Gavi-India partnership: catalysing transformation of world’s largest immunisation programme
Gavi-India partnership: looking ahead

- **Coverage and equity support** through HSS2: 2017-2021
- **On track for transition** and already **self-financing** penta, IPV, rota, MR and select HSS innovations
- **Partnership in market shaping** on vaccines and exploring collaboration on cold chain technologies
- **Gavi donor since 2013**
1

Key developments in global landscape
2019 Lasker~Bloomberg Public Service Award honours the Vaccine Alliance

“For providing sustained access to childhood vaccines around the globe, saving millions of lives, and for highlighting the power of immunization to prevent disease”
Gavi’s third replenishment launch
(TICAD7, Japan, August 2019)

“We are immensely proud of the results Gavi has achieved with Japan’s support and we are committed to help Gavi to further its mission going into its next period.”

Masahiko Kiya
Ambassador for TICAD
Deputy-Assistant Minister for Foreign Affairs
Government of Japan
Preparing for Gavi’s third replenishment: 2020

- **January**: 20\(^{th}\) anniversary celebration at Davos
- **March**: High-level meeting hosted by Liverpool School of Tropical Medicine
- **3-4 June**: Pledging conference in London
  - Strong and sustained support across political spectrum in UK despite ongoing challenges and uncertainty
Other replenishments: 2019

The Global Fund, Lyon, October
Met ambitious US$ 14B ask

AfDB, Johannesburg, December

GPEI, Abu Dhabi, November
Raised US$ 2.6B of US$ 3.27B ask

IDA19, Stockholm, December
Launch of Global Action Plan (GAP) at 74th UNGA

- Intensive 18-month involvement to develop plan
- Collaboration for purpose: ongoing partnerships with most signatories
- Gavi leading “Sustainable financing” accelerator with Global Fund and World Bank
- Also engaging on other accelerators, especially “Primary health care”
Growing focus on primary health care in global health and development agenda
Intensified Gavi and Global Fund collaboration

Collaborating in 54 countries

1. Coordination, planning, sharing of information, joint visits, etc.
2. Increased engagement (fiduciary management, co-investments)
3. No collaboration
Intensified Gavi and Global Fund collaboration

For example, in Haiti:

- Gavi and Global Fund co-investing in **community health workers**
- Joint LMIS support through RFP process
- Potential **cost-sharing TA** for government capacity building in supply chain improvement plans

Collaborating in 54 countries

1. Coordination, planning, sharing of information, joint visits, etc.
2. Increased engagement (fiduciary management, co-investments)
3. No collaboration
Better coordination: Gavi, Global Fund investments

Gavi to share use of Global Fund dashboard for common view of health systems performance

Several countries planning for new Gavi, Global Fund HSS grants at similar time in 2020:

- Afghanistan
- Benin
- Burundi
- CAR
- Djibouti
- DPR Korea
- Kenya
- Kyrgyzstan
- Madagascar
- Mali
- Myanmar
- Pakistan
- Senegal
- South Sudan
- Sudan
- Syria

Also coordinating country dialogue and planning with Global Financing Facility (GFF) and Global Fund in 2nd wave GFF countries.
Working differently to reach zero-dose communities and strengthen primary health care
Decline in underimmunised and zero-dose children

UNDERIMMUNISED
have not received three doses of DTP-containing vaccine

ZERO-DOSE
have not received any doses of DTP-containing vaccine

YEAR 2000
(Gavi68)

28.6 MILLION

18.9 MILLION

TODAY
(Gavi68)

15.0 MILLION

10.4 MILLION
Most in need, hardest to reach

10.4 million
ZERO-DOSE children

live in Gavi-supported countries (80% of global total)
unimmunised against life-threatening diseases, unreached by routine health services
Zero-dose children live in clusters of inequity

Image credit: @johnny_miller_photography
Zero-dose children live in clusters of inequity

Image credit: @johnny_miller_photography
Outbreak in a zero-dose cluster

Image credit: @johnny_miller_photography
Reaching zero-dose children

Image credit: @johnny_miller_photography
Reaching zero-dose children forges equity in health care

Image credit: @johnny_miller_photography
Reaching zero-dose children transforms communities

Image credit: @johnny_miller_photography
Zero-dose children live in clusters of inequity

Image credit: @johnny_miller_photography
Using improved data to identify zero-dose children in DRC

