

Inaugural Keynote Lecture: Contributions of Gavi and DCVMN to the global vaccine markets

DCVMN 18th AGM
Seth Berkley M.D, CEO
26 September 2017, Seoul



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Gavi's mission, model and achievements to date

Gavi's mission

Saving
children's
lives

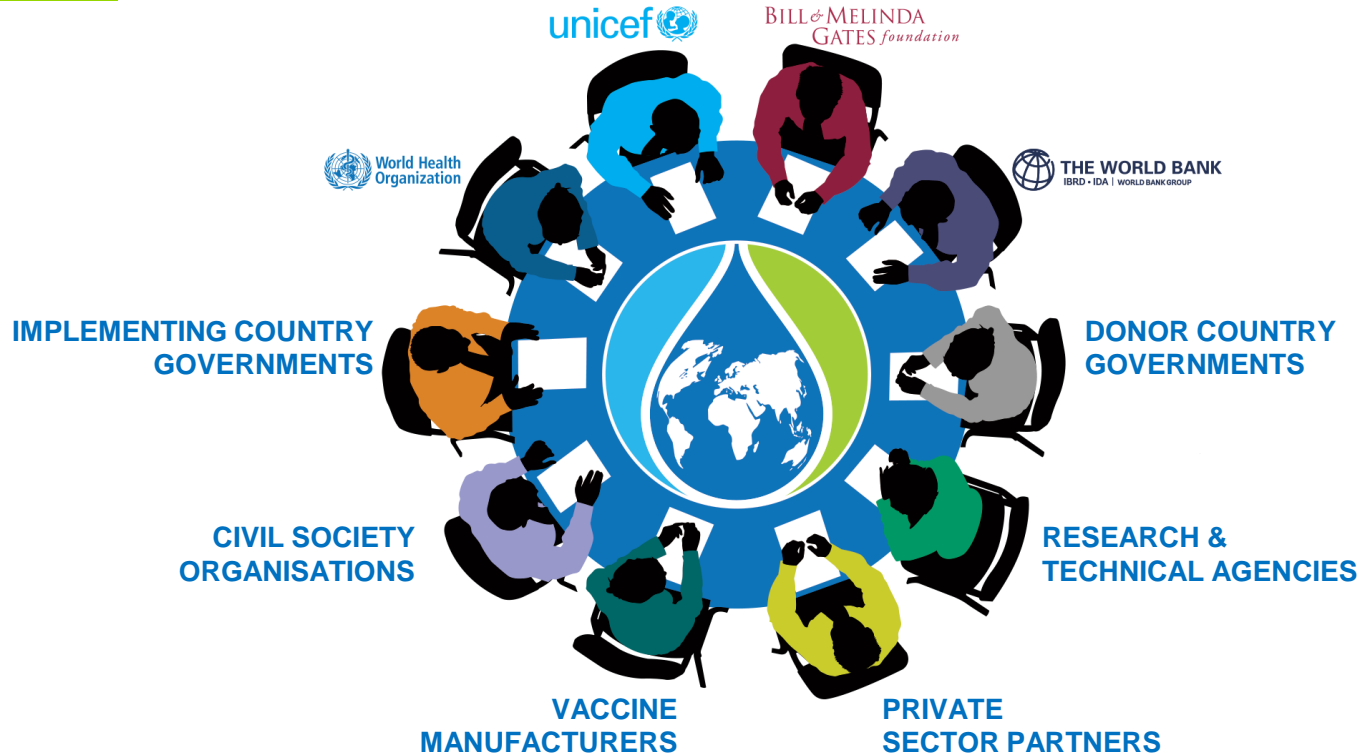
and protecting
people's health

by increasing
equitable use of
vaccines

in lower-income
countries

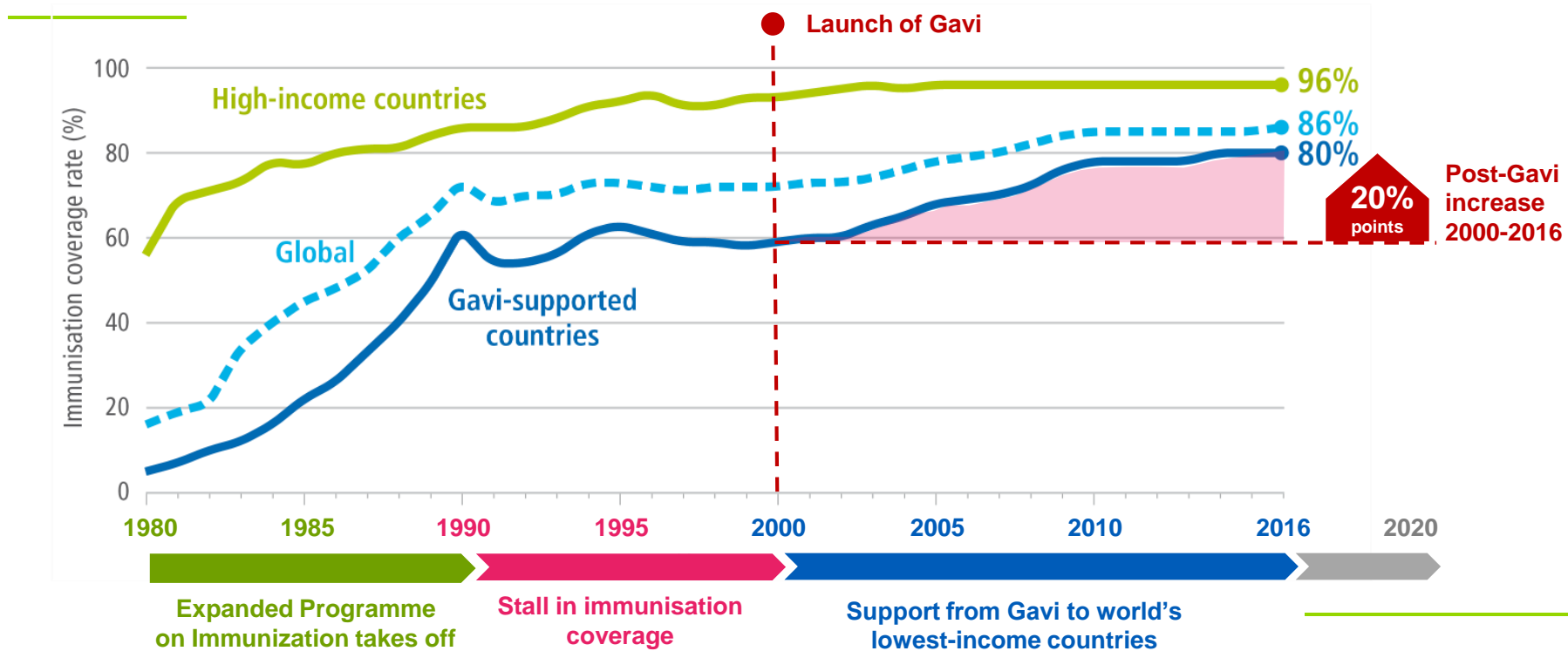


Gavi's partnership model



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Increasing immunisation coverage



* Based on data officially reported to WHO and UNICEF by current member states.

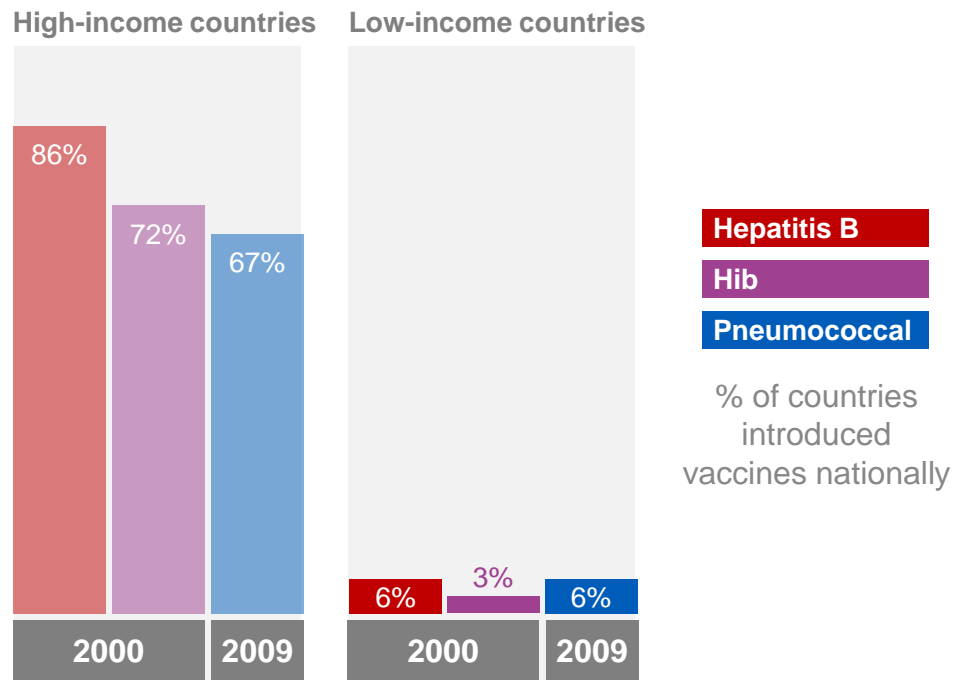
Note: Includes DTP-containing vaccines, such as pentavalent vaccine.

