluate the effectiveness of immunisation programmes.

This is why Gavi is supporting countries' efforts to strengthen their acquisition of high quality immunisation data, and their capacity to use this data to improve immunisation coverage and equity. As part of its current data strategy, in 2018 Gavi supported 625 data-related activities across 65 countries. Investments totalling US\$ 56 million were used to upgrade data collection systems to ensure that timely data is available, fit-for-purpose and used for immunisation programme planning, monitoring and risk mitigation.

NEPAL Data highlights the economic benefits of vaccination

In 2018, Nepal's Ministry of Health worked with researchers and health professionals from the Nepal Paediatric Society, the University of Oxford (UK), Johns Hopkins University (Maryland, USA) and the University of Otago (New Zealand) on a Gavi-funded project to assess the economic impact of the recent roll-out of pneumococcal conjugate vaccine (PCV) in Nepal.

Based at Patan Hospital, Lagankhel, and drawing on data gathered from the local population, the researchers demonstrated that the roll-out of PCV coincided with a sharp fall in the prevalence of *Streptococcus pneumoniae*, the bacterium responsible for most cases of pneumonia among people living in urban Nepal.

Data from the project was also used to estimate the economic costs associated with the disease, an episode of which can place a significant financial burden on families. In 40% of recorded cases, the average costs associated with the hospitalisation of a child for pneumococcal disease (US\$ 122) exceeded parental monthly income by a factor of 1.5; productivity loss from missed work was estimated to add a further US\$ 66 to the cost burden.

While the project clearly revealed the potential of PCV to limit the impact of pneumococcal disease, it also demonstrated the benefits of data gathering. Insights gained from this local-scale project will inform policy decisions about the use of PCV across Nepal – and beyond its borders.

Nepal was also selected as the host country for the first large-scale, randomised controlled trial of a new typhoid conjugate vaccine, Tyvbar, prequalified by the WHO early in 2018. According to the WHO, between 11 and 21 million cases of typhoid occur worldwide each year, leading to 128,000–161,000 deaths annually, many in young children^a. Typhoid represents a growing public health concern in Nepal where the disease is endemic, and the burden is likely to increase due to the causative agent, *Salmonella typhi*, becoming resistant to antibiotics.

During late 2017 and 2018, more than 20,000 children from the Lalitpur District of Kathmandu were enrolled in the TyvAC trial, which was designed to test the new vaccine's efficacy in an endemic setting. The trial was coordinated by researchers from the University of Maryland, USA, and funded by the Bill & Melinda Gates Foundation with support from Gavi and the Typhoid Vaccine Acceleration Consortium (TyvAC).

Data accumulated as part of the trial, which included information on local and systemic adverse reactions to the vaccine, was reviewed by the International Data and Safety Monitoring Board (DSMB) who concluded that it had no concerns about the safety of Tyvbar.

a – WHO website. Typhoid. <https://www.who.int/immunization/diseases/typhoid/en/>

KENYA Making data experts of us all

Good data does not collect itself: acquiring good data requires expertise. To improve the acquisition and quality of Expanded Programme on Immunization (EPI) and vaccine-preventable disease data across the lower levels of its health system, Kenya launched a pilot programme in 2018 to help individual health workers increase their data skills and expertise.

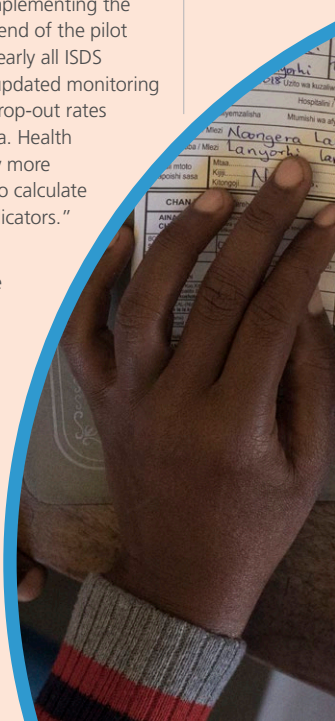
The STOP Immunisation and Surveillance Data Specialist (ISDS) pilot programme employed five ISDS consultants, who worked across 94 local health facilities in five counties (Busia, Kitui, Marsabit, Nairobi and Tana River).

The strength of the programme lay in its focus on improving skills, achieved in part by capitalising on existing in-country disease surveillance expertise developed by the Global Polio Eradication Initiative.

As a result of the pilot, funded by Gavi and managed by the US Centers for Disease Control and Prevention (CDC), the use and analysis of EPI data in all five counties improved.

"There was a notable improvement in data agreement between different immunisation recording and reporting tools," reports Health Scientist Alyssa Wong, a member of the CDC team responsible for implementing the STOP-ISDS strategy. "By the end of the pilot in June 2018," she adds, "nearly all ISDS priority health facilities had updated monitoring charts, correctly calculated drop-out rates and adequately archived data. Health workers became significantly more knowledgeable about how to calculate basic surveillance and EPI indicators."

While data use remains a challenge, and there is scope for further improvement, significant progress has been made in reducing the tendency to overreport vaccine coverage rates in Kenya. Based on the success of this pilot, similar initiatives have since been launched in the Lao People's Democratic Republic and Madagascar.



UGANDA

The impact of data mentors

Many districts in Uganda experience electricity and Internet outages, compromising efforts to use digital health records. Data collection tools and data archiving practices aren't always harmonised between health facilities, and immunisation data is underused. However, following the recent introduction of a mentorship scheme, significant improvements in data capture have been made.

Since the start of 2018, 89% of Uganda's health facilities have participated in the Data Improvement Team Strategy. In total, members of 438 health teams received training in how to better capture and use immunisation-related data.

As the results of a recent evaluation have demonstrated, the Strategy has yielded significant benefits. For example, the proportion of health facilities that could correctly identify their target population (children under the age of one year) increased from 45% to 75%, and the use of vaccine control books increased from 58% to 78%. There was also a modest improvement in the use of health centre registers that document children's health and immunisation records. However, the evaluation revealed that concordance between these registers and the electronic District Health Information System (DHIS2) increased only slightly, from 32% to 37%. That suggests further work needs to be done to better utilise child registries for tracking children and their health needs.



Data Improvement Team Strategy, Uganda: teams receive training in how to better capture and use immunisation-related data

AFENET.net/2016

UNITED REPUBLIC OF TANZANIA

A fully digitised vaccine supply chain

Of the examples featured here, the improvements that have been achieved in the United Republic of Tanzania stand out as being the most innovative in terms of their scope. In 2018, systems were interlinked to create a truly digitised immunisation supply chain information system that allows healthcare workers to match vaccine doses to children, thereby increasing efficiencies and reducing wastage.

In 2018, local medical officers began using wireless digital tablets to track which children received which immunisations in a pilot scheme covering more than 1,300 health facilities across four regions. The benefits of using electronic methods of record-keeping quickly became apparent, especially in the most remote places, for example, within the harsh, dry highland plains of the Ngorongoro region that is home to the Maasai tribespeople.

Because many Maasai children are nomadic, they do not always attend the same clinics. This makes it particularly difficult to ensure these children receive all their vaccinations at the appropriate time. Before this "digital revolution", the success of immunisation programmes among the Maasai depended on hope – hope that children would attend and hope that their families would bring the correct paper records of their vaccination history.