Focus on improved denominator, coverage data, GIS mapping

Initial phase of project funded by Bill & Melinda Gates Foundation; now Gavi support to scale up to nine Mashako provinces
Availability of functional health services: better planning to increase access in DRC

Kimbwalu health area, Kwilu Province, DRC

0.04% reached  >20% reached  >40% reached
Mashako Plan, DRC: progress in strengthening routine immunisation, coverage and equity

- **Political leadership:** Meeting in July 2019 chaired by President Tshisekedi with all provincial governors
  - Declaration to strengthen RI & sustain polio gains
  - Subsequently US$ 3 million in co-financing
- **Mashako Plan approach to be scaled in new HSS application**

![Percentage areas supervised monthly by mobile application](image)

- Feb: 30%
- June: 55%
- October: 75%

![Immunisation service availability](image)

- Feb: 55%
- June: 65%
- October: 75%

Credit: Application Gestion PEV RDC

Original 9 provinces supported by Gates Foundation, Gavi, UNICEF, WHO

New HSS3 support in 2020 by Gavi

New support in 2020 by donor coalition: Gates Foundation, Gavi, UNICEF, USAID
Reaching zero-dose children in Mali: Gavi support targeting key barriers

**Weak management and accountability, especially at decentralised levels**
- Identification and engagement of local leaders
- Robust community-level microplans, monitoring frameworks and dashboards

**Addressing demand and gender-related barriers**
- Mapping and engaging local women’s associations
- Door-to-door sensitisation and defaulter tracking
- Monitoring demand via WhatsApp, monthly reviews

**Enhancing service delivery**
- Immunisation services in meeting places (eg, markets, mosques)
- **Urban**: Facility hours aligned to community needs
- **Insecure/hard to reach**: Integrated and mobile strategies including through CSOs
Reaching zero-dose children in Mali: progress in strengthening coverage and equity

HSS grant re-oriented in 2017 to target 23 of 75 districts with >70% of underimmunised

Penta3 coverage increased by 8% in target districts between 2017 and 2018 (admin data)

Mali has increased number of children reached with penta3 by 12% and reduced number of zero-dose children by >20% since 2015 (WUENIC data)
Gavi HSS investments driving improvement in supply chains

Supply chain largest HSS investment …
Approved HSS grants 2016-2019

… contributing to significant supply chain improvement
Average Effective Vaccine Management scores, Gavi68

32 out of 40 countries with new EVM since beginning of 2015 have improved, by average of 9%
Uganda: supply chain performance transformed since 2014 with Gavi HSS and TA support

- After 2014 EVM, Alliance helped Uganda develop improvement plan (EVM IP)
- US$ 8.4M of HSS invested in EVM IP implementation, with technical support from Alliance partners
- EVM IP mainstreamed into programme with reviews at all levels down to health facility
- Vaccines integrated into broader health supply chain managed by National Medical Store
Uganda: UPS-FIT partnership addressing critical remaining supply chain gaps

Key supply chain functions at last mile below 80% target
2018 EVM score at service delivery level

- E5 Maintenance: 74%
- E6 Stock management: 79%
- E7 Distribution*: 73%
- E9 Information systems: 76%

80% target

<table>
<thead>
<tr>
<th>Function</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>E5 Maintenance</td>
<td>74%</td>
</tr>
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<tr>
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<td>73%</td>
</tr>
<tr>
<td>E9 Information systems</td>
<td>76%</td>
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</tbody>
</table>

Partnership outsources distribution; checks stock and cold chain at facilities in 3 districts
Facilities with stock-outs (172 health facilities)

- EVM score at service delivery level
  - 79 (July 2019 (Baseline))
  - 7 (November 2019)

Starting to co-deliver some Global Fund commodities

* Score for district level since districts are responsible for distribution to facilities
India’s Electronic Vaccine Intelligence Network

Facilities Reported Stock-out of any Antigen (%)

Facilities reported Stock-Out
- 30% reduction in facilities observed stock-out (statistically significant at 95% CI)
  - Pre: 37.8%
  - Post: 26.3%

Instances per Facility
- 40% reduction in instances of stock out
  - Pre: 1 instance
  - Post: 0.6 instance

Mean Duration of Stock-out Per Facility
- 37% reduction in mean duration of Stock-out
  - Pre: 13.1 Days
  - Post: 8.3 Days
Government of India and Unilever: unlocking gender-related barriers to demand and coverage