Source: WHO/UNICEF Estimates of National Immunization Coverage, 2017

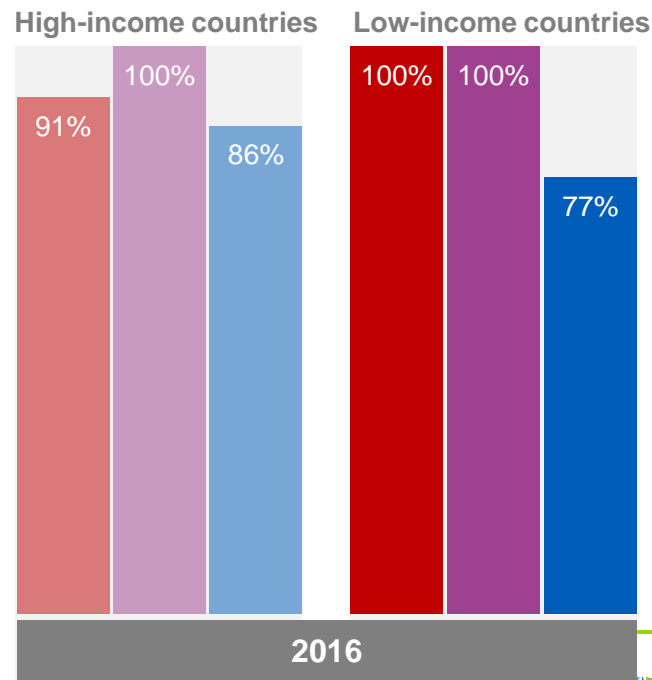
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Accelerating access to new vaccines in poorest countries

Prior to Gavi support



Now



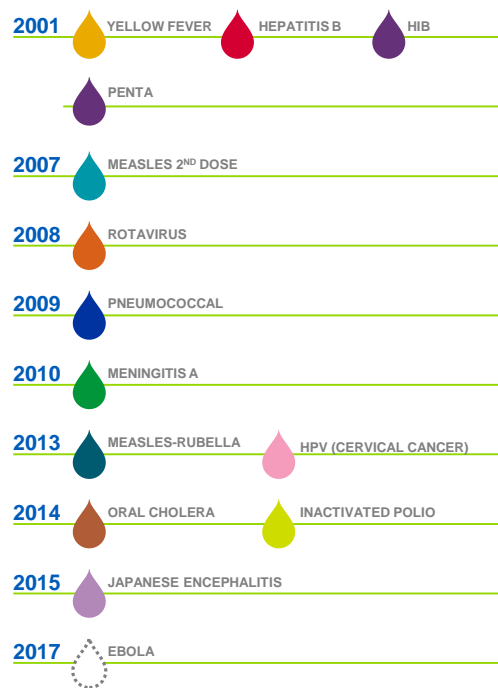
Note: Only countries with universal national introduction are included. World Bank 2016 country classification has been applied to the whole time series.

Source: The International Vaccine Access Center (IVAC) VIMS database.
Data as of 31 December 2016.

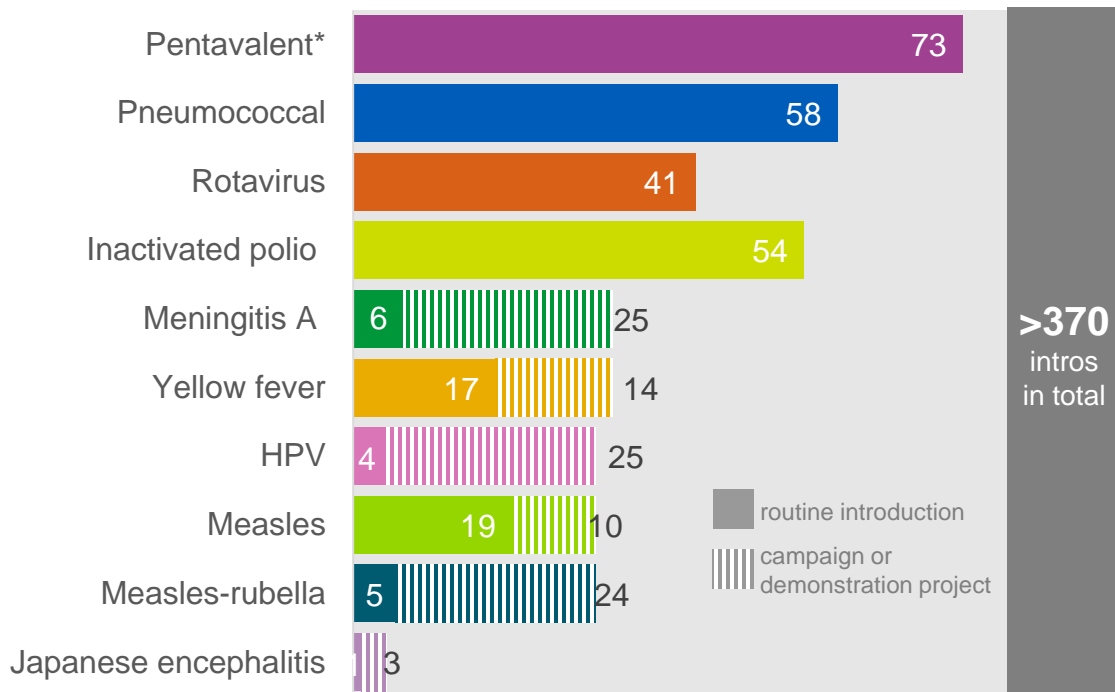
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Gavi vaccine introductions and campaigns

Year of first introduction/use of stockpile



Introductions by September 2017



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* 5 of the 73 countries introduced pentavalent vaccine independently of Gavi support.
 ** Measles routine = measles 2nd dose
 As of 20 September 2017

Gavi partnerships with countries: the India example



Pentavalent vaccine

- India's introduction with Gavi support and transition to full scale self-financing increased the Penta market by ~80m doses per year
- Increased and steady demand helped secure lower prices



Pneumococcal vaccine

- Launch started in three states



Measles-rubella vaccine

- Campaign completed in five states and started in 6 additional states

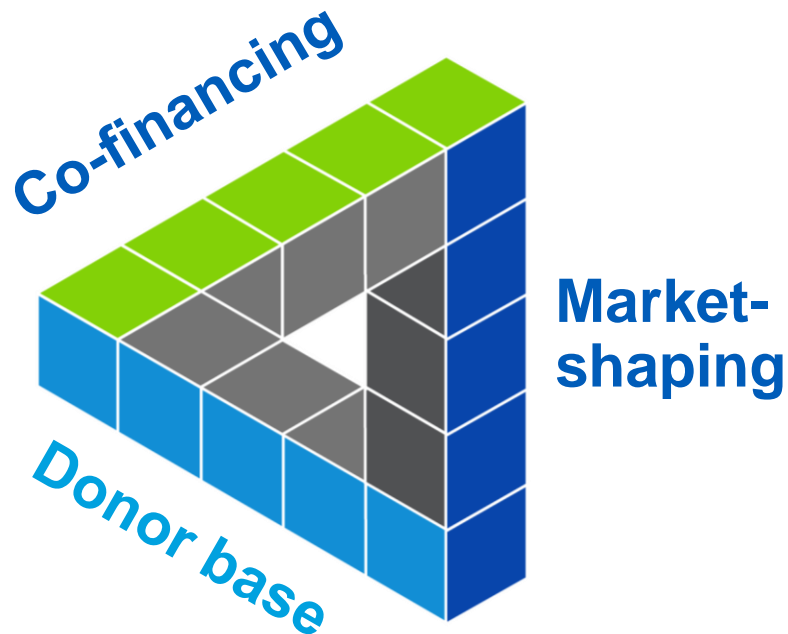


Rotavirus vaccine

- Launched in nine states, self-financed

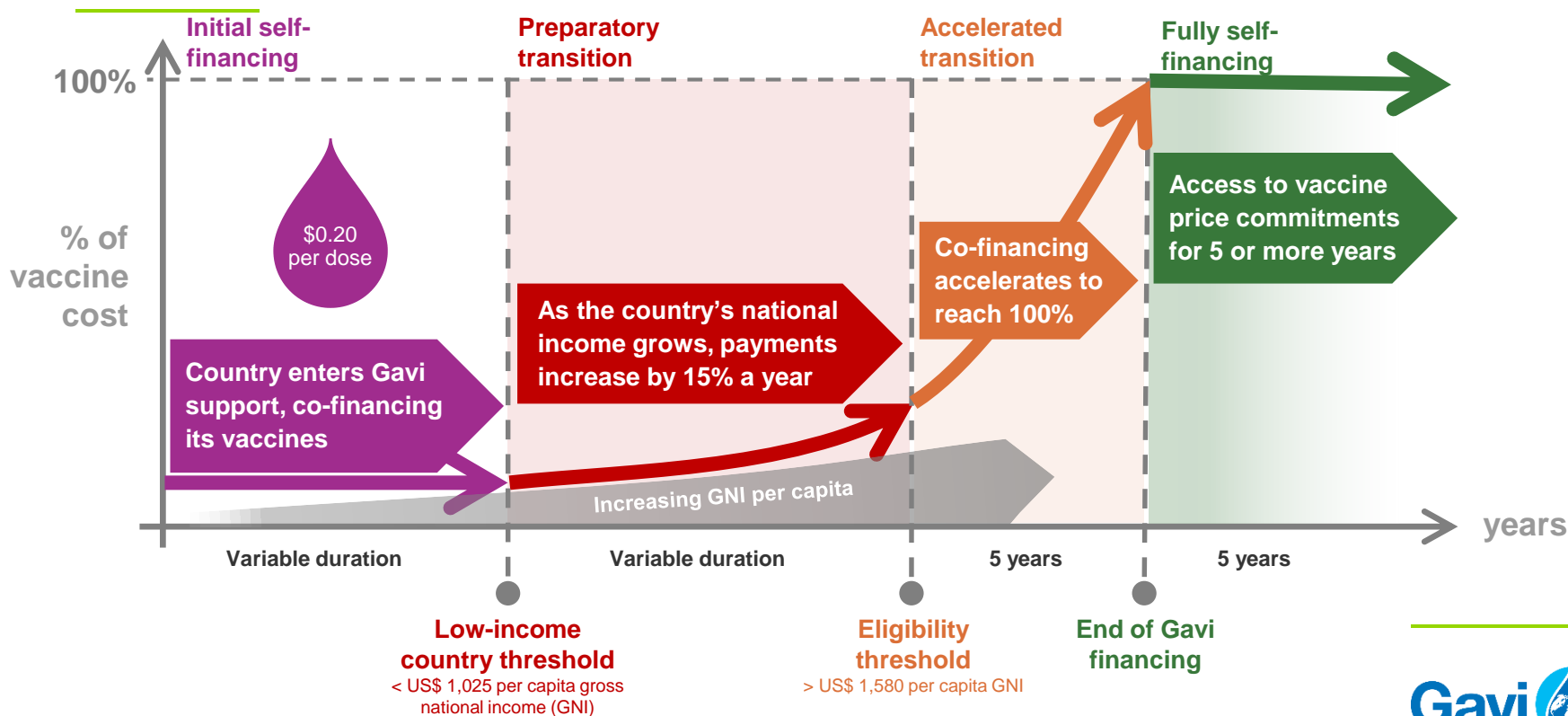
Aug-2017: Intensified Mission Indradhanush: Aim to reach 90% immunisation coverage by 2018