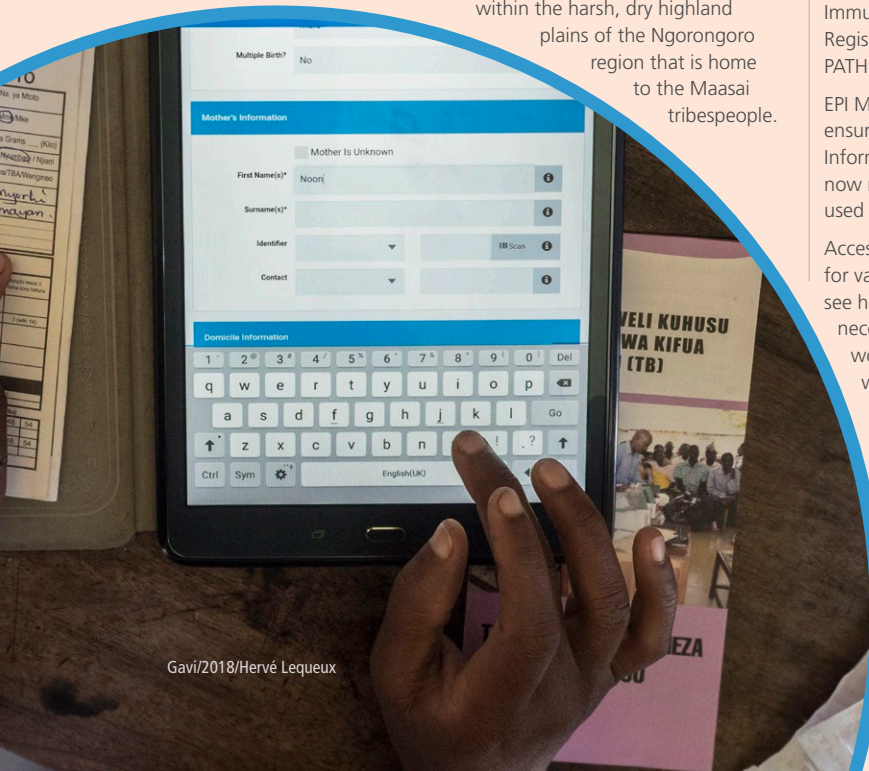
Now, a swipe of a finger instantly brings up the medical records of mothers and infants, and the vaccinations their children need. The tablet-based system is a vital component of the country's new EIR system, which enables health workers to seek out children who are missing out or defaulting on their routine immunisations. In a country where barely one in two children have their births registered this represents a crucial step forwards and is contributing to improvements in immunisation coverage among a previously underimmunised population subgroup.

Created as part of the United Republic of Tanzania's Better Immunisation Data (BID) initiative, the new Electronic Immunisation Register (EIR) is largely a country-driven project, produced by PATH with support from the Bill & Melinda Gates Foundation.

EPI Manager Dr Dafrossa Lyimo played a central role in its design, ensuring the EIR was also integrated with the country's Vaccine Information Management System (VIMS), another paperless system that now monitors and facilitates vaccine supply levels, and the equipment used to store vaccines at cool temperatures, across the country.

Access to this information means that health workers preparing for vaccination sessions in their clinic or community can quickly see how many vaccines are in stock and order new supplies as necessary. This helps with forward planning and ensures that health workers have enough vaccine doses to immunise all children who attend. By anticipating demand, this technology is also helping Dr Dafrossa's team better manage national vaccine stock levels, thus reducing stock-outs and wastage.

Such advances in data management are not only welcome, they are fundamentally necessary if we are to achieve our goal of reaching every single child with life-saving immunisation by 2030. That requires the global health community to continue to invest in innovative ways to acquire and analyse robust data. Ultimately, it will be the data that tells us if we have succeeded.



Gavi/2018/Hervé Lequeux

HELPING COUNTRIES TRANSITION FROM GAVI SUPPORT: ANGOLA

Following a commodity-driven post-conflict boom, global oil prices dropped and the government cut public spending, especially on social sectors. The health system was already underfunded – lacking trained staff and appropriate facilities – and Angola is now high on the list of countries with the largest number of underimmunised children.

After careful analysis of countries where transition is at risk, the Board agreed to a US\$ 20 million post-transition plan to address programmatic and financial challenges in Angola, one of five countries being supported with customised post-transition plans. Despite making vaccine financing a priority, the health system remained weak and both technical and financial support were needed.

Many children missing out on immunisation in Angola live in urban and periurban slums, where up to two thirds of children are underimmunised. Health and immunisation systems – like other public services – struggle to reach these areas and protect a growing population. People have also become used to immunisation being delivered through campaigns rather than taking their children to health facilities. These are often not open at times that suit parents, who may be working long hours with long commutes.

To address some of these challenges and increase immunisation rates, the Vaccine Alliance has agreed a three-part plan:

1. advocacy to increase and sustain funding for vaccines and health (currently about 5% of the national budget);
2. improving service delivery and communications for immunisation at health facilities; and
3. working with partners (CDC, USAID, GIE Vaccilog and a university in Brazil) to build long-term human resources capacity.

One of the long-term goals of Gavi support is that every country should have a sustainable, equitable vaccination programme with high coverage rates.

The transition from Vaccine Alliance support can be challenging for a combination of economic, political and health system reasons. One example of these challenges is Angola, still recovering from decades of conflict and reconstruction, heavily reliant on commodity exports and with limited investment in health.

Much of the focus of the plan will be on improving coverage in 18 urban and periurban districts. This includes providing an additional US\$ 11 million alongside a US\$ 100 million World Bank project as well as supporting the transition from polio surveillance.

The government now fully self-finances all vaccines that were previously supported by Gavi, and has increased investment in health. The challenges Angola faces are underlined by low levels of vaccine coverage (DTP3 coverage rose to 59% in 2018) and difficulties in preventing outbreaks of vaccine-preventable diseases. For example, the country experienced a yellow fever outbreak in 2016.

At the same time as transitioning from Gavi support, Angola faces other challenging transitions. Following elections in 2017, a political transition has been under way. At the same time, the polio programme is winding down and reducing its field staff; and previous support from Cuba, in the form of highly trained doctors, is being withdrawn due to funding constraints.

By investing in this post-transition plan, we are helping Angola to weather these short-term challenges. The country can then build on its growing commitment to fund health care and immunisation, and improve protection for the more than 480,000 underimmunised children in the country.

Angola's three-part plan:

- 

1 Advocate for increase of proportion of budget allocated to immunisation
- 

2 Improve service delivery and communications at health facilities
- 

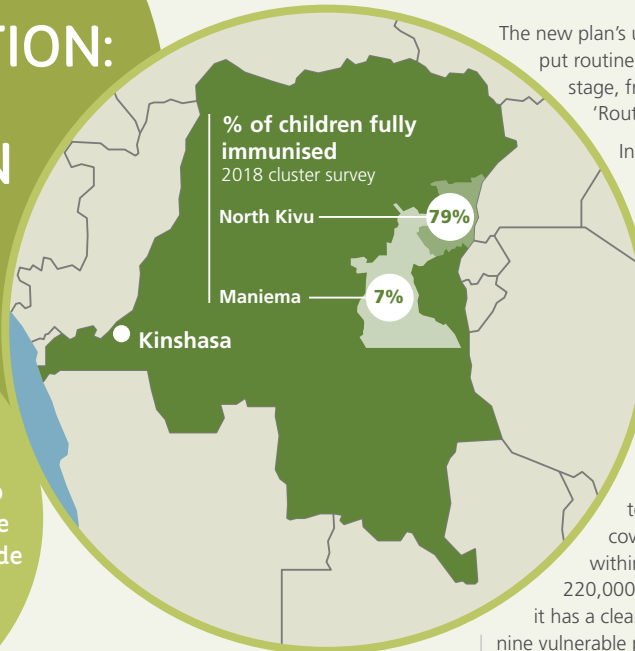
3 Long term increase in human resources and training of health workers and support



UNICEF Angola/2016/Simancas

A PLAN OF ACTION: BOOSTING IMMUNISATION COVERAGE IN DRC

An analysis of subnational data showed alarming disparities in immunisation performance across DRC. To turn the situation around the government, working alongside Alliance partners, hatched one of the most ambitious plans in Gavi's history.



