Paradigm shift: from dependency to country ownership

Seth Berkley, MD
Chief Executive Officer of the GAVI Alliance

Sabin 20th Anniversary Scientific Forum
25 April 2014
The GAVI Alliance: a public-private partnership bringing the best of many partners
Overview of GAVI vaccination programmes

- Japanese encephalitis
- Cholera
- IPV
- Measles rubella
- HPV
- Meningitis A
- Pneumococcal
- Rotavirus
- Measles
- Pentavalent
- Hib
- Yellow fever
- Hepatitis B
New GAVI vaccine support, 2011–2015: routine programme introductions and campaigns

Source: GAVI Alliance data as of March 2014.
Note: Only the first phase of introductions and campaigns is included. IPV projections are only partially based on country input.
GAVI support to injection safety

- Catalytic support to promote use of auto-disable syringes and safety boxes
- 44 out of 46 countries were able to continue the programme after GAVI support ended.
- More than half fully financed the syringes and boxes with government funding.
Catalytic support to China’s hepatitis B programme

Fewer than one percent of children under five are now chronic carriers of Hepatitis B

5岁以下儿童的慢性乙肝病毒携带率在1%以下
By 2015:
Half a billion children immunised

By 2020, we can immunise an additional third of a billion children

15 years of remarkable progress
... made possible with increasing leadership from countries

- **Other development partners**: 16%
- **Country-funded**: 47%
- **GAVI donor-funded**: 37%
- **Other development partners**: 6%
- **Country-funded**: 54%
- **GAVI donor-funded**: 40%

Countries are picking up a greater share (+7%)

**Source:** JHU estimates for 73 GAVI-eligible countries and for routine only
... catalysed by the GAVI financing model
The GAVI spend peaks in 2016-2020: sustainability through catalytic aid

Cumulative number of graduated countries by end of periods:

- 2011-15: 1
- 2016-20: 22
- 2021-25: 29
- 2026-30: 40

GAVI-funded cost (US$ billion):

- 2011-15: 2.1 bn vaccine doses
- 2016-20: 2.7 bn
- 2021-25: 2.1 bn
- 2026-30: 1.7 bn

* including HSS and VIG
Co-financing: countries taking ownership

Source: GAVI Alliance as of April 2014
How the co-financing model works

Source: GAVI Alliance 2014
How the co-financing model works: but after graduation?

Source: GAVI Alliance 2014
Co-financing model designed for sustainability

Armenia: vaccine financing by source

- **GAVI NVS funding**
- **Donor-funded routine vaccines**
- **Government-funded routine vaccines**
- **Government-funded co-financing**

Total spend
in 2003: **US$ 134,000**

in 2012: **US$ 1,123,000**
Country co-financing scaling up: over US$ 1 billion, 2016-2020

Source: GAVI Alliance data as of April 2014
India, Indonesia and Nigeria account for more than half of the world’s unimmunised children.

All three are set to graduate from GAVI support in the coming years.

Graduating countries, year independent from GAVI support and 2012 DTP3 coverage rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Coverage Rate</th>
<th>Year</th>
<th>Country</th>
<th>Coverage Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>97%</td>
<td>2016</td>
<td>Nicaragua</td>
<td>98%</td>
</tr>
<tr>
<td>Honduras</td>
<td>88%</td>
<td>2017</td>
<td>Papua New Guinea</td>
<td>63%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>99%</td>
<td>2018</td>
<td>Uzbekistan</td>
<td>99%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>99%</td>
<td>2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>80%</td>
<td></td>
<td>Moldova</td>
<td>92%</td>
</tr>
<tr>
<td>Guyana</td>
<td>97%</td>
<td></td>
<td>Kiribati</td>
<td>94%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>64%</td>
<td></td>
<td>Georgia</td>
<td>92%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>99%</td>
<td></td>
<td>Timor-Leste</td>
<td>67%</td>
</tr>
<tr>
<td>Armenia</td>
<td>95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>75%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congo</td>
<td>85%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Cuba and the Ukraine are graduating countries, but currently do not receive vaccine support from GAVI. India will start graduating in 2015, but the duration is yet to be determined.
“The perfect storm”
Nigeria health budget 2010–2011

Other sources
US$ 1.3 bn

Total health budget:
US$ 1.27 bn
(-51%)