GAVI'S RESOURCE MOBILISATION MODEL



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As economies grow, countries transition out of Gavi support

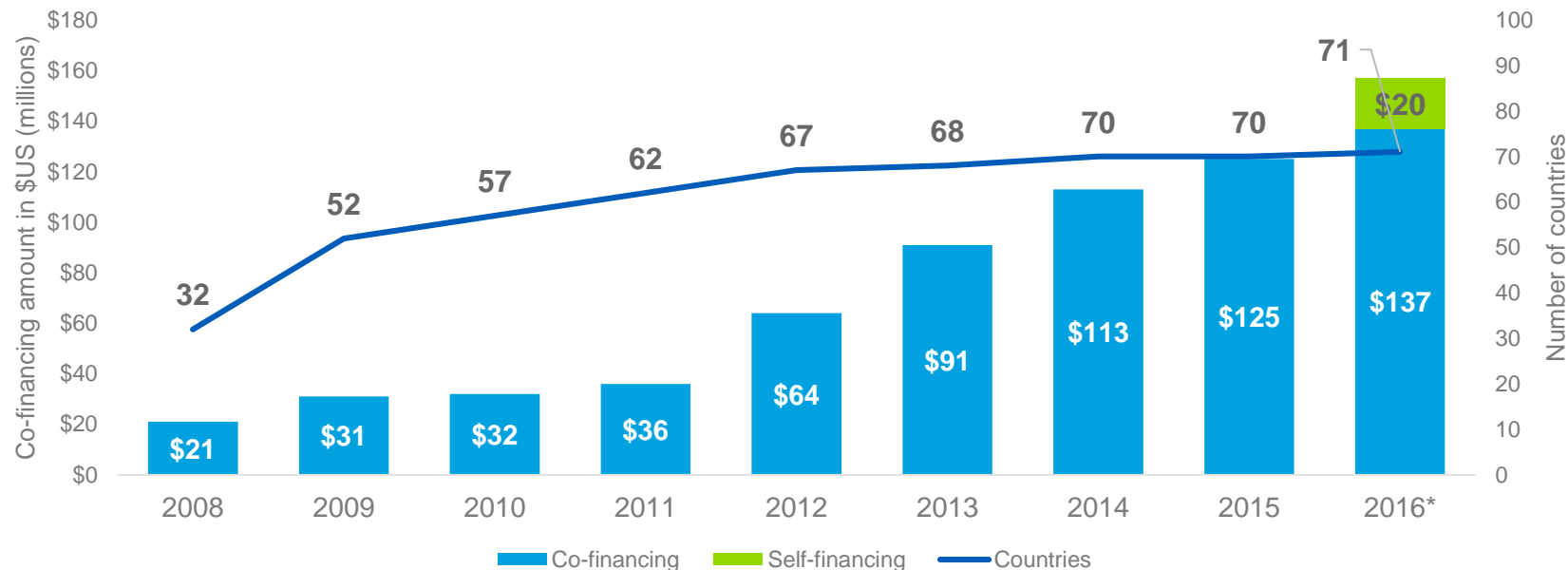


Note: the eligibility threshold is adjusted annually for inflation.

Source: Gavi, the Vaccine Alliance, 2016

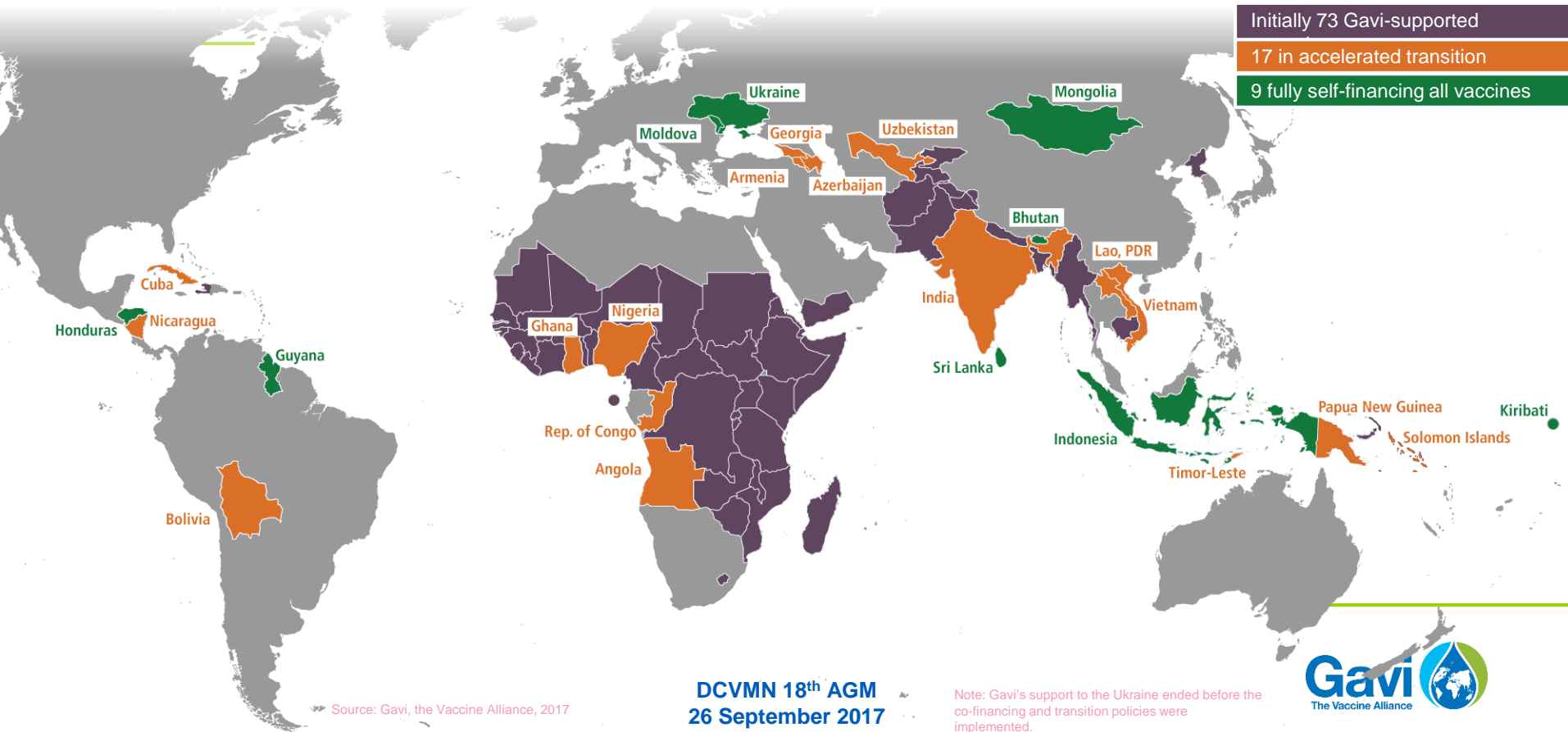
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Growing country co-financing contribution



* In 2016, 67 countries were co-financing and 4 countries fully self-financing

One third of initial 73 Gavi countries in or completed transition

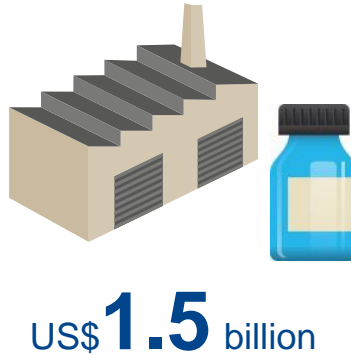


Innovative finance key to Gavi's funding model

International Finance Facility for Immunisation (IFFIm)



Advance Market Commitment (AMC) for pneumococcal vaccine



Advance Purchase Commitment (APC) for Ebola vaccine



The Gavi Matching Fund



Government of the Netherlands

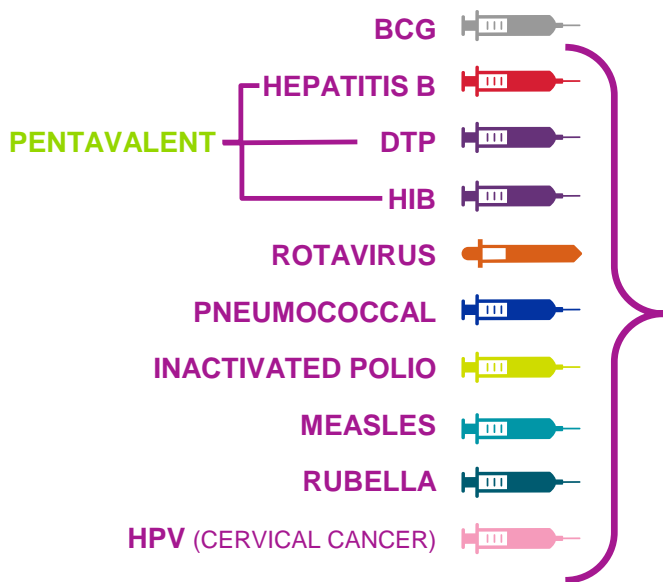


British Government

BILL & MELINDA
GATES foundation

Affordable and sustainable vaccine prices

Cost to immunise a child
with full course of:














Gavi
price:
US\$ 35



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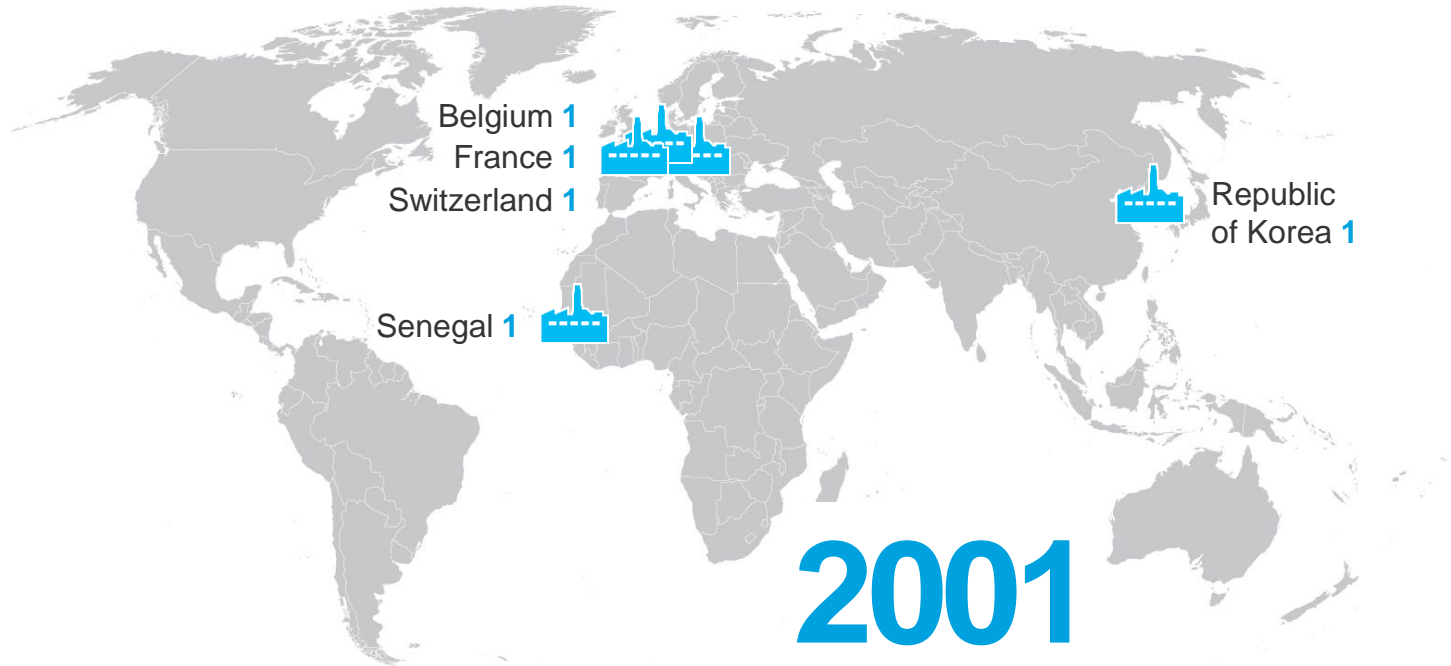
Market shaping and the role of industry in the Vaccine Alliance

Vaccine markets, how partners achieve impact

	UPSTREAM	PLANNING	INCENTIVES	PROCUREMENT	OPERATIONS
BMGF					
GAVI					
UNICEF					
TACTICS	<ul style="list-style-type: none"> Product innovation Providing financial resources Technical support 	<ul style="list-style-type: none"> Programmatically driven demand forecasts Market analytics Strategic vaccine roadmaps Information transparency 	<ul style="list-style-type: none"> Negotiating affordable pricing Innovative financing mechanisms or market incentives 	<ul style="list-style-type: none"> Tender process execution Manufacturer award 	<ul style="list-style-type: none"> Supply chain operations Technical support for country-led programs, introductions, packaging and cold chain capacity

Gavi started at a time of limited supply

2001: 5 suppliers from 5 countries of production

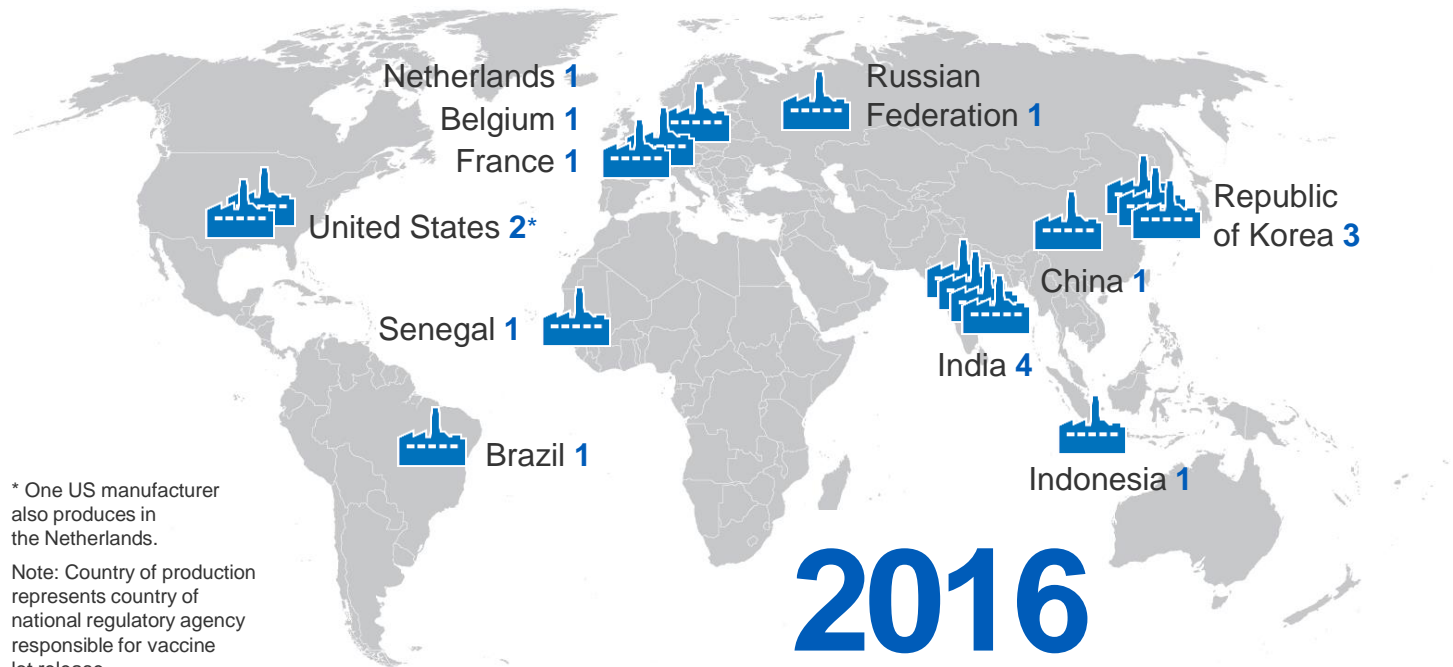


Source: UNICEF Supply Division

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Gavi has helped create a viable market with more secure supply

2016: 17 manufacturers from 11 countries of production



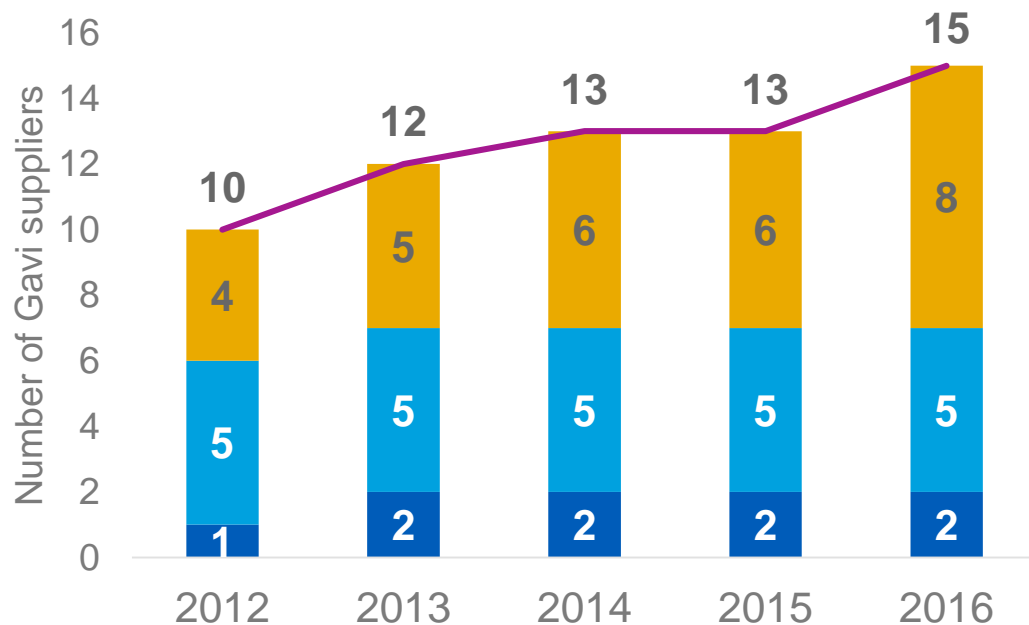
* One US manufacturer also produces in the Netherlands.

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

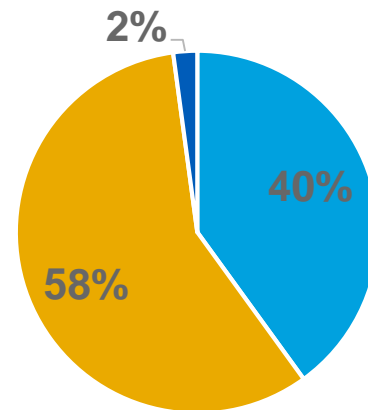
Source: UNICEF Supply Division and WHO list of pre-qualified vaccines, 2016

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DCVMN contribution to Gavi market