The new plan's underlying vision would be to put routine immunisation back at centre stage, framed with the message 'Routine is the new emergency!'

In October 2018, Gavi's Deputy CEO Anuradha Gupta joined DRC Health Minister, Dr Oly Kalenga, in Kinshasa to launch the Mashako Plan, named after former DRC Minister of Health, Professor Leonard Mashako Mamba, who approved the introduction of the first Gavi-supported vaccine back in 2001.

The plan is ambitious – to boost national vaccine coverage by 15 percentage points within 18 months, protecting 220,000 additional children. But it has a clear target population of

nine vulnerable provinces and achievable objectives, including a 20% increase in the number of immunisation sessions and an 80% reduction in vaccine stockouts.

The plan also includes several innovations to boost coverage, such as performance-based funding and the use of smartphones to aggregate data and target low-performance areas. Regular coverage surveys will ensure the plan stays on track. Gavi's Cold Chain Equipment Optimisation Platform is aiming to increase the proportion of health areas with working cold chain equipment, from just 16% in 2016 to a target of 80% by the end of 2019.

It's difficult to underestimate the challenges of improving routine immunisation coverage in a fragile country the size of DRC. But by drilling down into the data, hunting out the gaps in coverage and targeting them ruthlessly, the Mashako Plan could prove to be a workable model for boosting the number of children receiving routine vaccines in even the most difficult of settings.

The Democratic Republic of the Congo (DRC) is a country the size of Western Europe, riven by difficult terrain and crumbling infrastructure after decades of war and continuing conflict in the east of the country.

Despite these huge challenges, its immunisation programme has achieved impressive progress over the past two decades, increasing basic vaccine coverage and almost halving child mortality over the same period.

Yet this progress hasn't been universal. A major 2018 cluster survey revealed a country divided. In North Kivu an impressive 79% of children were fully immunised, compared with just 7% in Maniema. To get a clearer idea of why this was happening at a local level, in early 2018 Gavi initiated work to gather and analyse this subnational data.

The results gave a clear picture of what was driving this underperformance. Only 10% of districts nationwide went through 2017 without experiencing a stock-out of vaccines.

Even within health zones there were huge disparities in terms of service availability: in the capital, Kinshasa, there were fifteen times more immunisation sessions in one district than in another just a few kilometres away.

Despite the numerous challenges exposed by this new analysis, DRC had one important trump card: a strong, well-staffed Ministry of Health with the political capital and will to turn the country's routine immunisation programme around.

It also had partners ready and willing to support this effort. Gavi, working alongside Alliance and expanded partners, spent the summer of 2018 working with the Ministry of Health and other partners to devise a plan that would complement current performance-based health sector reforms and address the structural issues holding back DRC's routine vaccination programme, focusing on the provinces that were found to be furthest behind.

Frequent disease outbreaks had diverted attention away from routine immunisation – the first and best line of defence against outbreaks – towards reactive campaigns.



A world first: the Ebola vaccine passes its first major test

While the government was poised to label routine immunisation as the new emergency, a more familiar health emergency was brewing in northern DRC. In May 2018 an Ebola outbreak was declared in Equateur province.

This was DRC's ninth Ebola outbreak since the disease was discovered, but it was the first to include a potentially powerful new weapon in the response effort: a vaccine. Nearly 3,500 people at risk received the vaccine during the outbreak, which was declared over in late July.

The stockpile of Ebola vaccines, which is yet to be licensed, was available thanks to a unique agreement between Gavi and the vaccine's

manufacturer, whereby Gavi committed to procure future doses of licensed vaccines when they become available.

In return the manufacturer committed to apply for licensure to a stringent health authority and in the meantime to ensure a stockpile of at least 300,000 investigational doses would be available in the event of an outbreak.

Sadly, this stockpile would be needed again just a month later. On 1 August another outbreak was declared in North Kivu, a region torn apart by instability, conflict and mistrust of the government. This outbreak would prove far tougher to contain and control.



Gavi/2015/Phil Moore

1 Contributions to Gavi

as of 31 December 2018 (US\$ millions)

Cash received by Gavi

Donors	2018	Total 2000–2018
Australia		323.9
Canada	76.9	517.8
China	0.5	3.5
Denmark	3.8	49.5
European Commission (EC)	53.6	168.5
France		255.4
Germany	158.1	647.3
Iceland	1.0	1.0
India	2.0	6.0
Ireland	3.4	55.4
Italy	32.4	51.0
Japan	19.2	110.6
Kingdom of Saudi Arabia	5.0	12.5
Luxembourg	0.9	14.5
Netherlands	46.4	508.6
Norway	144.7	1,581.5
Principality of Monaco	0.2	0.3
Republic of Korea	4.0	19.0
Spain		43.2
State of Qatar		4.0
Sultanate of Oman	0.6	1.8
Sweden	42.4	489.8
Switzerland		1.6
United Kingdom	252.9	2,462.1
United States of America	290.0	2,179.5

Donor governments and the European Commission total: **1,138.0** **9,508.5**

Alwaleed Philanthropies	0.2	0.6
Bill & Melinda Gates Foundation	340.0	3,439.4
The Children's Investment Fund Foundation (UK)		31.8
China Merchants Charitable Foundation	0.5	1.0
Comic Relief	1.9	27.0
ELMA Vaccines and Immunization Foundation	0.9	2.9
His Highness Sheikh Mohammed bin Zayed Al Nahyan		38.0
International Federation of Pharmaceutical Wholesalers (IFPW)	0.9	1.2
"la Caixa" Foundation	1.6	33.3
LDS Charities		9.2
Lions Clubs International Foundation (LCIF)		30.0
OPEC Fund for International Development (OFID)		1.1
Reckitt Benckiser Group	1.4	1.4
Red Nose Day Fund	1.9	7.1
Unilever ^a	1.1	3.2
Other donors ^b	0.1	29.2

Foundations, organisations and corporations total: **350.4** **3,656.4**

Subtotal: **1,488.4** **13,164.9**

AMC proceeds ^c	56.5	1,168.0
IFFIm proceeds ^d	50.0	2,625.7
Total:	1,594.9	16,958.6

Notes:

a – Unilever provides resources to Gavi through a leveraged partnership project.

b – Includes contributions from: A&A Foundation (US\$ 1m), Absolute Return for Kids (US\$ 1.6m), Anglo American plc (US\$ 3.0m), Dutch Postcode Lottery (US\$ 3.2m) and JP Morgan (US\$ 2.4m), in addition to other private sector donors (some contributions were initially paid to the GAVI Campaign).

c – Cash transfers from the World Bank to Gavi.

d – Cash disbursements from the World Bank to the GFA (2006–2012) and to Gavi (2013–2018).