First phase of *Safal Shuruat* ("Successful Beginning") partnership shows encouraging results – now being scaled up to 14 districts (15M population)

### AN INCREASE IN AGE-APPROPRIATE COMPLIANCE IS OBSERVED FOR CRITICAL VACCINES

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Base(N)</th>
<th>MV0</th>
<th>MV5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentavalent</td>
<td>480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rota virus</td>
<td>652</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles Rubella</td>
<td>356</td>
<td></td>
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</tr>
</tbody>
</table>

- **Rota was Introduced**: 66.1
- **MR Campaign**: 80.5
- **Compliance of Penta (%)**
- **Compliance of Rota (%)**
- **Compliance of MR (%)**

An increased inclination to a demand-driven approach for immunization.

*KANTAR: All rotavirus was introduced in UP in September 2018 which is after our round MV1
#MR campaign was carried out from Nov – Jan which is after our round MV2 and before round MV3.*

*An initiative by Gavi, The Vaccine Alliance*
Reporting back on previous Board decisions
“The Alliance at its Best”: innovating to respond to Ebola

- **Mar. ’14**: Ebola outbreak starts in West Africa
- **Oct. ’14**: Board approves US$ 390M exceptional, time-limited Ebola envelope for response
- **Jan. ’16**: Advance Purchase Commitment with Merck enables continuously replenished stockpile of 300,000 doses of experimental vaccine; 255,000 doses used (as of 23 November 2019)
- **Nov. ’19**: Merck vaccine granted marketing approval by EMA/EC, followed by WHO prequalification
- **Dec. ’19**: Board to decide on future Ebola programme
World Polio Day 2019: celebrating global eradication of WPV3

WPV3 eradication confirmed in October 2019; WPV2 eradicated in 2015
Overall eradication effort facing setbacks: urgent action required to change course

- **Gavi now full partner in GPEI**
- **Latest data**
  - WPV1 resurgence: 112 cases in 2019 to date versus 29 cases in 2018
  - cVDPV cases up from 2018 and spreading
  - Recent outbreaks in Angola, CAR, DRC
- **Risks**
  - Delays to eradication and impact on RI/ “essential immunisation” as countries battle outbreaks with multiple campaigns
- **Strengthening Gavi-GPEI collaboration**
  - Improve coordination and synergies with polio –use of data, delivery systems and outbreak response
  - Routine immunisation: improve quality and integration; win hearts and minds

**Global WPV1 & cVDPV cases**, previous 12 months

1 Excludes viruses detected from environmental surveillance; 2 Onset of paralysis: 20 Nov 2018 – 19 Nov 2019

Credit: WHO
Drug resistant typhoid reported in parts of Asia and Africa, increasing need for prevention

- In 2016, Pakistan became first country to report extensively drug resistant typhoid (XDR)

- XDR cases reported in UK, USA, Canada, Australia, Denmark, Taiwan, Ireland – all with travel history to Pakistan (Sindh and Punjab)

Credit: Dr Zulfi Bhutta, SAGE, October 2017
Pakistan: first country to introduce TCV into routine programme with recent campaign launch in Sindh

- Ongoing outbreak of XDR typhoid
- 3 phases, targeted, wide-age (9m-15y):
  - Phase 1 catch-up campaign completed;
  - RI introduction initiated

Introduction year by provincial area

- Khyber Pakhtunkhwa: 2021
- FATA: 2021
- Balochistan: 2021
- Sindh: 2019
- Punjab: 2020
- GB & Azad Kashmir: 2021

Approvals for 2020 Gavi-supported TCV introduction in Liberia and Zimbabwe
Nigeria: progress update

- **Accountability Framework (AF)**
  - National AF signed in June 2019
  - Plans underway to develop tailored sub-national AFs

- **Progress on Gavi support**
  - New support approved for meningitis A, measles, yellow fever; national-level HSS and CCEOP
  - HSS applications for eight target states recently submitted
  - First of ~10,000 cold chain equipment already being deployed
  - High-level Alliance mission scheduled for mid-December

- **Vaccine management & data systems: improvement ongoing**
Nigeria: urging integrated activities in face of continued infectious disease outbreaks

- Measles
- Cholera
- Cerebrospinal meningitis (CSM)
- Yellow fever (YF)
Syrian Arab Republic: complex situation requiring tailored engagement

