CEO Board presentation
Seth Berkley MD, 22 June 2016
IMMUNISATION ON THE GLOBAL AGENDA

Board meeting
22-23 June 2016
A transition period

• Decade of Vaccines: midpoint

• New leaders: US President, WHO Director-General, UN Secretary-General, German Chancellor?

• New sustainable development goals – vaccine indicator?

• Global focus on outbreaks
“The promotion of UHC requires provision of services to protect and improve the health of all individuals throughout their life course… In this regard, we welcome platforms such as Gavi the Vaccine Alliance”

G7 Leaders’ Declaration
Immunisation: a platform for universal health coverage

~98% of children touched by immunisation

86% of children reached through routine immunisation

Board meeting
22-23 June 2016
Outbreaks threaten health systems: Ebola example

- Two-year anniversary of outbreak, February 2016
- Flare-ups in Liberia and Guinea (latest in April) with good emergency response from the countries
- 300,000 doses through Gavi’s advance purchase commitment available for use in clinical trials and emergencies
Yellow fever: Angola outbreak

- Exported cases to China, Kenya, DRC
- Separate outbreak in Uganda
- Confirmed cases in Chad, Sao Tome, Congo, Ghana, Brazil, Peru, Colombia
- Gavi supported 5.4m vaccine doses for Angola so far, invested 12m doses in 2016 stockpile
- Working with WHO to manage current outbreak and review strategy for routine, campaigns and stockpiles
Climate change and distribution of Aedes Aegypti

Aedes Aegypti

The global distribution of Aedes Aegypti

Occurrence of Aedes Aegypti plotted on prediction surface (from 0 to 1 yellow) at a spatial resolution of 5 km x 5 km

Source: https://elifesciences.org/content/4/e08347/figure1/figure-supp4
Reported measles cases
with onset date from Nov 2015 to April 2016 (six-month period)

Rate per 1,000,000 population
(75 countries or 39%)
(42 countries or 22%)
(32 countries or 16%)
(24 countries or 12%)
(9 countries or 5%)
(12 countries or 6%)

Not applicable

† Data Source: RDC Bulletin surveillance rougeole 14 juin 2016
§ Data source: Somali EPI/POL Weekly Update  Week 23

Measles vaccine coverage in Gavi countries

1 st dose
2 nd dose

Data source: surveillance DEF file
Data in HQ as of 13 June 2016
Progress on Gavi’s new measles-rubella strategy

• Implementation: applications from September, implemented from 2017

• Measuring coverage and surveillance: now part of joint appraisals

• Readiness assessments & coverage surveys: mandatory before and after campaigns

• Stronger collaboration with partners: e.g. risk assessments, lessons learnt

• Early work on modelling: for geographic areas, target age groups

• Already higher campaign coverage: e.g. Nigeria: 84.5% in 2015, from 74.5% in 2013
New initiatives to tackle health emergencies

- New WHO Outbreaks and Health Emergencies Cluster
- World Bank’s Pandemic Emergency Financing Facility
- WHO Contingency Fund for Emergencies
- WHO R&D Blueprint
- Coalition for Epidemic Preparedness & Innovation
Outbreak preparedness and response: Gavi’s role

Will revert to the Board over coming year on:

• Support for vaccine stockpiles
• Role in humanitarian emergencies and fragile settings
• Yellow fever strategy
• Meningitis (timing tbd)

Further investments in vaccines against potentially epidemic diseases (e.g. Ebola 2\textsuperscript{nd} generation and cholera) to be reviewed as part of 2018 Vaccine Investment Strategy
Vaccines help reduce antimicrobial resistance

Review commissioned by UK government

- **Vaccine report**: need to use vaccines more widely; value of pneumococcal vaccine in reducing antimicrobial resistance

- **Summary report**: Gavi model as example of how new antibiotics could be developed, e.g.:  
  - Overcoming market failures  
  - Encouraging innovation
Wild poliovirus & cVDPV cases\(^1\), previous six months\(^2\)

1 Excludes viruses detected from environmental surveillance.
2 Onset of paralysis 8 December 2015 – 7 June 2016

Source: Data in WHO HQ as of 7 June 2016
Switch from trivalent to bivalent oral polio vaccine