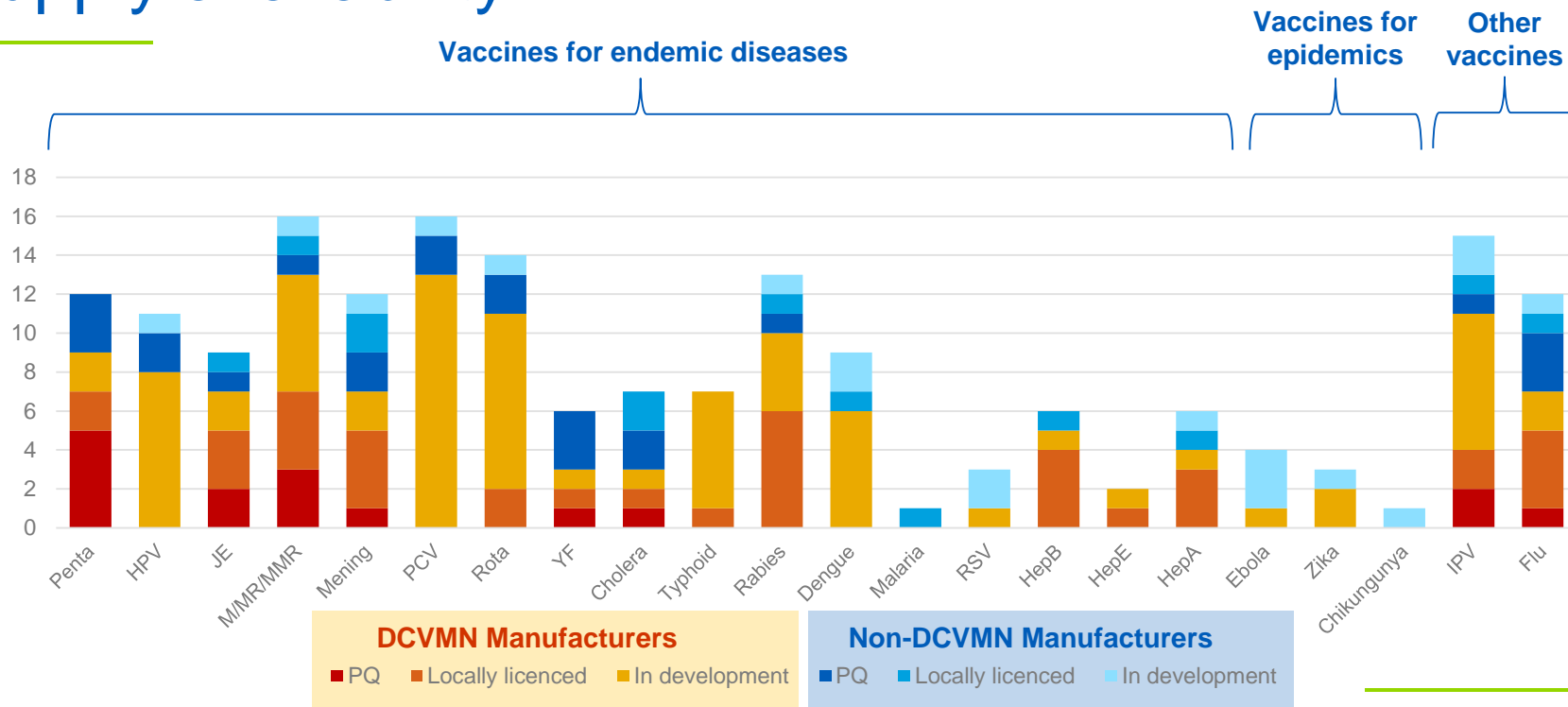
% of Gavi supplied doses 2012-2016



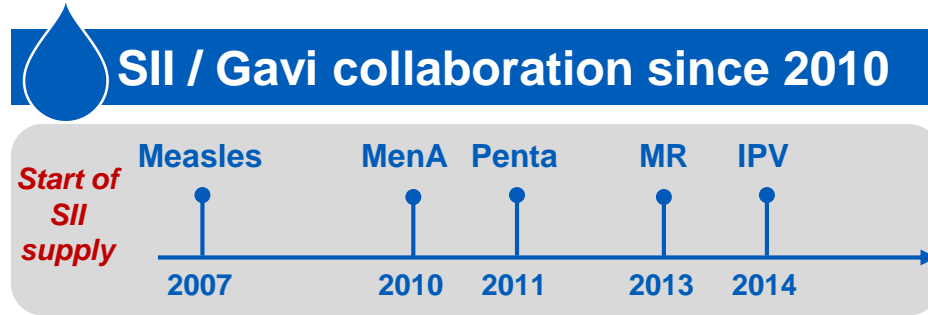
DCVMN supplied Gavi with 1.5bn doses over 2012-2016

■ Other suppliers* ■ IFPMA suppliers ■ DCVMN suppliers — Total

Critical role of DCVMN in ensuring greater vaccine supply availability



Gavi collaboration with industry: the example of SII



- Over 2012-2016, SII supplied 1,193 million doses of vaccines and contributed to immunizing 923 million children

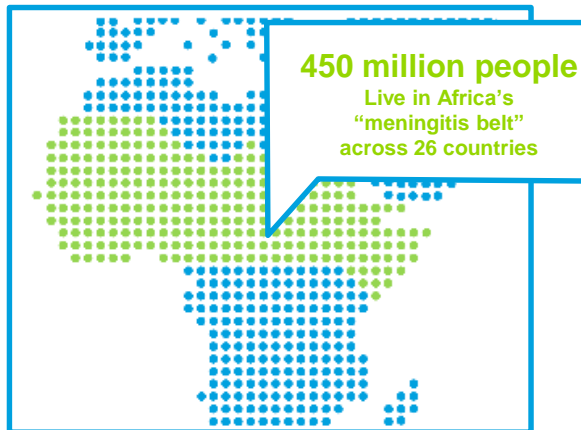


SII contribution to improving vaccine supply security: MenAfriVac success story

Meningitis A vaccine

The Challenge:

- ◆ No affordable vaccine against meningitis A
- ◆ Vaccine manufacturers reluctant to invest



Severe consequences:

- ◆ 10% of people infected die
- ◆ 25% of survivors suffer permanent disabilities

The Solution:

- ◆ Partnership between WHO, PATH, Bill & Melinda Gates Foundation
- ◆ SII vaccine development commitment
- ◆ Initial investment to develop affordable vaccine



- ◆ Gavi funds campaigns and routine introductions

450 million
people threatened

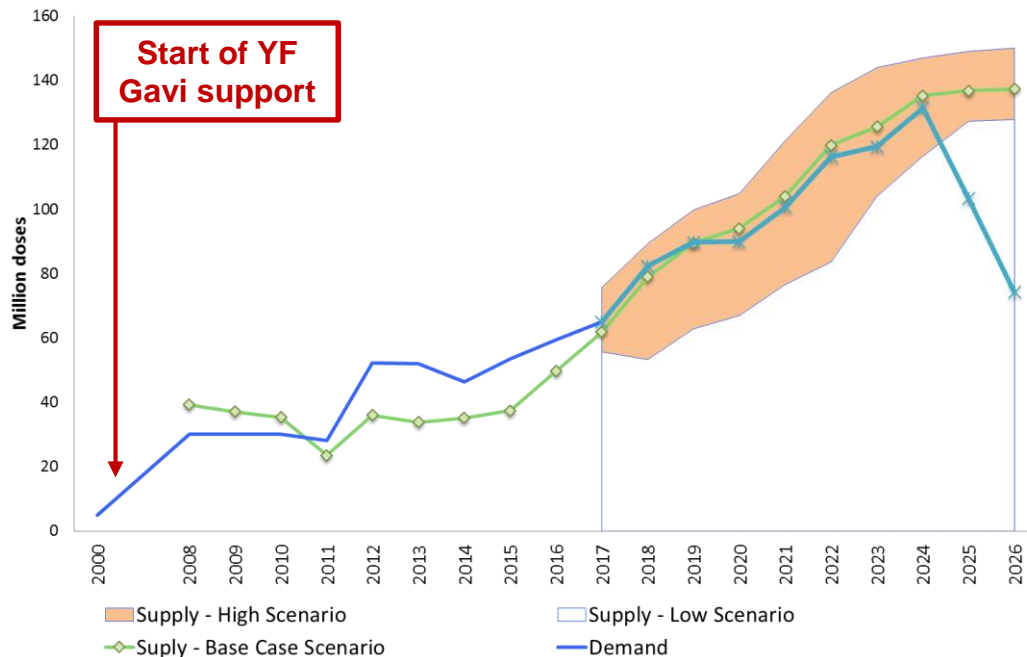
More than 235 million
people vaccinated since 2010



Prevention vs Treatment
Cost per person

Yellow Fever vaccine: example of an increasingly healthy market

- Between 2013 and 2017, Gavi and partners identified opportunities to **improve supply security** for YFV:
 - Encouraging manufacturers to invest** in securing and increasing supply
 - Providing technical and financial support** to manufacturers
 - Strengthening National Regulatory Agencies** responsible for ensuring vaccine quality and safety



Gavi is committed to supporting product innovation



Accelerating product innovation to better meet country programmatic needs and improve coverage and equity



Align product innovation priorities and definitions across market-shaping partners



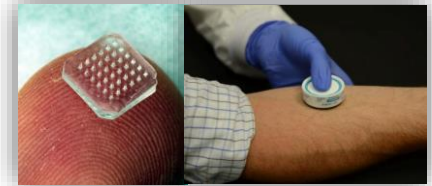
Weigh benefits of **long-term product innovations** to support investment decisions



Shape **cold chain equipment markets**

Delivery options

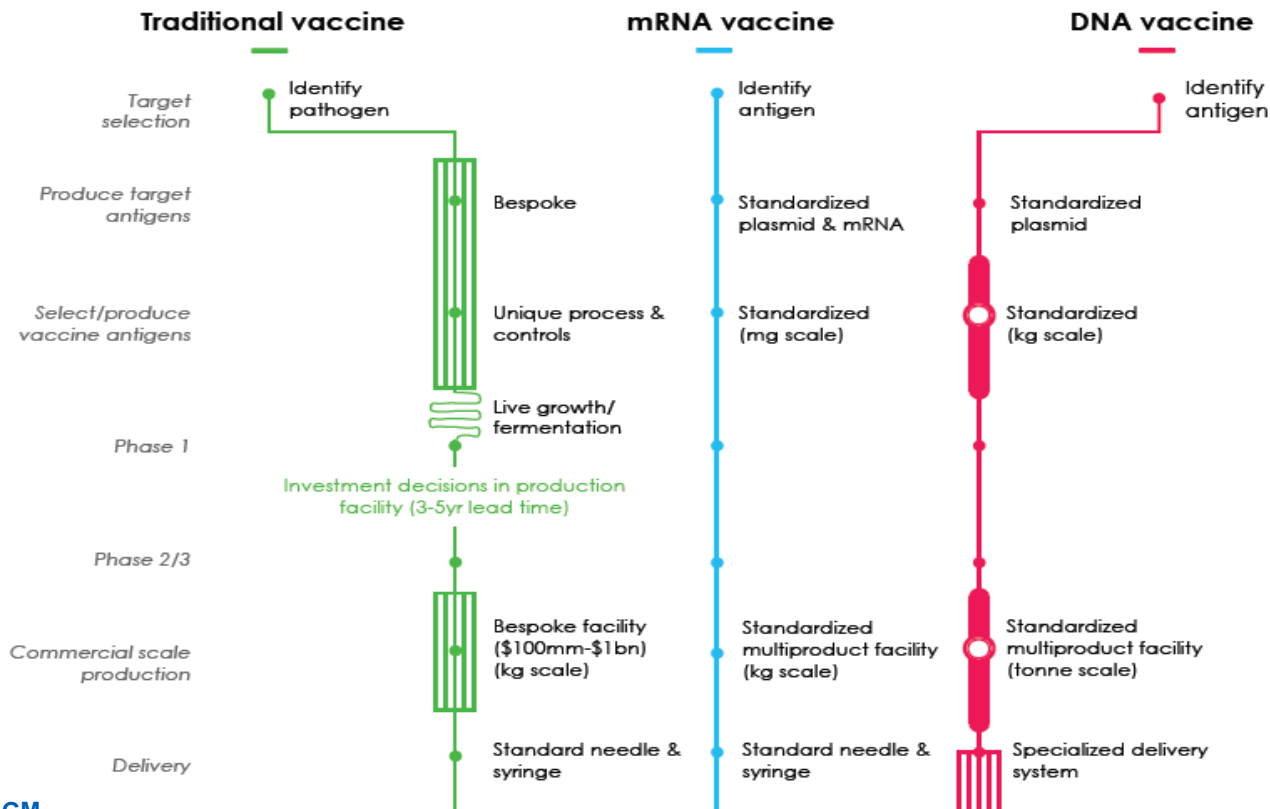
- Transdermal micro-array patch
- Needle free jet injectors
- Blow-filled seal technology
- Solar Direct Drive refrigerators