Cash received by Gavi

in support of Gavi for its role in supporting the Polio Eradication and Endgame Strategic Plan (2013–2020)

Donors	2018	Total
Norway	24.5	124.7
United Kingdom	5.3	40.1
Governments total:	29.8	164.7
Bill & Melinda Gates Foundation	44.6	241.2
Private contributions total:	44.6	241.2
Total:	74.4	405.9

Innovative finance mechanisms: AMC and IFFIm

AMC commitments	Total 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
Total:	1,500.0

Notes:

a – Actual contributions received from IFFIm grants subject to the Grant Payment Condition may differ from committed amounts.

b – Non-US\$ contributions are expressed in US\$ equivalents, calculated using the foreign exchange rates at the time of signing the respective donor grant agreements.

IFFIm commitments ^a	Duration of commitment (years)	Currency of pledge ^a (in millions)	US\$ equivalent ^{ab} (in millions)
United Kingdom	23	GBP 1,630	2,980
France	20	EUR 1,390	1,884
Italy	20	EUR 499	635
Australia	20	AUD 288	284
Norway	15	US\$ 27 NOK 1,500	264
Spain	20	EUR 190	240
Netherlands	10	EUR 80 US\$ 67	181
Sweden	15	SEK 276	38
South Africa	20	US\$ 20	20
Brazil	20	US\$ 20	20
Total:			6,546

Country co-financing commitments

	2018	2000–2017
Co-financing ^a	124.0	787.0

Notes:

a – These amounts are subject to change as a result of i) payments against past defaults, and ii) payments against co-financing obligations of fiscally aligned countries.

Source: Gavi, the Vaccine Alliance, 2019

2 Governance structure

as of 31 December 2018

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)

Independent members

Ngozi Okonjo-Iweala, *Board Chair*
 William Roedy, *Board Vice Chair*
 Margaret (Peggy) Hamburg
 Helen Rees
 David Sidwell
 Richard Sezibera
 Stephen Zinser

Institutions

WHO

Soumya Swaminathan

UNICEF

Shanelle Hall

The World Bank

Tim Evans

The Bill & Melinda Gates Foundation

Orin Levine

Constituencies

Developing country government representatives

Constituency 1

Mohamed Abu Zaid Mustafa (Sudan)

Constituency 2

Myint Htwe (Myanmar)

Constituency 3

Edna Yolani Batres (Honduras)

Constituency 4

Raymonde Goudou Coffie (Côte d'Ivoire)

Constituency 5

Amir Aman Hagos (Ethiopia)

Donor government representatives

USA/Australia/Japan/Republic of Korea

Sarah Golding (Australia)

United Kingdom/Qatar

Daniel Graymore (United Kingdom)

Canada/Italy/Spain

Megan Cain (Canada)

Germany/France/Luxembourg/

European Commission/Ireland

Jean-François Pactet (France)

Norway/Netherlands/Sweden

Reina Buijs (Netherlands)

Industrialised country vaccine industry

Susan Silbermann (Pfizer)

Developing country vaccine industry

Sai Prasad (Bharat Biotech)

Civil society organisations

Clarisse Loe Loumou (Alternative Santé, Cameroon)

Research and technical health institutes

Marta Nunes (the Vaccine Preventable Diseases Unit/Respiratory and Meningeal Pathogens Research Unit, South Africa)

Non-voting member

Seth Berkley, CEO Gavi, the Vaccine Alliance

Other Gavi-related governance structures

The International Finance Facility for Immunisation (IFFIm) Company

Cyrus Ardalan, *Chair*

Chairman, Citigroup Global Markets Limited

Marcus Fedder

Former Vice Chair, TD Securities

Fatimatou Zahra Diop

Former Secretary General, Central Bank of West African States (BCEAO)