- **Board approved exceptional support** for Syria for 2017-18, extended to end 2019 ("whole country approach")
- **Syria now Gavi-eligible**
- **Vaccine support application received** for IPV, penta, M*-MR
- **Possible need for exceptional flexibility** until application(s) approved to avoid vaccine stock-outs

* UNICEF will support mumps component of MMR for 2020
Sudan eligibility

- Latest GNI per capita (pc): US$ 1,560; under Gavi eligibility threshold (US$ 1,630)
- Due to enter accelerated transition in 2020
- Based on three-year GNI pc average, forecast to re-enter eligibility in 2021
- Board decision sought to maintain eligibility (on consent agenda)
  - Similar to Congo Republic
- Funding Policy review proposing new approach to address future cases

Sudan: GNI per capita. Atlas method (current US$)
Source: https://data.worldbank.org
Gavi yellow fever (YF) diagnostic procurement support: early progress

Promising progress on diagnostic test kit availability

- UNICEF-SD organised manufacturer outreach based on WHO Target Product Profiles
- Six manufacturers with promising kits
- At least one manufacturer developing new technology based on Gavi decision to engage

IRC already approved six countries for reagent support

- Applications recommended for approval
- Applications known to be in progress
- Other eligible countries
Tackling ongoing measles outbreaks

Reported Cases over Past 24 Months (August 2107-August 2019)

USA: high measles coverage, pockets of low coverage. Multiple importations

Philippines: many years of low coverage in a federal system exacerbated by Dengvaxia concerns

Ukraine: it’s complicated

China: Historic and unprecedented successes

Israel: Multiple importations

Yemen: conflict setting

Thailand: Unaddressed immunity gaps

DR Congo*: endemic transmission w low population immunity

Brazil: cross-border importations into underserved region

Madagascar: Classic island epidemiology

India: Improved surveillance

Venezuela: collapse of health system

Brazil: cross-border importations into underserved region

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Disclaimer:
The information and graphics shown on this page are not intended to be exhaustive or all-inclusive and are presented as a visual aid only. For the most up-to-date and comprehensive information, please refer to the official reports and publications by relevant health organizations.
Measles vaccine prevents measles-induced “immune amnesia”

Incomplete genetic reconstitution of B cell pools contributes to prolonged immunosuppression after measles

Velislava N. Petrova1, Bevan Sawatsky2, Alvin X. Han3,4, Brigitta M. Laksono1, Lisa Walz2, Edyth Parker6, Kathrin Piepenbrock7,8,9,10,11

See all authors and affiliations

Science Immunology 01 Nov 2019: Vol. 4, Issue 41, eaay6125
DOI: 10.1126/sciimmunol.aay6125

Measles virus infection diminishes preexisting antibodies that offer protection from other pathogens

Michael J. Mink1,2,4,5,6,7, Tomasz Kutek1,2,7,8, Yomei Long9, Mamie Li2, Rory D. de Vries6, Mikael Kepe1,2,7,8, Heil Siikander1,2,3, Marian Bewers2, David F. Chey2, Mark S. Wilson2,6, H. Benjamis Larmat2,7,8, Ashley N. Nelson2,6, Diane E. Griffin1,2,7,8, Brik L. de Swart2,6, Stephen J. Elliott2,7

Measles virus is directly responsible for more than 100,000 deaths yearly. Epidemiological studies have associated measles with increased morbidity and mortality for years after infection, but the reasons why are poorly understood. Measles virus infects immune cells, causing acute immune suppression. To identify and quantify long-term effects of measles on the immune system, we used VirScan, an assay that tracks antibodies to thousands of pathogen epitopes in blood. We studied 77 unvaccinated children before and 2 months after natural measles virus infection. Measles caused elimination of 11 to 73% of the antibody repertoire across individuals. Recovery of antibodies was detected after natural reexposure to pathogens. Notably, these immune system effects were not observed in infants vaccinated against MMR (measles, mumps, and rubella), but were confirmed in measles-infected macaques. The reduction in humoral immune memory after measles infection generates potential vulnerability to future infections, underscoring the need for widespread vaccination.
Spectrum of immunisation approaches to achieve high, equitable measles coverage and control

WHO Strategic Advisory Group of Experts (SAGE) on Immunization, October 2019:

“Given the current global context, SAGE concluded that … eradication is not a realistic outcome in the short-to-medium term. SAGE recommended that …. an eradication goal and target date be considered only when substantial, measurable progress has been made in ensuring the programme conditions necessary to achieve elimination.”