Product Presentations



Comparison of production processes: traditional, mRNA and DNA vaccines



Numerous mRNA vaccines in clinical/ pre-clinical development

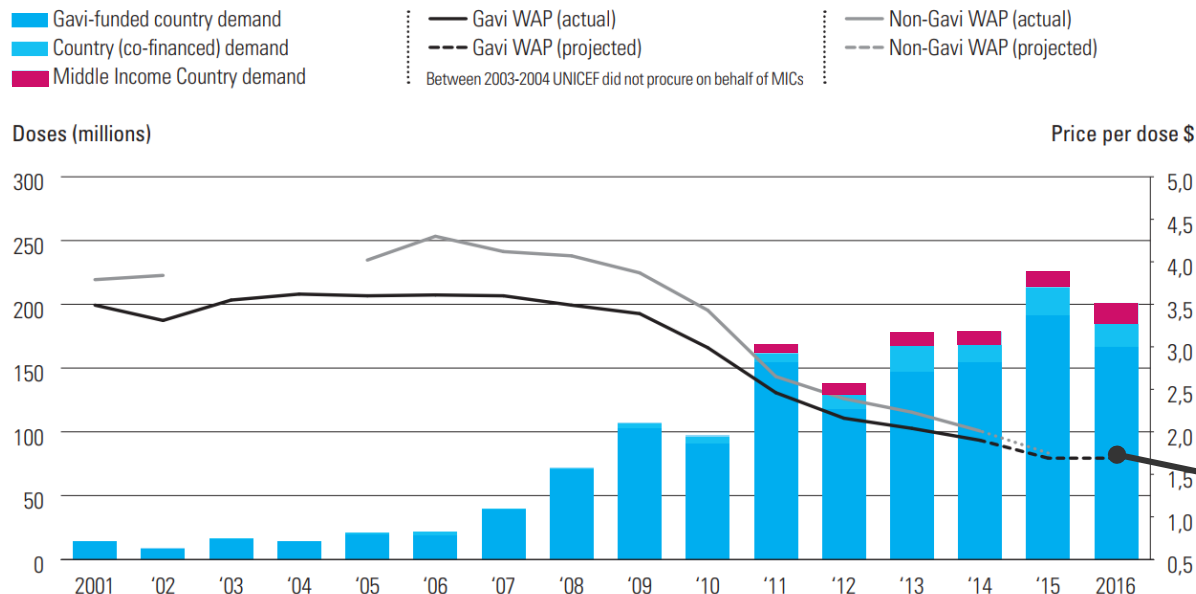
In clinical development

- Influenza H10
- Influenza H7
- Rabies
- Chikungunya
- Zika

In late clinical development

- CMV
- HMPV/ PIV3

Increased access to vaccines also means lower prices for middle income countries: Penta example



Further 50% price reduction expected over 2017-2019

Suppliers

1 1 1 1 1 2 2 4 4 5 6 6 7 8 8 9

Source: UNICEF Supply Annual Report, 2014 and UNICEF Vaccine Price Data, 2017

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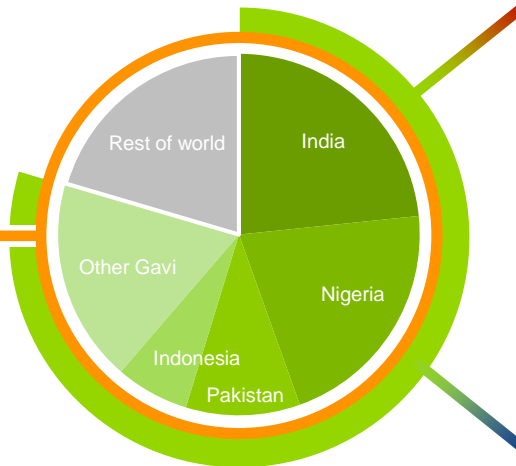
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Emerging challenges and opportunities

The immunisation gap



19.5
million
are not fully
protected with
the most
basic
vaccines



80%
in Gavi-supported
countries



1 in 5

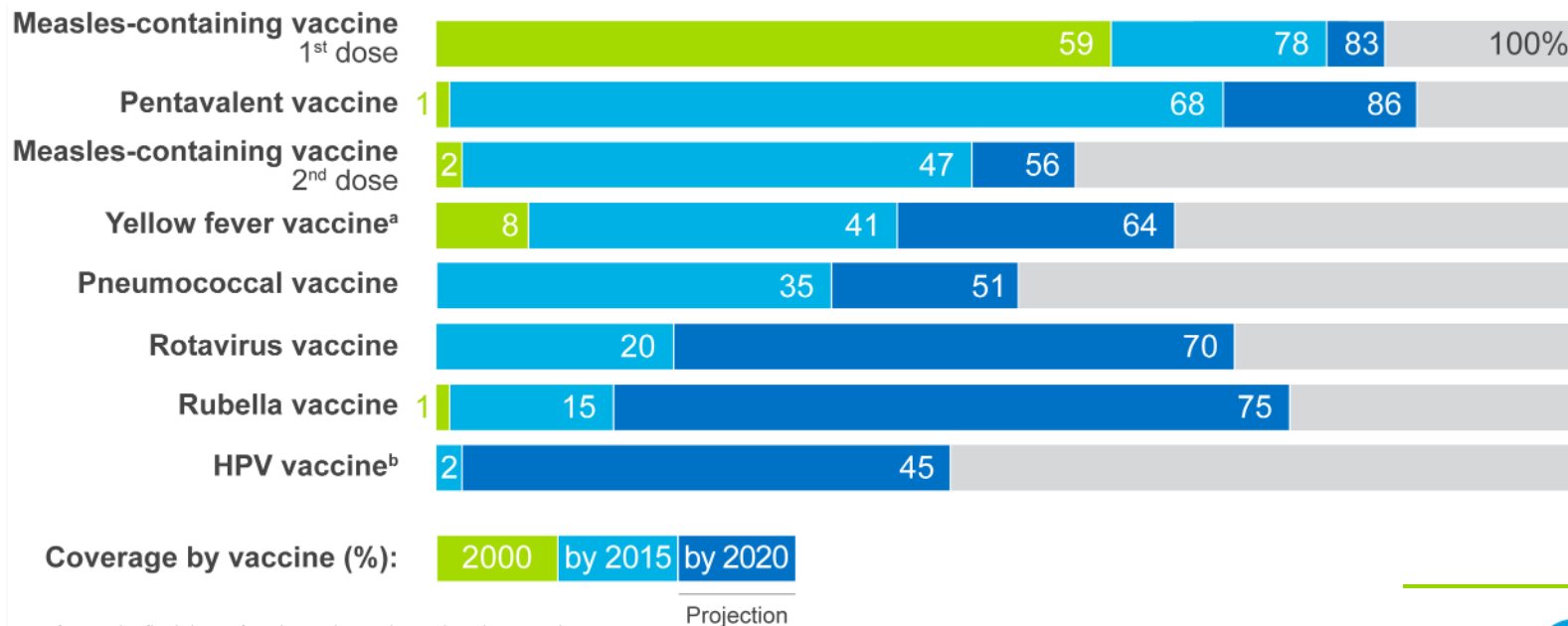
in Gavi countries do
not get a full course
of the most **basic**
vaccines



only **1 in 14**
are fully immunised
with all
recommended
vaccines

...and to accelerate coverage of new vaccines

Vaccine coverage in Gavi-supported countries by 2020



Coverage refers to the final dose of each vaccine, unless otherwise stated.

^a Target population and coverage estimates are based on 32 yellow fever-endemic Gavi-supported countries in Africa.