Doris Herrera-Pol

Former Global Head of Capital Markets, the World Bank

Helge Weiner-Trapness

Founding Partner, Quintus Partners

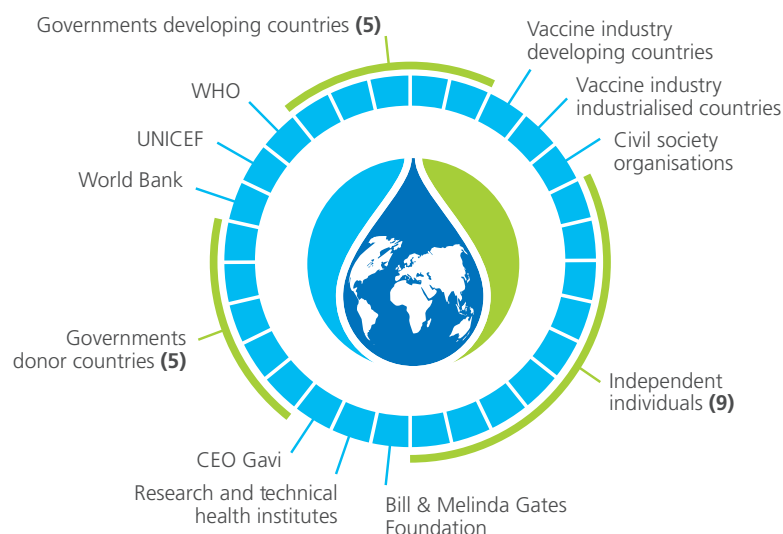
Bertrand de Mazières

Director General for Finance at the European Investment Bank

Christopher Egerton-Warburton

Partner, Lion's Head Capital Partners

Governance structure



Source: Gavi, the Vaccine Alliance, 2019

3 Contributions pledged to Gavi^a includes pledges as of 31 December 2018 (US\$ millions)

Donors	2000–2010						2011–2015						2016–2020					
	Direct contribution	Matching Fund	AMC	IFFim ^b	Total	As % of grand total ^c	Direct contribution	Matching Fund	AMC	IFFim ^b	Total	As % of grand total ^c	Direct contribution	Matching Fund	AMC	IFFim ^d	Total	As % of grand total ^c
Australia	29				29	<1%	242			28	270	4%	159			89	248	3%
Brazil																3	3	<1%
Canada	152		125		277	7%	120		75		194	3%	410				410	4%
China													5				5	<1%
Denmark	32				32	<1%	13				13	<1%	12				12	<1%
European Commission (EC)	58				58	1%	35				35	<1%	252				252	3%
France ^e	19			192	211	5%	127			306	433	6%	109			420	530	6%
Germany	22				22	<1%	186				186	3%	707				707	8%
Iceland ^f													1				1	<1%
India							3				3	<1%	9				9	<1%
Ireland	30				30	<1%	15				15	<1%	17				17	<1%
Italy			158	107	265	6%			266	152	418	6%	120		211	150	480	5%
Japan							54				54	<1%	95				95	1%
Kingdom of Saudi Arabia													23				23	<1%
Kuwait													1				1	<1%
Luxembourg	6				6	<1%	5				5	<1%	5				5	<1%
Netherlands ^g	216			14	230	5%	149			72	220	3%	211	12		83	305	3%
Norway	526		2	41	569	14%	612		48	94	754	10%	782			106	888	10%
Principality of Monaco													1				1	<1%
Republic of Korea	0.4				0.4	<1%	7				7	<1%	22				22	<1%
Russian Federation			8		8	<1%			40		40	<1%			32		32	<1%
South Africa				4	4	<1%				4	4	<1%				4	4	<1%
Spain	43			58	101	2%				51	51	<1%				51	51	<1%
State of Qatar													10				10	<1%
Sultanate of Oman													3				3	<1%
Sweden	123			10	132	3%	255			11	266	4%	189			11	200	2%
Switzerland													2				2	<1%
United Kingdom ^h	137		22	153	313	7%	1,424	61	317	475	2,277	31%	1,378		146	854	2,378	26%
United States of America ⁱ	647				647	15%	733				733	10%	800				800	9%
Donor governments and the European Commission total:	2,039		316	578	2,933	70%	3,980	61	746	1,192	5,979	80%	5,321	12	388	1,770	7,492	82%
Alwaleed Philanthropies													1				1	<1%
Bill & Melinda Gates Foundation ^j	1,213		20		1,233	29%	1,237	50	30		1,317	18%	1,475	75			1,550	17%
His Highness Sheikh Mohammed bin Zayed Al Nahyan							33				33	<1%	5				5	<1%
Audacious Alliance ^k													9				9	<1%
The Children's Investment Fund Foundation (UK)								32			32	<1%						
China Merchants Charitable Foundation													2				2	<1%
Comic Relief								20			20	<1%	8				8	<1%
ELMA Vaccines and Immunization Foundation								2			2	<1%	2				2	<1%
Girl Effect ^l													4				4	<1%
International Federation of Pharmaceutical Wholesalers (IFPW)													1	1			2	<1%
"la Caixa" Foundation	16				16	<1%		11			11	<1%		7			7	<1%
LDS Charities								7			7	<1%	2				2	<1%
Lions Clubs International Foundation (LCIF)								15			15	<1%		15			15	<1%
Reckitt Benckiser Group													1				1	<1%
Red Nose Day Fund							1				1	<1%	1	5			6	<1%
Unilever ^m														3			3	<1%
Other donors ⁿ	12				12	<1%	6	11			18	<1%	3				3	<1%
Foundations, organisations and corporations total^o:	1,241		20		1,261	30%	1,277	148	30		1,455	20%	1,489	131			1,620	18%
Grand total:	3,280		336	578	4,194	100%	5,257	209	776	1,192	7,433	100%	6,810	143	388	1,770	9,112	100%

						2021–2037		
Direct contribution	Matching Fund	AMC	IFFIm	Total	As % of grand total			
			149	149	6%	Donors		
			17	17	<1%	Australia		
						Brazil		
						Canada		
						China		
9				9	<1%	Denmark		
						European Commission (EC)		
			814	814	34%	France ^e		
						Germany		
						Iceland ^f		
						India		
						Ireland		
			175	175	7%	Italy		
						Japan		
3				3	<1%	Kingdom of Saudi Arabia		
						Kuwait		
						Luxembourg		
						Netherlands ^g		
						Norway		
						Principality of Monaco		
5				5	<1%	Republic of Korea		
						Russian Federation		
			6	6	<1%	South Africa		
			60	60	2%	Spain		
						State of Qatar		
						Sultanate of Oman		
			3	3	<1%	Sweden		
						Switzerland		
			1,183	1,183	49%	United Kingdom ^h		
						United States of America ⁱ		
16		2,406	2,422	100%		Donor governments and the European Commission total:		
						Alwaleed Philanthropies		
						Bill & Melinda Gates Foundation ^j		
						His Highness Sheikh Mohammed bin Zayed Al Nahyan		
						Audacious Alliance ^k		
						The Children's Investment Fund Foundation (UK)		
						China Merchants Charitable Foundation		
						Comic Relief		
						ELMA Vaccines and Immunization Foundation		
						Girl Effect ^l		
						International Federation of Pharmaceutical Wholesalers (IFPW)		
						"la Caixa" Foundation		
						LDS Charities		
						Lions Clubs International Foundation (LCIF)		
						Reckitt Benckiser Group		
						Red Nose Day Fund		
						Unilever ^m		
						Other donors ⁿ		
						Foundations, organisations and corporations total^o:		
16		2,406	2,422	100%		Grand total:		

Notes:

a – Some contributions may be received by Gavi in years different to those for which the pledges were made.

b – A number of the "US\$ equivalent values" of actual IFFIm donor contributions received between 2006 and 2015 have been updated to reflect information received from the IBRD at the end of 2016. The total value of changes made is +US\$ 4.5 million, representing 0.25% of the total during this period (US\$ 1.77 billion); changes at country level are also relatively minor.

c – The percentages in this column pertain to each donor's share of the total amount pledged for the period, rather than each donor's share of the expected need for the period.

d – In 28-29 November 2018, the Gavi Alliance Board approved Gavi supporting the Coalition for Epidemic Preparedness Innovation (CEPI), subject to funds being made available by the Kingdom of Norway and disbursed via IFFIm.

e – The Agence Française de Développement (AFD, French Development Agency), Gavi, the Vaccine Alliance and the Bill & Melinda Gates Foundation signed an innovative partnership which will provide funding worth €100 million during the 2016–2020 period. The partnership aims to increase vaccine coverage in six French-speaking countries of the Sahel region: Burkina Faso, Chad, Mali, Mauritania, the Niger and Senegal.

f – Iceland prepaid its contribution of US\$ 1 million for the period from July 2018 to June 2021 in full in 2018.

g – As of 31 December 2018, €1.9 million (US\$ 2.3 million) of the total €10 million Matching Fund contribution pledged by the Netherlands had yet to be matched by other private sector donor contributions.

h – As of 31 December 2018, all of the UK's GBP 38.1 million Matching Fund contribution (US\$ 61 million) had been matched by other private sector donor contributions.

i – The USA's US\$ 1.0 billion pledge announced at the 2015 Berlin replenishment meeting is for the period 2015–2018 and includes US\$ 800 million for 2016–2018. The United States Government has provided an additional US\$ 20 million to Gavi, to be used to support an Ebola vaccine stockpile once a licensed vaccine becomes available.

j – As of 31 December 2018, US\$ 29.8 million of the total US\$ 125 million Matching Fund contribution pledged by the Bill & Melinda Gates Foundation had yet to be matched by other/private sector donor contributions.

k – The Audacious Alliance has contributed US\$ 9 million directly to Last Mile Health and Living Goods, matching Bill & Melinda Gates Foundation's US\$ 9 million Matching Fund contribution to this partnership project to increase vaccination coverage.

l – Girl Effect is an investor and implementer in Gavi's mission to drive increased uptake of the HPV vaccine.

m – Unilever provides resources to Gavi through a leveraged partnership project.

n – Includes contributions from: A&A Foundation (US\$ 1 million), Absolute Return for Kids (US\$ 1.6 million), Anglo American plc (US\$ 3.0 million), Dutch Postcode Lottery (US\$ 3.2 million), JP Morgan (US\$ 2.4 million) and the OPEC Fund for International Development (US\$ 1.1 million), in addition to other private sector donors.

o – In-kind contributions are not included in the total for foundations, organisations and corporations. As of 31 December 2018, the following organisations had made (or pledged) in-kind contributions: Deutsche Post DHL Group, Girl Effect, Google-Nexleaf Analytics, IFPW, Lions Clubs International Foundation, Orange SA, Philips, The Shifo Foundation, Unilever, UPS and Vodafone.