HPV: addressing inequities and programmatic challenges in a supply-constrained environment

- Global supply shortage continuing
- Demand skewed by: inclusion of boys; widening recommended age group; and cervical cancer elimination agenda
- Market dynamics also skewed in favour of low-incidence/high-paying markets
Kenya introduces HPV vaccine in routine immunisation programme

- Eastern Africa – highest reported cervical cancer incidence in sub-Saharan Africa. In Kenya:
  - Most frequent cancer among women ages 15-44
  - ~5,250 new cases annually

- Kenya among eight countries to introduce HPV vaccine by end 2019

- Impact: ~800,000 10-year-old girls protected against cervical cancer annually
Vaccine Innovation Prioritisation Strategy (VIPS)

Phase I: Nine platform innovations shortlisted

- Microarray patches (MAPs)
- Compact prefilled auto-disable devices (cPADs)
- AD sharps injury protection (SIP) syringes
- Heat stable/controlled temperature chain (CTC) qualified liquid formulations
- Dual-chamber delivery devices
- Freeze damage resistant liquid formulations
- Combined vaccine vial monitor (VVM) and threshold indicator (TI)
- Barcodes/radio-frequency identification (RFID)

Note: Innovation pictures are just examples of innovations

Phase II

Further analysis and prioritisation
Alliance and Secretariat update
Strengthening Alliance health

- **Alliance Health Survey (AHS)**
  - Third AHS completed in October 2019
  - Overall results **stable** – colleagues continue to be proud Alliance members
  - Challenges: trust, information-sharing; discussion with Alliance members planned in 2020

- **Alliance collaboration**
  - Seven **regional team-building retreats** organised
  - **Social mixers** for Alliance partners in Geneva
  - Two joint **onboarding sessions** conducted
  - **Co-working** spaces: Exchanges facilitated between Gavi Secretariat, UNICEF and WHO at global and regional levels
  - Quarterly **brown-bag webinars** on key Alliance topics
New Gavi.org: now live

- More vivid multimedia user experience; translations in progress
- Easy access to Country Portal
- Smart platform streamlines publishing
- #VaccinesWork section includes features by Alliance partners
Successful implementation of SAP enterprise resource planning (ERP) platform

- Significant milestone in modernising, integrating financial/operational systems
- Launched on 1 October; already made millions in payments to partners
- Natural learning curve and challenges in adaptation may slightly affect end-of-year targets
- Additional functionality to be implemented in early 2020
Gavi Secretariat update

New senior hires

Laura Boehner
Chief Technology and Knowledge Officer

Jelena Madir
Director, Legal
Gavi was launched on 31 January 2000 in Davos
Gavi will celebrate 20 years of saving lives in January 2020 in Davos
Gavi: celebrating 20 years in 2020
Gavi: celebrating 20 years in 2020

>760 million children vaccinated
Gavi: celebrating 20 years in 2020

> 760 million children vaccinated

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Vaccines against 17 infectious diseases
Gavi: celebrating 20 years in 2020

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Vaccines against 17 infectious diseases

433 vaccine introductions and campaigns

Credit: Gavi/Thierry Vincent
Gavi: celebrating 20 years in 2020

<table>
<thead>
<tr>
<th>成就</th>
<th>数量</th>
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<tbody>
<tr>
<td>&gt;760百万</td>
<td>儿童接种疫苗</td>
</tr>
<tr>
<td>&gt;960百万</td>
<td>竞选接种活动</td>
</tr>
<tr>
<td>&gt;13百万</td>
<td>死亡预防</td>
</tr>
<tr>
<td>60%</td>
<td>全球出生人群支持</td>
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<td>70%</td>
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疫苗针对17种传染性疾病

- 433项疫苗引入和活动
- 约1.4亿库存剂量发货
- 60%全球出生人群支持
- 70%由于疫苗可预防疾病死亡率减少
Gavi: celebrating 20 years in 2020

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~140 million stockpile doses shipped

>$150 billion in economic benefits
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- ~140 million stockpile doses shipped
- >$150 billion in economic benefits
- $54 return on $1 invested in immunisation
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Gavi: celebrating 20 years in 2020

20 years of keeping people healthy
THANK YOU

धन्यवाद

www.gavi.org