- April/May: all countries and territories switched
- Environmental samples of type 2 found in Egypt, Kenya, Nigeria, India
- Bivalent OPV doesn't protect against type 2
- Need for strong routine coverage with inactivated polio vaccine (IPV)
Supply shortages delay IPV introductions

Number of Gavi-supported countries that have introduced inactivated polio vaccine
Support for IPV post-2018

• Committed to support IPV through 2018 when Board will review

• If funding is made available, Gavi support to continue until Endgame target for stopping vaccination/exit strategy is developed

• Extension of Endgame led by Global Polio Eradication Initiative (GPEI)

• Expect GPEI to initiate discussions with donors on IPV support
IMMUNISATION ON THE GLOBAL AGENDA

RESULTS UPDATE

DELIVERING ON THE NEW STRATEGY

2011-2015 RESULTS

Board meeting
22-23 June 2016
Reporting back on 2011-2015

• 2015 Annual Progress Report
• 2011-2015 Review: highlighting successes and challenges
Three mission indicators all on track

**Under-five mortality rate** in Gavi-eligible countries (per 1,000 live births)

- 2010: 76
- 2011: 70
- 2012: 68
- 2013: 66
- 2014: 63
- Target: 66

**Number of future deaths averted** (millions)

- 2010: 0
- 2011: 0.5
- 2012: 1.2
- 2013: 2.4
- 2014: 3.1
- Target: 3.9

**Number of children immunised** (millions)

- 2010: 0
- 2011: 0.5
- 2012: 1.2
- 2013: 2.4
- 2014: 3.7
- Target: 5.0

*Board meeting*

22-23 June 2016
Vaccine introductions

Over **200 introductions 2011–2015**

**70 introductions in 2015** – nearly 50% more than in 2014

- Pneumococcal
- Rotavirus
- Inactivated polio
- Human papillomavirus (demo)
- Human papillomavirus (routine)
- Meningitis A
- Japanese encephalitis
- Measles 2nd dose
- Measles SIA
- Measles-rubella
Advance Market Commitment: impact study

Innovative finance mechanism: US$ 1.5 billion commitment from 6 donors to accelerate access to pneumococcal vaccines

Main findings:

• Accelerated coverage in 50+ countries
• 6m+ pneumococcal disease cases, 230,000+ child deaths prevented by 2015
• 3m child deaths averted by 2030
• Increased available supply despite shortages
• Did not succeed in materially accelerating development of new products
Pneumococcal vaccine impact in the Gambia

If children in the Gambia develop serious pneumococcal pneumonia, sepsis or meningitis they have a 1 in 7 chance of dying.

PCV in the Gambia reduced severe pneumococcal pneumonia, sepsis and meningitis by 55%.
Meningitis A vaccine progress

• Campaigns in 16 countries in Africa’s meningitis belt
• 235 million people immunised by end 2015
• Meningitis A eliminated as public health problem in the region
• Focus shifting to routine introductions: Sudan, Ghana and Mali planning to introduce this year
• Delayed routine introductions problematic
• Meningitis C outbreaks, e.g. Niger, Nigeria

Impact:
Number of meningitis A cases:

<table>
<thead>
<tr>
<th>Country</th>
<th>2008</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niger</td>
<td>842</td>
<td>0</td>
</tr>
<tr>
<td>Mali</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>156</td>
<td>4</td>
</tr>
</tbody>
</table>
Coverage and equity challenges

Unlikely to meet 2015 targets for coverage, equity and drop-out rate

*Board meeting
22-23 June 2016*
Increases in 3rd dose pentavalent coverage, 2010-2015

Bangladesh

Zambia

Uganda

Mozambique
India completes pentavalent vaccine roll-out in all states

2011
- Introduced - 2 states

2013
- Introduced - 8 states

2014
- Introduced - 11 states

2015
- Introduced - 36 states
HSS results: Afghanistan example

DTP3 coverage

- National coverage: 83%
- Coverage in 6 HSS target provinces: 38%
Bangladesh: coverage improvements linked to HSS support

Changes in DTP3 coverage relative to HSS support phase, 2010-2014
**Improvements in country co-financing**