General notes regarding reporting of US\$ equivalents (for contributions made to Gavi in currencies other than US\$):**Direct contributions (including Matching Fund)**

Received contributions: non-US\$ contributions for 2000–2018 are expressed in US\$ equivalents using the exchange rates on the dates of receipt. Since 2014 and where contributions were hedged to mitigate currency risk exposure, US\$ equivalents are based on the rates applicable to the hedge agreement.

Future contributions: non-US\$ direct contribution and Matching Fund pledges for 2019 and beyond are expressed in US\$ equivalents using the applicable "forecast rates" from Bloomberg as at 31 December 2018 or using the rates applicable to any hedge agreement in place.

General notes regarding IFFIm contributions

Due to IFFIm's nature as a frontloading vehicle, yearly contributions paid into IFFIm can differ significantly from yearly proceeds transferred to Gavi.

While IFFIm grants are irrevocable and legally binding, they are subject to a Grant Payment Condition that can potentially reduce the amount due in the event that a programme country is in protracted arrears with the International Monetary Fund. As of 31 December 2018, IFFIm donor grant payments are reduced by 1.5%; however, such reductions are not reflected in future contributions figures.

Reporting of US\$ equivalents (for contributions made to IFFIm in currencies other than US\$)

Received contributions: non-US\$ contributions for 2000–2018 are expressed in US\$ equivalents as confirmed by the IBRD (World Bank).

Future contributions: non-US\$ contributions for 2019 and beyond are expressed in US\$ equivalents using the exchange rates at the time of signing the respective donor grant agreements.

Source: Gavi, the Vaccine Alliance, 2019

4 Commitments for country programmes 2000–2023^a

as of 31 December 2018 (US\$ millions)

Country	New and underused vaccine support	Health system strengthening support	Immunisation services support	Operational support	Injection safety support	Vaccine introduction grant	Civil society organisation support ^b	Human papillomavirus vaccine demonstration cash support	Product switch grant	Transition grant	Ebola EPI recovery grant	Cold chain equipment optimisation platform	Total
Afghanistan	215.2	99.6	14.0	12.3	1.7	3.5	3.6		0.4				350.2
Albania	2.1				0.1	0.3							2.5
Angola	101.1	5.8	3.0		1.3	3.7				1.4			116.3
Armenia	4.8	0.3	0.1		0.1	0.5		0.2	-	0.6			6.5
Azerbaijan	12.1	0.6	0.7		0.2	0.2							13.8
Bangladesh	636.9	51.6	23.3	34.0	6.1	8.3		0.4	0.3				760.9
Benin	117.0	9.3	0.2	5.1	0.4	1.3		0.2				2.3	135.6
Bhutan	1.3	0.2			-	0.3				0.2			2.0
Bolivia (Plurinational State of)	26.5	5.4	0.3		0.9	0.8				1.2			35.0
Bosnia & Herzegovina	2.1				0.1	0.1							2.3
Burkina Faso	200.4	21.2	9.7	7.5	0.9	3.6		0.2	0.4			3.8	247.6
Burundi	108.1	54.5	3.7	7.8	0.4	1.6	0.5	0.2	0.1				176.9
Cambodia	63.4	31.8	2.0	6.9	0.6	1.5		0.2					106.5
Cameroon	179.8	30.4	8.0	8.3	1.0	4.5		0.2	0.3			2.9	235.4
Central African Republic	36.1	12.2	1.9	2.3	0.1	0.6						1.6	54.9
Chad	56.7	5.7	2.6	8.9	0.4	1.2							75.6
China	22.0				15.9	0.8							38.7
Comoros	1.6	4.6	0.1		-	0.4							6.6
Congo	20.9	5.2	1.7		0.2	0.8				0.4			29.2
Côte d'Ivoire	177.6	18.2	8.8	14.7	1.6	4.4		0.2	0.2			2.8	228.5
Cuba	1.3	2.4			0.4	0.1				0.2			4.3
Democratic People's Republic of Korea	28.1	40.6	2.2		0.7	0.6							72.3
Democratic Republic of the Congo	561.2	204.6	25.8	31.5	2.7	8.1	9.8		0.8			22.4	866.8
Djibouti	5.0	3.4	0.2		-	0.4						0.3	9.4
Eritrea	26.6	14.8	0.4	2.8	0.1	0.8			-			1.0	46.6
Ethiopia	887.9	239.0	23.4	52.5	2.7	10.7	3.2	0.2				20.9	1,240.5
Gambia	31.7	5.5	0.7	1.5	0.1	1.3		0.2	-			0.5	41.6
Georgia	4.4	0.4	0.1		0.1	0.4		0.2		0.6			6.2
Ghana	259.4	28.0	5.3	15.4	0.9	3.6	0.8	0.2					313.5
Guinea	32.5	28.6	2.9	2.3	0.3	0.6					6.1	8.7	82.1
Guinea-Bissau	11.8	1.4	0.5	1.0	0.1	0.5							15.4
Guyana	3.7		0.1	-		0.5				0.4			4.7
Haiti	28.2	3.3	1.3	0.9	0.4	0.9						5.9	40.8
Honduras	32.1	9.2	0.1		0.5	0.6				0.4			42.8
India	680.1	207.0		8.5	18.4	0.4							914.4
Indonesia	130.9	24.8	12.6		9.9	11.6	3.9	0.2					193.9
Kenya	437.8	28.4	6.4	18.0	1.1	6.2		0.3	0.4			4.1	502.9
Kiribati	0.3					0.3							0.6
Kyrgyzstan	22.1	6.2	0.8		0.2	0.4						0.6	30.3
Lao People's Democratic Republic	31.5	13.8	1.4	1.2	0.3	1.1		0.2	-	1.5			51.1
Lesotho	8.1	2.7	0.1	0.6	0.1	0.6			-				12.2
Liberia	32.0	21.0	2.2	0.5	0.4	0.9		0.2	0.1		2.8	1.2	61.3
Madagascar	167.1	28.0	4.1		0.6	2.3		0.2	0.2			3.6	206.0
Malawi	223.1	60.0	2.0	5.7	0.7	3.6		0.2	0.2			4.5	299.9
Mali	228.2	24.7	5.0	4.5	0.7	2.4		0.1					265.6
Mauritania	31.1	5.8	0.7	2.0	0.2	0.8			-			0.6	41.3
Mongolia	5.9	0.5	0.5		0.1	0.2							7.2
Mozambique	203.0	26.5	1.7	7.9	0.8	4.7		0.2	0.3				245.1