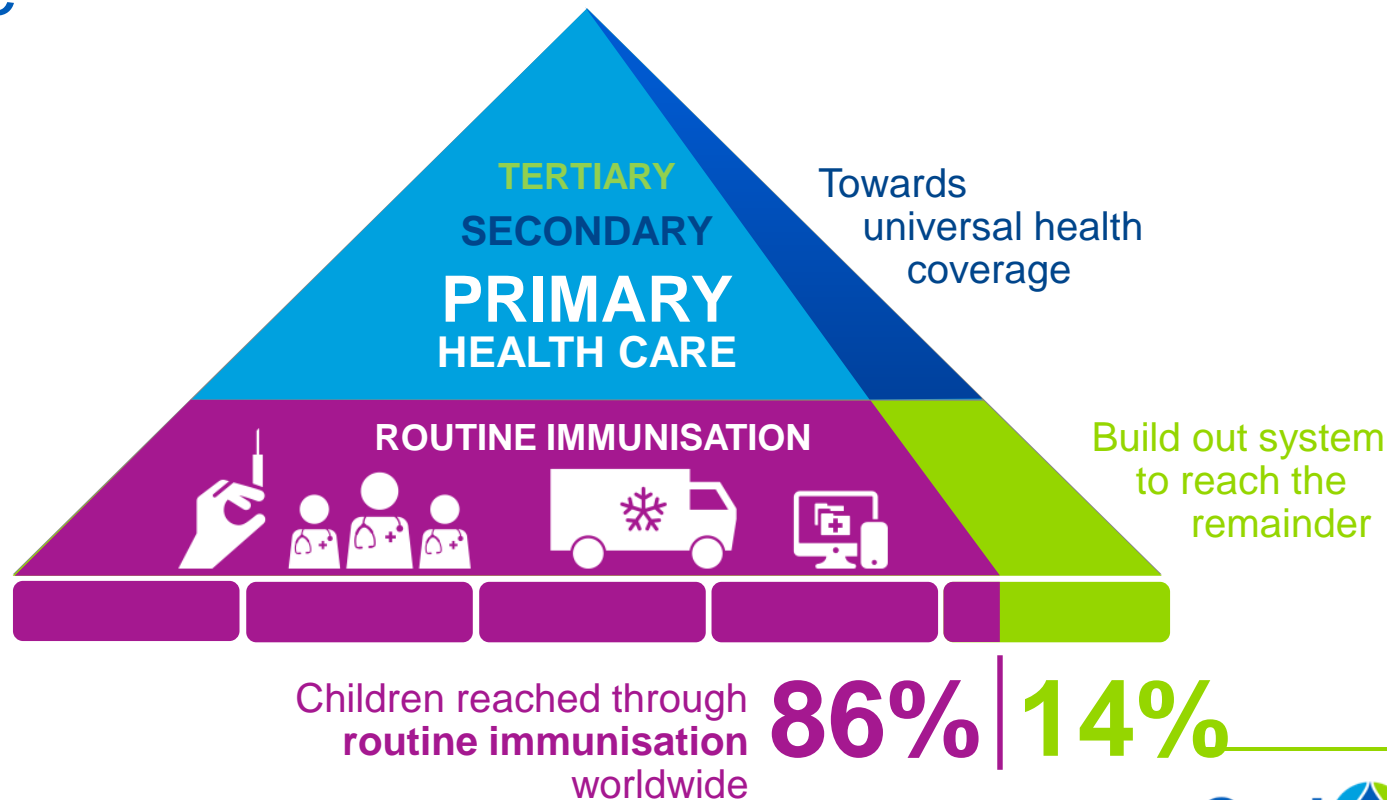
^b Target population for HPV is 10 year old girls.

Sources: WHO/UNICEF Estimates of National Immunization Coverage, 2016. 2020 coverage: Gavi strategic demand forecast version 12.

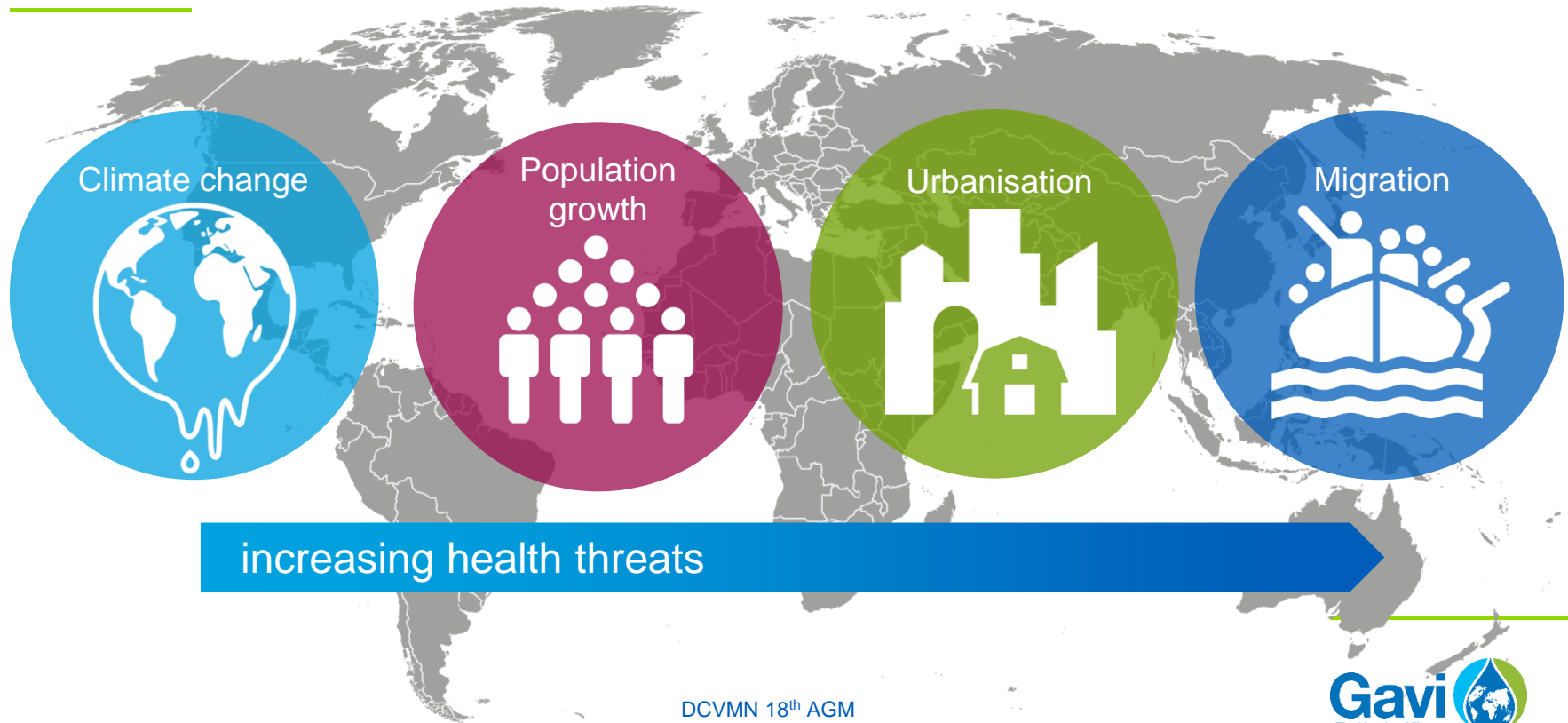
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Immunisation: a platform for universal health coverage



Growing risk of infectious disease outbreaks



Routine immunisation key to global health security

Strong **routine immunisation** systems help build the capacity for communities and countries to **detect**, **prevent** and **respond to** outbreaks



Countries are more connected than ever



Diseases spread faster and further



70% of countries are not prepared*



Threat to health security



Threat to economic stability



* Source: CDC, Decoding GHSA: Global Health Security Agenda

Gavi's growing role in outbreak preparedness and response



Yellow fever vaccine
stockpile



Measles outbreak
response



Meningitis vaccine
stockpiles



Oral **cholera** vaccine
stockpile



Ebola vaccine
stockpile

Gavi's investment in global OCV stockpile

Vaccine Investment Strategy (VIS)

- Identified evidence gaps: lack of vaccine effectiveness data for **targeted vaccination strategy**, unsure of demand, impact and programmatic feasibility
- Decision: **global cholera vaccine stockpile contribution** for epidemic response + **research investment** to understand role of OCV in endemic settings

Gavi Board

- Approved the use of the VIS funding to also support operational costs

2018 VIS

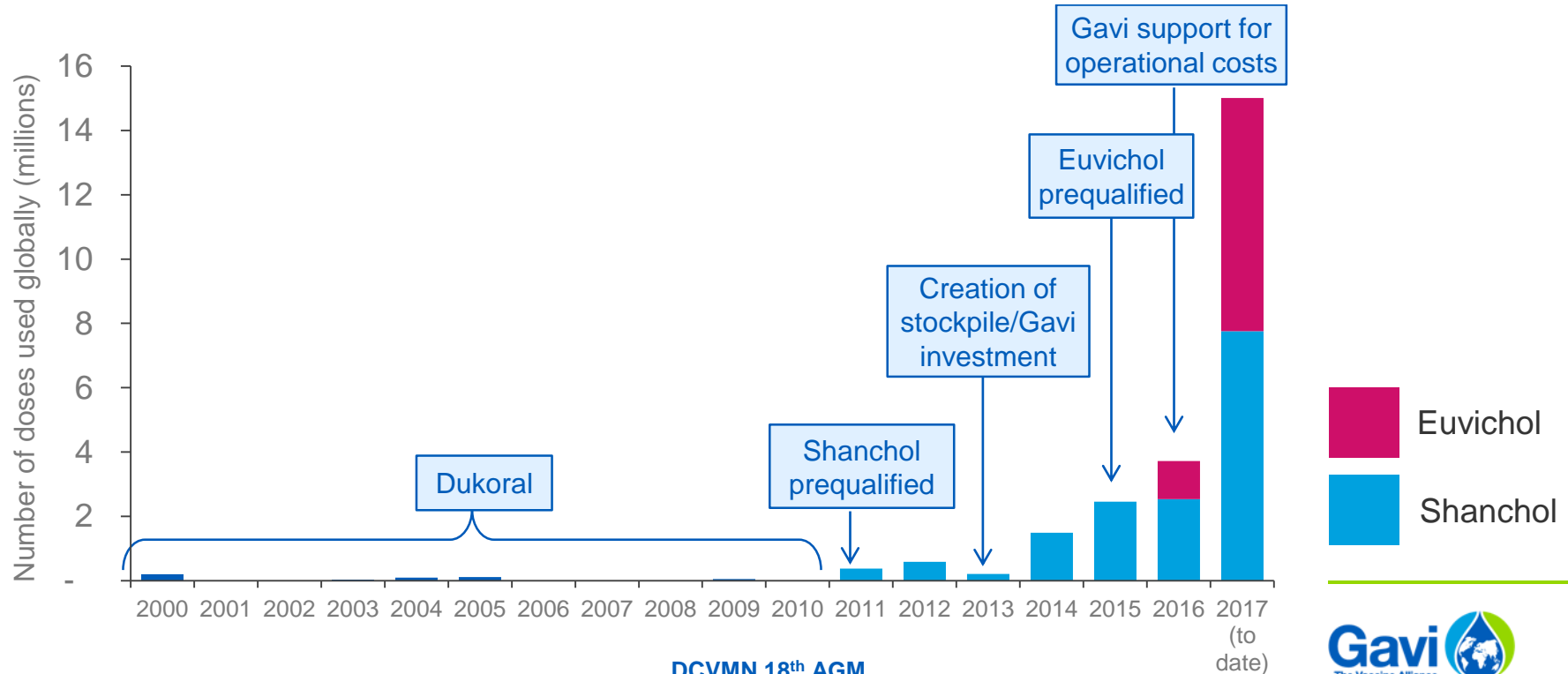
- Review of Gavi's future investment in cholera