Increase by year compared to forecast

**Actual co-financed amounts, US$m**

**Projected co-financed amounts (Oct 2010), US$m**

---

**Board meeting**

22-23 June 2016
Market shaping results

Cost to fully immunise a child with pentavalent, pneumococcal and rotavirus vaccines (US$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Penta</th>
<th>Rota</th>
<th>Pneumo</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$35</td>
<td>$33</td>
<td>$35</td>
<td>$35</td>
</tr>
<tr>
<td>2011</td>
<td>$23</td>
<td>$22</td>
<td>$23</td>
<td>$23</td>
</tr>
<tr>
<td>2012</td>
<td>$22</td>
<td>$22</td>
<td>$22</td>
<td>$22</td>
</tr>
<tr>
<td>2013</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
</tr>
<tr>
<td>2014</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
</tr>
<tr>
<td>2015</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
<td>$20</td>
</tr>
</tbody>
</table>

43% reduction

Security of supply: products offered as % of 2015 target

- Total: 54%, 67%, 79%, 79%, 88%, 104%
- Penta: 54%, 67%, 79%, 79%, 88%, 104%
- Rota: 54%, 67%, 79%, 79%, 88%, 104%
- Pneumo: 54%, 67%, 79%, 79%, 88%, 104%

Board meeting
22-23 June 2016
Gavi prices start from low baseline

Cost of full course of:

- Hepatitis B
- DTP
- Hib
- Rotavirus
- Pneumococcal
- Polio IPV
- Measles
- Rubella
- HPV

Purchasing vaccines for 60% of world’s birth cohort

Approx. USA price: US$ 950

Gavi price: US$ 35

$35 in 2010

Sources: CDC vaccine price list November 2015; UNICEF Supply Division, March 2016

Board meeting
22-23 June 2016
Vaccine supply shortages

- Cholera vaccine
- Inactivated polio vaccine
- Yellow fever
DELIVERING ON THE NEW STRATEGY

- Stronger country focus
- Coverage and equity
- Political will
- Long-term sustainability
Liberia: double launch

- HPV demonstration project
- Rotavirus vaccine
Republic of the Congo

• Inactivated polio vaccine
Nepal

• HPV demonstration project
Cambodia

- Japanese encephalitis vaccine
Bolivia

- Inactivated polio vaccine
Democratic Republic of Congo

- Meningitis A vaccine campaign
Kenya

• Measles-rubella vaccine
Kyrgyzstan

- Pneumococcal vaccine
Honduras

• HPV vaccine – national introduction
Vaccine introduction update

2016 year to date (10 June): 25 introductions (Approx. one per week)

- Pneumococcal
- Rotavirus
- Inactivated polio
- Human papillomavirus (demo)
- Human papillomavirus (national)
- Meningitis A
- Japanese Encephalitis
- Measles-rubella
Building political will to improve coverage, equity and sustainability

Increasing engagement with finance ministers and advocates

“I call on every Head of State across Africa to prioritise access to vaccination in each and every community.”

President Kikwete, Global Ambassador for Immunisation, African Union Summit, Addis Ababa, January 2016
Immunisation’s return on investment

3x
Public infrastructure

The Economic Benefits of Public Infrastructure Spending in Canada. The Centre for Spatial Economics, September 2015

7x
Pre-school education

The rate of return to the HighScope Perry Preschool Program. Department of Economics, University of Chicago, April 2009

9x
Community health workers

Strengthening primary health care through community health workers... Dessalegn H, Chambers R, Clinton C, Phumaphi J, Sirleaf J, Evans T, et al. 2015

48x
Immunisation


18x
(cost of illness, in Gavi-supported countries)

(full income approach, in Gavi-supported countries)
Country focus key to improving coverage and equity

1. Understanding country needs
   - 72 in-country Joint Appraisals in 2015
   - Articulation of key barriers and needs

2. Responding to country needs
   - Proposals from UNICEF/WHO seek to respond to joint appraisals
   - Initial submissions include ~200 focused staff in country offices