Country

Country	New and underused vaccine support	Health system strengthening support	Immunisation services support	Operational support	Injection safety support	Vaccine introduction grant	Civil society organisation support ^b	Human papillomavirus vaccine demonstration cash support	Product switch grant	Transition grant	Ebola EPI recovery grant	Cold chain equipment optimisation platform	Total
Myanmar	135.2	94.0	7.7	20.5	2.1	6.5						3.3	269.3
Nepal	108.8	59.7	3.3	4.3	1.2	3.2		0.2	0.2			2.7	183.5
Nicaragua	32.9	3.8	0.3		0.5	0.3				0.8			38.6
Niger	163.0	43.6	7.4	3.9	0.9	3.6		0.3	0.2			3.0	225.9
Nigeria ^c	748.6	32.6	44.2	129.4	12.6	20.9			2.0				990.4
Pakistan	1,177.5	123.4	48.8	43.0	7.4	15.6	7.6					20.6	1,443.9
Papua New Guinea	27.4	3.1	0.4	1.6		0.6						1.0	34.1
Republic of Moldova	5.5				0.1	0.5		0.2		0.7			7.0
Rwanda	143.2	18.9	3.0	4.2	0.4	1.4			0.1			1.9	173.0
São Tomé et Príncipe	1.7	3.5	0.1	-	-	0.7		0.2					6.1
Senegal	117.1	18.2	2.6	8.8	0.6	2.7		0.2	0.1			2.5	152.8
Sierra Leone	73.9	16.5	2.7	2.0	0.3	1.3		0.2	0.1		3.8	1.3	102.0
Solomon Islands	3.3	5.4		0.2		0.5		0.2				0.7	10.2
Somalia	15.0	38.4	1.2		0.2	0.7						2.7	58.3
South Sudan	21.4	34.4	5.9	8.1	0.2	0.6						1.9	72.6
Sri Lanka	23.7	4.5			0.7	0.9				0.1			29.9
Sudan	369.5	54.1	11.2	40.7	1.3	3.9							480.8
Tajikistan	25.8	11.4	2.4		0.3	0.8							40.7
Timor-Leste	1.3	3.1				0.2				1.5			6.0
Togo	55.3	10.0	3.0	4.0	0.3	1.1		0.2	0.1			1.5	75.5
Turkmenistan	1.0				0.2	0.1							1.2
Uganda	394.3	49.8	9.2	16.1	1.2	7.2			0.5			6.6	484.9
Ukraine	2.7				0.7	0.1							3.5
United Republic of Tanzania	462.8	19.1	11.4	18.4	1.0	10.2		0.2				8.9	532.0
Uzbekistan	74.5	18.9	-		0.7	2.6				0.8		1.2	98.7
Vietnam	125.8	40.7	1.9	14.9	3.2	3.2			0.1	3.2		1.6	194.6
Yemen	228.3	24.0	5.0	10.5	1.2	2.1							271.2
Zambia	177.9	13.1	3.9	4.5	0.7	3.5			0.2				203.7
Zimbabwe	103.8	7.5	1.5	4.0	0.9	1.7		0.2	0.1				119.8
Grand total	10,921.8	2,139.0	357.8	603.9	113.5	199.6	29.2	6.1	7.6	14.1	12.7	149.0	14,554.3

Notes:

a – Commitments represent endorsements of multi-year programme budgets made by the Gavi Board (or Executive Committee) or the Gavi CEO. 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.

b – Civil society organisation Type A support is not included as these approvals are not country specific.

c – The Board has approved the extension of Nigeria's 'Accelerated Transition' period and within it a total support of up to US\$ 1 billion. The above table includes a subset of this figure as Commitments, that has been fully endorsed to date.

General note:

Values have been adjusted to reflect the final actual amount disbursed.

Figures in the above table are expressed in millions with 1 decimal.

Source: Gavi, the Vaccine Alliance, 2019

5 Board approvals for country programme expenditure 2000–2019^a

as of 31 December 2018 (US\$ millions)

Country	New and underused vaccine support	Health system strengthening support	Immunisation services support	Operational support	Injection safety support	Vaccine introduction grant	Civil society organisation support ^b	Human papillomavirus vaccine demonstration cash support	Product switch grant	Transition grant	Ebola EPI recovery grant	Cold chain equipment optimisation platform	Total
Afghanistan	215.2	99.3	14.0	12.3	1.7	3.5	3.6		0.4				350.0
Albania	2.1				0.1	0.3							2.5
Angola	101.1	5.8	3.0		1.3	3.7				1.4			116.3
Armenia	4.8	0.3	0.1		0.1	0.5		0.2	-	0.6			6.5
Azerbaijan	12.1	0.6	0.7		0.2	0.2							13.8
Bangladesh	560.6	51.6	23.3	34.0	6.1	8.3		0.3	0.3				684.6
Benin	103.7	8.5	0.2	5.1	0.4	1.3		0.2				2.3	121.5
Bhutan	1.3	0.2			-	0.3				0.2			2.0
Bolivia (Plurinational State of)	26.5	5.4	0.3		0.9	0.8				1.2			35.0
Bosnia & Herzegovina	2.1				0.1	0.1							2.3
Burkina Faso	187.1	14.5	9.7	7.5	0.9	3.6		0.1	0.4			3.8	227.6
Burundi	108.1	47.0	3.7	7.8	0.4	1.6	0.5	0.2	0.1				169.2
Cambodia	63.4	24.9	1.8	6.9	0.6	1.5		0.2					99.4
Cameroon	178.1	12.5	8.0	8.3	1.0	4.5		0.2	0.3			2.9	215.7
Central African Republic	30.1	12.2	1.6	2.3	0.1	0.6						1.6	48.6
Chad	51.0	5.7	2.6	8.9	0.4	1.2							69.9
China	22.0				15.9	0.8							38.7
Comoros	1.6	3.4	0.1		-	0.4							5.4
Congo	20.9	5.2	1.7		0.2	0.8				0.4			29.2
Côte d'Ivoire	154.1	12.4	8.8	14.7	1.6	4.4		0.2	0.2			2.0	198.4
Cuba	1.3	2.4			0.4	0.1				0.2			4.3
Democratic People's Republic of Korea	27.0	40.6	2.2		0.7	0.6							71.2
Democratic Republic of the Congo	561.2	190.4	25.8	31.5	2.7	8.1	9.8		0.8			22.4	852.6
Djibouti	4.7	2.8	0.2		-	0.4						0.3	8.3
Eritrea	22.4	7.6	0.4	2.8	0.1	0.8			-			1.0	35.2
Ethiopia	787.8	201.1	23.4	50.1	2.7	10.7	3.2	0.2				4.7	1,084.0
Gambia	27.0	3.3	0.7	1.5	0.1	1.3		0.2	-			0.5	34.6
Georgia	4.4	0.4	0.1		0.1	0.4		0.2		0.6			6.2
Ghana	259.4	21.1	5.3	15.4	0.9	3.6	0.8	0.2					306.6
Guinea	31.2	21.0	2.9	2.3	0.3	0.6					6.1	8.7	73.2
Guinea-Bissau	9.8	1.4	0.5	1.0	0.1	0.5							13.3
Guyana	3.7		0.1	-		0.5				0.4			4.7
Haiti	24.0	3.3	1.3	0.9	0.4	0.9						3.1	33.9
Honduras	32.1	9.2	0.1		0.5	0.6				0.4			42.8
India	671.0	161.0		8.5	18.4	0.4							859.3
Indonesia	130.9	24.8	12.6		9.9	11.6	3.9	0.2					193.9
Kenya	437.8	22.9	6.4	18.0	1.1	6.2		0.3	0.4			4.1	497.4
Kiribati	0.3					0.3							0.6
Kyrgyzstan	18.5	6.2	0.8		0.2	0.4						0.6	26.8
Lao People's Democratic Republic	28.8	10.2	1.4	1.2	0.3	1.1		0.2	-	1.5			44.8
Lesotho	6.3	2.1	0.1	0.6	0.1	0.6			-				9.9
Liberia	28.4	16.6	2.2	0.5	0.4	0.9		0.2	0.1		2.8	1.2	53.2
Madagascar	167.1	22.7	4.1		0.6	2.3		0.2	0.2			3.6	200.7
Malawi	207.4	46.3	2.0	5.7	0.7	3.6		0.2	0.2			2.4	268.3
Mali	189.1	17.1	5.0	4.5	0.7	2.4		-					218.8
Mauritania	27.3	3.8	0.7	1.9	0.2	0.7			-			0.6	35.3
Mongolia	5.3	0.5	0.5		0.1	0.2							6.6
Mozambique	203.0	17.0	1.7	7.9	0.8	4.7		0.2	0.3				235.5