<table>
<thead>
<tr>
<th>Surviving infants (million), 2012</th>
<th>Income level¹ (US$ per capita)</th>
<th>DTP3 coverage, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>6.01</td>
<td>1,430</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>4.91</td>
<td>422</td>
</tr>
<tr>
<td>Pakistan</td>
<td>4.36</td>
<td>1,260</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.22</td>
<td>3,420</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2.78</td>
<td>840</td>
</tr>
<tr>
<td>DRC</td>
<td>2.63</td>
<td>220</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2.40</td>
<td>410</td>
</tr>
<tr>
<td>Bihar</td>
<td>2.13</td>
<td>331</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1.86</td>
<td>570</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>1.83</td>
<td>1,336</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>1.57</td>
<td>516</td>
</tr>
<tr>
<td>Kenya</td>
<td>1.50</td>
<td>840</td>
</tr>
</tbody>
</table>

- GAVI-supported countries
- Indian states

India accounts for more than:
- 30% of the world’s under-immunised children (2012)
- 17% of global child deaths from pneumococcal pneumonia (2000)
- 23% of global child deaths from rotavirus diarrhoea (2004)

¹ WB estimate of GNI per capita for 2012 for GAVI countries, GDP per capita for 2010-11 for Indian states, assuming exchange rate of 0.016 USD per rupee. GNI and GDP are not fully comparable metrics, but provide an illustrative sense of income levels. Source: World Bank; Ministry of statistics and Program Implementation Govt. Of India; disease burden data from Laxaminarayan & Ganguly (2011), India’s Vaccine Deficit: Why more than half of Indian children are not fully immunisaed and what can – and should be done, Health Affairs 30(6), 1096-1103 (quoting WHO 2000, 2004)
Vaccines as percentage of government spending on health

Note: Vaccines for routine immunisation only. India, DPR Korea, Somalia and Zimbabwe excluded from analysis.
Increase in the number of countries with a line item for routine vaccines in national budget

Advantages of pentavalent vaccine

- Protects **against five diseases in three jabs** versus nine
- **Improves the experience** of the baby, caregiver and health worker
- **Reduces waste** and facilitates logistics
- **Saves time and money**
Pentavalent (DTP-HepB-Hib) vaccine – a brief history

- Kenya first country to introduce with GAVI support, 2001
- SAGE strengthened Hib vaccine recommendation, 2006
- A surge of introductions in 2008-2009
- By end 2014, all 73 GAVI countries using pentavalent in routine programmes (South Sudan)
- Other LMICs which are not GAVI-eligible (e.g. Egypt, Iraq & the Philippines) have access to pentavalent at better prices
Pentavalent vaccine introductions

* introduction not supported by GAVI
2012 global birth cohort: 135 million

GAVI countries birth cohort: 80 million

Non-GAVI countries birth cohort

Source: GAVI Alliance, 2013
Changing the mindset of the vaccine manufacturing industry
Pentavalent vaccine supply, 2006
Countries of production

Source: GAVI Alliance, 2014
Pentavalent vaccine supply, 2013

Countries of production

Source: GAVI Alliance, 2014
Note: Indonesia self-procures pentavalent vaccines from Biofarma.
Pentavalent vaccine: increasing volumes, growing number of suppliers, lower price

Manufacturers from which GAVI procured vaccines:
- Red: based in low-/middle-income country
- Blue: based in high-income country

Approved number of doses requested: 1 million

Sources: UNICEF Supply Division 2014, country annual progress reports 2012 (requested doses)
Impact of pentavalent vaccine on the ground

Eliminating Hib meningitis in Kenya (Kilifi district)

Source: Anthony Scott, Wellcome Trust Senior Research Fellow in Clinical Science
KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya, January 2014
Country-led health system strengthening (HSS) grants

- Country-proposed activities contribute to improving immunisation coverage and equity
- Based on bottleneck and gap analysis, aligned with national health plans and harmonised (as much as possible) with other funding
- GAVI encourages participatory and inclusive design and implementation of programmes by countries including with civil society
- Stressing the importance of data quality
The immunisation landscape

Synergies and shared learnings

- Polio eradication
- Traditional vaccines
- Regional vaccines
- New vaccines
- Measles elimination
- R&D: vaccine improvements
- R&D: future vaccines
Comprehensive immunisation services
Strengthening civil society engagement: GAVI-supported activities

Source:
Delivered together
GAVI Alliance 2000–2013

440,000,000 additional children immunised

6,000,000 future deaths averted
We are on course to rapidly ramp-up number of fully immunised children from low base…
Thank you