3. Countries at the design table
   - Improved harmonisation
   - Greater transparency
   - Enhanced accountability

Board meeting
22-23 June 2016
High-level country visits

- **Pakistan**: focus on coverage and equity
- **India**: new partnership - coverage and equity, market shaping, new vaccines
- **Tanzania**: Programme & Policy Committee meeting in Arusha
Priority country: Pakistan

Punjab province: data and political leadership essential for accountability and results

Coverage (children aged 12 months) %

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>December 2014</th>
<th>December 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentavalent 1</td>
<td>84%</td>
<td>96%</td>
</tr>
<tr>
<td>Pentavalent 3</td>
<td>64%</td>
<td>86%</td>
</tr>
<tr>
<td>Measles 1</td>
<td>48%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Pentavalent 3rd and measles 1st dose increased > 20% in one year

Source: Nielson (Dec 2014 & Dec 2015)
Priority country: India

Immunisation under stewardship of the Prime Minister

MISSION INDRADHANUSH

Prime Minister reviewed progress of Mission Indradhanush (February 2016)

Mission Indradhanush: PM Modi calls for aggressive action plan to cover all children for immunisation in a specific time-frame
Partnership agreement signed

Sets out commitments of the Government of India and Gavi

- Gavi support of up to US$ 500m vaccine/cash allocation
- Government’s commitment to sustain and scale up programmes
- Performance indicators for vaccines and health system support to be developed as part of tailored proposal review process
Pneumococcal vaccine fast-tracked, rotavirus launch started

Pneumococcal

- February: ministerial group approved national introduction
- 6 states tentatively planned for Gavi-supported first phase in 2017-19, accounting for >30% of pneumococcal deaths in country

Rotavirus

- March: Government funded first phase of rotavirus vaccine launch with indigenous vaccine
Priority country: Madagascar

Coverage & equity – lessons learnt:

**Prioritise**
- Use data to identify low coverage districts

**Be open to new partners**
- Additional expertise may be needed to implement recommendations

**Learn from the past**
- More regular monitoring by partners
- Specific strategies for challenging contexts – more tailored approach
HPV vaccine programme reboot

• 28 countries approved for HPV demonstration programmes
• New programme for January 2017 IRC submission (tbd)
• Two changes already identified, taking onboard lessons learned:
  • **One application** for demonstration programmes and national introductions – reduces delays, ensures country commitment from the start
  • **Pre-application workshop** to identify sustainable implementation strategies – helps countries better understand cost and coverage implications
• More changes to come
Multiple forms of immunisation-related country support

Example: Alliance support to Burkina Faso in 2014

Vaccine support
- Penta
- Pneumo
- Rota

Technical assistance
- WHO
- UNICEF
- CSO constituency support

Measles-rubella campaign
- Operational support ($5m)

Measles 2nd dose introduction
- Measles

Vaccine introduction grant ($1m)

Health system strengthening
- Annual disbursement ($2m)

Immunisation strengthening support
- Annual disbursement ($1m)

Board meeting
22-23 June 2016
Integrated approach to health system and immunisation strengthening

Example: Alliance support to Burkina Faso in 2014 (illustrative to show recommended model)

Vaccine support

- Penta
- Pneumo
- Rota
- Measles
- MR

Technical assistance

WHO
UNICEF
CSO constituency support

Health system and immunisation strengthening (HSIS) support

Integrated support package for:
- System strengthening
- One-time costs of vaccine introductions, campaigns, product switches

Board meeting
22-23 June 2016
Cold Chain Equipment Optimisation Platform: early progress

DEMAND

- Haiti recommended for approval
- 4 more countries applied, another 10-15 expected by year-end
- Tech guide helps countries choose the right equipment

SUPPLY

Innovative technology:

- **Arktek**: cooling technology for last-mile delivery
- Equipment designed to stop vaccines freezing: reduces wastage
- **Energy harvesting** on solar direct drives (SDDs) – to charge phones, communicate supply data

Full **installation & training** included, first 10-year **warranty** offered on SDDs
Nigeria’s vaccine supply chain system redesign

Now three-hub architecture involves direct transportation of vaccines from hubs to states.

Gavi funds will be used to support 12 states across the country.