Country

Country	New and underused vaccine support	Health system strengthening support	Immunisation services support	Operational support	Injection safety support	Vaccine introduction grant	Civil society organisation support ^a	Human papillomavirus vaccine demonstration cash support	Product switch grant	Transition grant	Ebola EPI recovery grant	Cold chain equipment optimisation platform	Total
Myanmar	112.8	89.0	7.7	20.5	2.1	6.5						2.0	240.6
Nepal	95.8	45.8	3.3	4.3	1.2	3.2		0.2	0.2			0.6	154.4
Nicaragua	32.5	3.8	0.3		0.5	0.3				0.5			37.9
Niger	146.0	35.9	7.4	3.9	0.9	3.6		0.2	0.2			3.0	201.3
Nigeria	669.2	32.6	44.2	129.4	12.6	20.9			2.0				910.9
Pakistan	1,041.2	123.4	48.8	43.0	7.4	15.6	7.6					20.6	1,307.5
Papua New Guinea	26.9	3.1	0.4	1.6		0.6						1.0	33.6
Republic of Moldova	5.5				0.1	0.5		0.2		0.7			7.0
Rwanda	129.3	18.9	3.0	4.2	0.4	1.4			0.1			1.3	158.5
São Tomé et Príncipe	1.5	2.4	0.1	-	-	0.7		0.1					4.9
Senegal	117.1	18.2	2.6	8.8	0.6	2.7		0.1	0.1			2.5	152.7
Sierra Leone	61.6	10.0	2.7	2.0	0.3	1.3		0.2	0.1		3.8	1.3	83.2
Solomon Islands	3.1	4.2		0.2		0.5		0.1				0.7	8.8
Somalia	14.1	25.8	1.2		0.2	0.7						2.6	44.7
South Sudan	20.1	34.4	5.9	8.1	0.2	0.6						1.9	71.4
Sri Lanka	23.7	4.5			0.7	0.9				0.1			29.9
Sudan	343.1	41.5	11.2	40.7	1.3	3.9							441.7
Tajikistan	25.8	7.7	2.4		0.3	0.8							37.0
Timor-Leste	1.3	3.1				0.2				1.5			6.0
Togo	49.6	7.4	3.0	4.0	0.3	1.1		0.2	0.1			1.5	67.1
Turkmenistan	1.0				0.2	0.1							1.2
Uganda	361.3	32.4	9.2	16.1	1.2	7.2			0.5			6.6	434.4
Ukraine	2.7				0.7	0.1							3.5
United Republic of Tanzania	394.1	19.1	11.4	16.1	1.0	10.2		0.2				8.9	461.1
Uzbekistan	70.2	16.4	-		0.7	2.6				0.8		1.2	91.9
Vietnam	125.8	40.7	1.9	14.9	3.2	3.2			0.1	2.9		0.9	193.6
Yemen	228.3	24.0	5.0	10.5	1.2	2.1							271.2
Zambia	150.7	8.4	3.9	4.5	0.7	3.5			0.2				171.8
Zimbabwe	101.5	7.5	1.5	4.0	0.9	1.7		0.2	0.1				117.5
Grand total	10,118.5	1,825.1	357.3	599.2	113.5	199.5	29.2	5.7	7.6	13.4	12.7	122.4	13,404.2

Notes:

a – Approvals are a subset of commitments that have been approved by the Gavi Board (or Executive Committee) or the Gavi CEO. 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.

b – Civil society organisation Type A is not included as these approvals are not country specific.

General notes:

Approvals for Gavi Phase I (2000–2006) have been adjusted to reflect the actual disbursement values.

Approvals totalled US\$ 9,386 million through 2016, US\$ 1,440 million in 2017, US\$ 1,387 million in 2018 and US\$ 1,191 million in 2019.

Figures in the above table are expressed in millions with 1 decimal.

Source: Gavi, the Vaccine Alliance, 2019

6 Commitments and Board approvals for investment cases

as of 31 December 2018 (US\$ millions)

Commitments for investment cases 2003–2021^a

Programme	Vaccines	Operational costs	Cold chain equipment	Implementation costs	Total
Measles	60.4	115.6			176.0
Measles-Rubella Initiative	22.0	33.0			55.0
Meningitis	207.8	34.3			242.2
Maternal and neonatal tetanus	16.3	45.3			61.6
Polio	143.3	48.0			191.3
Yellow fever	168.0	49.3			217.3
Cholera	131.5	35.0			166.5
Ebola	5.0	3.0			8.0
Humanitarian response (Syria)	36.1		13.9		50.0
Malaria vaccine pilots				27.5	27.5
Other	5.0	0.5			5.5
Total:	795.4	364.0	13.9	27.5	1,200.8

Notes:

a – Commitments represent endorsements of multi-year programme budgets made by the Gavi Board (or Executive Committee) or the Gavi CEO. 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.

b – Approvals are a subset of commitments that have been approved by the Gavi Board (or Executive Committee) or the Gavi CEO. Only such approved amounts can be disbursed subject to all other conditions for disbursement being met by the countries.

Source: Gavi, the Vaccine Alliance, 2019

Board approvals for investment case expenditure 2003–2020^b

Programme	Vaccines	Operational costs	Cold chain equipment	Implementation costs	Total
Measles	60.4	115.6			176.0
Measles-Rubella Initiative	22.0	33.0			55.0
Meningitis	100.5	29.1			129.6
Maternal and neonatal tetanus	16.3	45.3			61.6
Polio	143.3	48.0			191.3
Yellow fever	167.9	49.3			217.2
Cholera	71.6	20.0			91.6
Ebola	5.0	1.0			6.0
Humanitarian response (Syria)	36.1		13.9		50.0
Malaria vaccine pilots				24.6	24.6
Other	5.0	0.5			5.5
Total:	628.0	341.8	13.9	24.6	1,008.4

The Vaccine Alliance is funded by

Donor governments and the European Commission

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Girl Effect
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Lions Clubs International Foundation (LCIF)
Mastercard
Majid Al Futtaim
Orange
Philips
Reckitt Benckiser
Unilever
UPS
Vodafone

Our aspiration 2016–2020

10%
reduction in child mortality rate

300
million children vaccinated through routine programmes

5–6
million lives saved over the long term

250
million years lost due to disability or premature death averted

100%
of vaccine programmes sustained after our financial support ends

Credits

Chief editor: Sarah Sheppard

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Gavi prepares an Annual Financial Report for each calendar year, which includes the audited consolidated financial statements of the Gavi Alliance and of the International Finance Facility for Immunisation. The 2018 Annual Financial Report will be approved by the Board and published on the Gavi website in September 2019: www.gavi.org/funding/financial-reports.

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Annual Progress Report

2020
2019
2018
2017
2016

4.3 million future deaths were averted in 2016–2018 thanks to Gavi-supported vaccines; putting us on track to reach our 5–6 million target by 2020



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