2013

2016

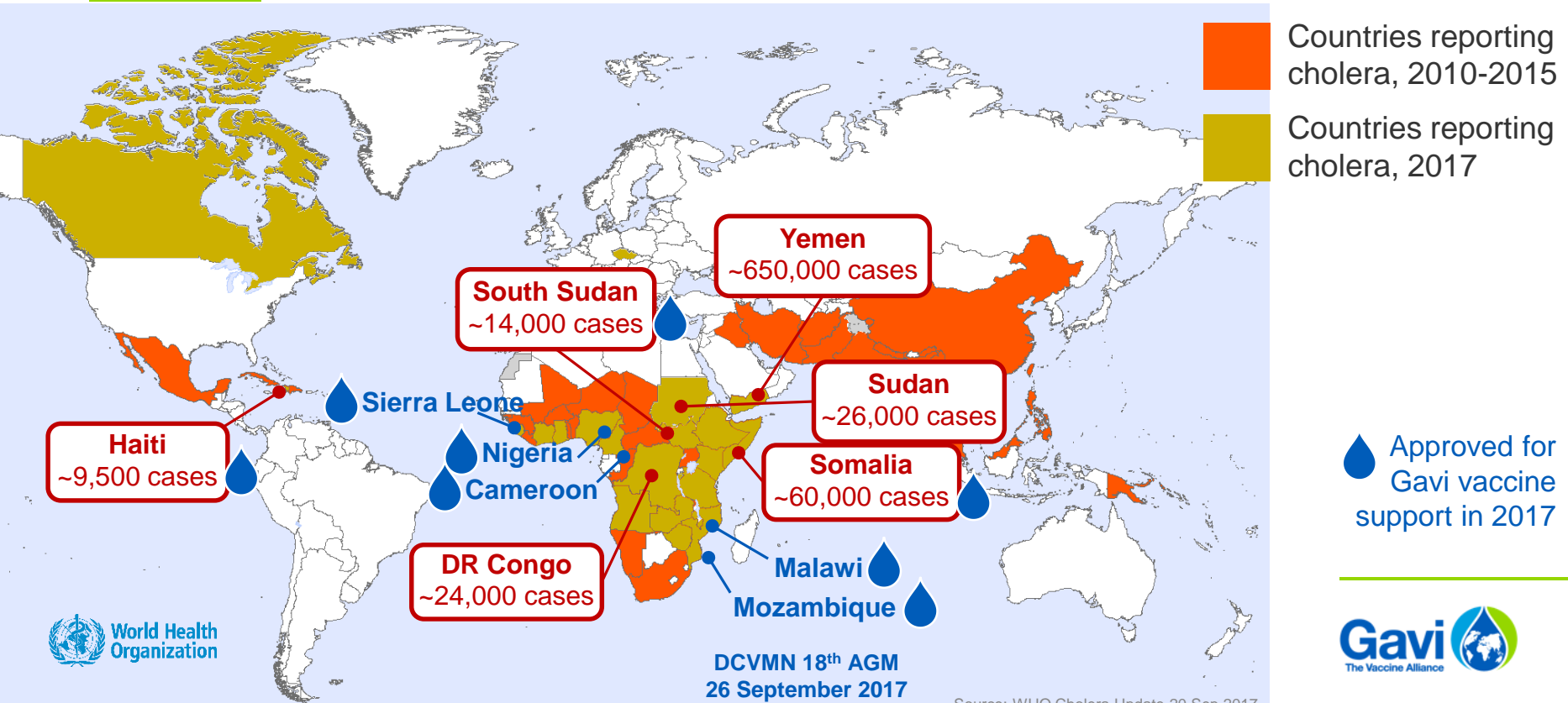
2018

Oral cholera vaccine: impact of investment



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Cholera: affected countries



Alliance Partners supported the introduction of a new oral cholera vaccine from EuBiologics



* Cholera Vaccine Initiative

Tech Transfer &
Licensure

Funding (CHOVI*)

Prequalification

eu**biologics** 



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Euvichol Innovative Packaging

Euvichol Carton for 10 vials



Appearance of Euvichol



Pull tab mechanism to facilitate removal of vaccine's foil cover



Next version of Euvichol: further improving the convenience of administering the vaccine

Euvichol in glass vial presentation



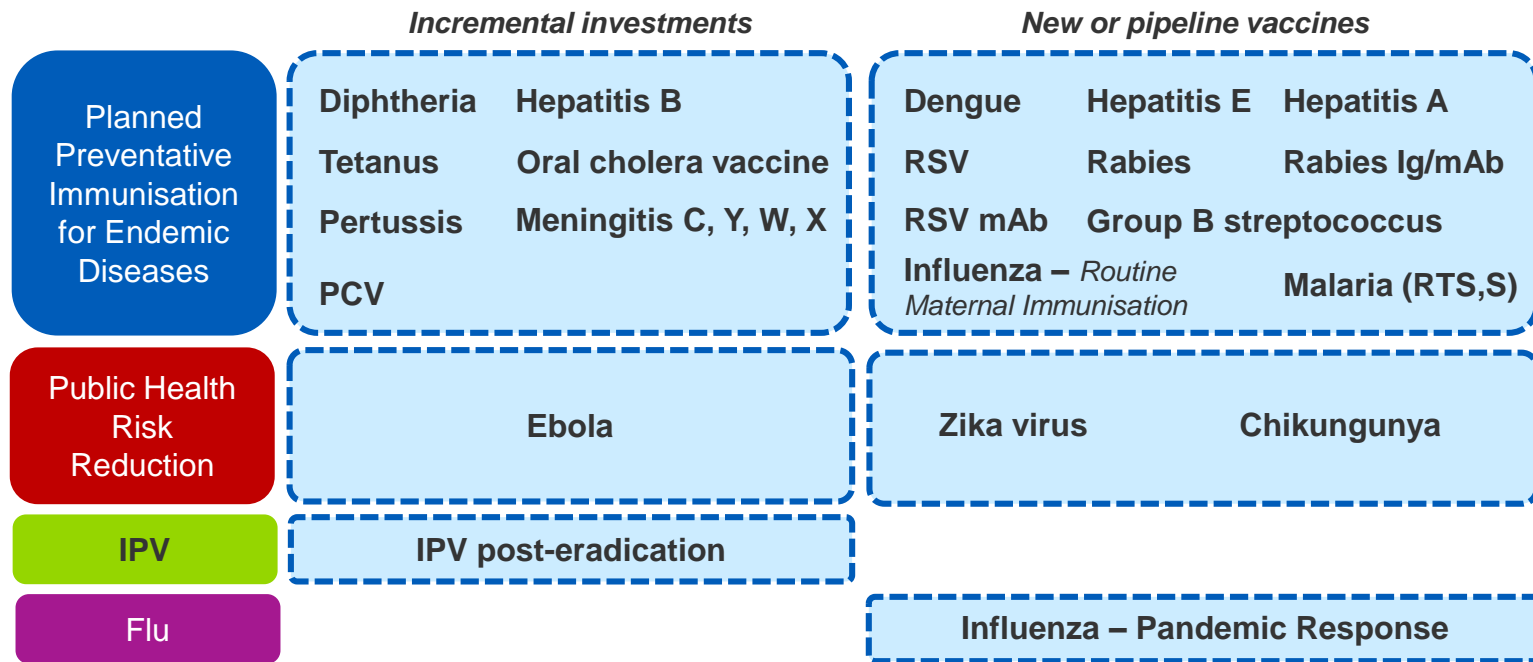
Euvichol in plastic tube presentation



- Less expensive
- Ease of storage and transportation
- Ease of administration and waste management

Looking ahead: Future vaccine investments to be decided in 2018 Vaccine Investment Strategy

Candidate Vaccines



* Further analyses and information might shift this list over the course of the next few months

TED: The troubling reason why vaccines are made too late, if they are made at all.....



Source: TED, Vancouver (March 2015)

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Epidemic preparedness: launch of CEPI



Seth Berkley ✓

@GaviSeth

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Here broad group of partners celebrating #cepi launch @Davos #wef17 #globalhealth @wellcometrust @gatesfoundation



Richard Hatchett
CEO, Coalition for
Epidemic Preparedness
Innovations (CEPI)



CEPI
New vaccines
for a safer world

Mission

We want to stop future epidemics by developing new vaccines for a safer world.

Vaccines are one of the world's most important health achievements. Yet their life-saving potential hasn't yet been realised for many known and unknown epidemic threats, particularly in low-income countries, where the risks and needs are often greatest.

Immunisation and antimicrobial resistance



HIGH-LEVEL MEETING ON
ANTIMICROBIAL RESISTANCE

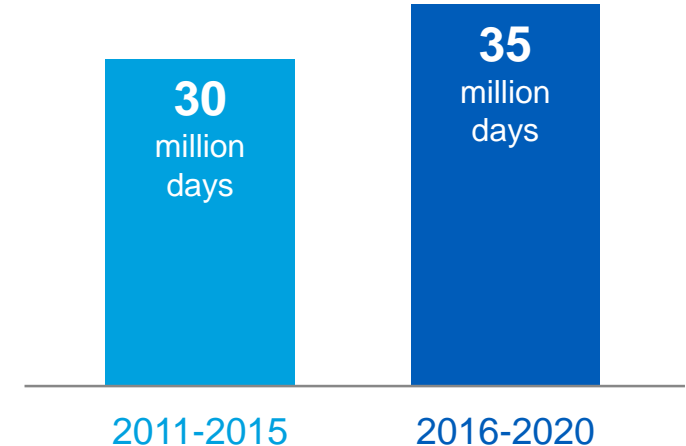


21 SEPTEMBER 2016, UN HEADQUARTERS, NEW YORK

Declaration recognised that:

“the keys to tackling antimicrobial resistance are: the prevention and control of infections in humans and animals, including immunization, monitoring and surveillance of antimicrobial resistance...”

Days of antibiotic use prevented
by Gavi support for Hib, pneumococcal
and meningitis A vaccines:



2016-20: Saving millions of lives and growing economies in the world's poorest countries

in Gavi-supported countries, 2016–2020



**additional children
immunised**

5–6
million
lives saved

>100
million
illness cases averted

80–100
US\$ billion
costs averted
related to illness:

- productivity loss due to death/disability
- treatment costs
- caretaker productivity loss
- transport costs



Sources: Update using methods from 1) Lee LA et al. The estimated mortality impact of vaccinations forecast to be administered during 2011–2020 in 73 countries supported by Gavi. *Vaccine* 2013; 2) Stack M et al. Estimated economic benefits during Decade of Vaccines, *Health Affairs* 2011.

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Thank you



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www.gavi.org