Source: NFHCDA RI department, UNICEF, team analysis
STEP: supply chain leadership training, Rwanda

• Launched at new East African Community Centre of Excellence for Supply Chain
• UPS created curriculum & leads training
• IFPW provides scholarships & mentorship
• 60 students in 2016
• Innovative course design:
  • Distance learning
  • In-person training at EAC centre
  • Follow-up mentorship
Supply chain model
Innovation: using drones to access the hard-to-reach

• Gavi partnering with UPS and Zipline to explore using drones to deliver vaccines in Rwanda
• Funded by UPS
• Currently planned for blood supplies and rabies vaccine
• Can reach inaccessible areas
Innovation: using drones to access the hard-to-reach
New private sector initiative: INFUSE

- 60+ applied, 15 innovators selected for final round in July
- Aim: enable countries to access and scale most promising innovations
- Enhanced WEF partnership agreement signed
- 2016 focus: data improvements

Proven concepts in health innovation apply to INFUSE

Identification of most promising proven concepts

Select concepts identified

Selected concepts matched with political & financial capital

Resulting partnerships scaled for global impact
Aspirational vision for transition

“Countries have **successfully expanded their national immunisation programmes** with vaccines of public health importance and sustained these vaccines post-transition with **high and equitable coverage** of target populations, while having **robust systems and decision-making** processes in place to support introduction of future vaccines.”
Fully self-financing countries: independently launching new vaccines, high coverage

- **Bhutan**
  - 99% penta3 coverage
  - (independent pneumococcal launch, June)

- **Honduras**
  - 85% penta3 coverage
  - (co-funded HPV launch, May)

- **Mongolia**
  - 99% penta3 coverage
  - (independent pneumococcal launch, June)

- **Sri Lanka**
  - 99% penta3 coverage
  - (co-funded HPV launch, date tbc)

Donor funding

• Close to 80% of grants signed, including Norway, UK
• Japan: new contribution brings total to ~ US$ 100m for 2016-20 – first multi-year commitment
New supply and procurement strategy

Three strategic priorities

Healthy markets  Moving beyond singular objectives to deliver on healthy markets, balance trade-offs

Long-term view  Taking a long-term view of markets

Innovation  Driving innovation to better meet country needs
Pneumococcal vaccine price reduction

GSK: record low price for pneumococcal vaccine, 10% reduction

“A fair shot”
MSF campaign for lower prices
Pentavalent tender shows further price decreases

- First stage of multi-phase tender for 2017–2019
- Innovative procurement method with multiple bidding opportunities
- Price transparency
- Second phase starting in June
New country portal – improving country interaction

- One platform for countries’ interaction with Gavi
- Simplifies the application and reporting process
- 69/73 countries have submitted/started to submit applications
- Average of nearly 150 users logging in each week
- Partner portal launched on same platform
Optimising programmatic outcomes with new risk-related tools

Performance framework
- Reports country performance against full set of agreed targets and indicators

Country risk matrix
- Identifies, monitors and quantifies key risks and tracks mitigating actions

Programme capacity assessment
- Evaluates capacity of implementers to manage Gavi support

Programme audit
- Gives independent assurance of country controls and appropriate use of Gavi support

Grant management practices
- SCM engagement/focus
- Partner engagement/focus

Board meeting 22-23 June 2016
Changes to Board process

- **Streamlining Board information:**
  - **Board papers:**
    - 680 pages in June 2015,
    - 520 pages in Dec 2015,
    - 160 pages + 215 pages 2nd pack for this Board meeting
  - **Annexes**
    - Additional information and reference material
  - **myGavi**
- **More items on consent agenda**
- **Closer coordination of committees, increased expertise**
- **More strategic Board agenda with stronger country focus, more time for in-depth discussion**
Agenda for this meeting

• Gavi-Global Fund approach to collaboration
• Financial update
• Report from Audit and Investigations
• Malaria vaccine pilots
• Health system and immunisation strengthening support
• Partners’ Engagement Framework & Alliance Accountability Framework
• Country Programmes: sustaining immunisation gains
• Supply and procurement strategy 2016-2020
In 2001 Gavi immunised ~1 million children.
By 2015 we are immunising >55 million children annually

But…
~1 in 5 children still miss out on basic vaccines; we must do better