Gavi’s role in strengthening Immunisation systems and reducing burden of meningitis in Africa

The Meningitis Vaccine Project Closure Conference: Ending and New Beginnings

Seth Berkley
23 February 2016
In collaboration with various research institutes, health authorities of India and of 26 countries in sub-Saharan Africa
Gavi has supported the Meningitis Vaccine Project since the beginning

“The dream of a world without meningitis epidemics is steadily becoming a reality. The launch today of a cheap, effective vaccine is a huge step in that direction.”

Helen Evans,
Interim CEO, Gavi, 2010
Gavi has invested nearly US$ 370 million in the meningitis programme

Including over 300 million Men A vaccine doses, immunisation devices, operational costs and technical assistance
Gavi’s commitment to the fight against meningitis in Africa: three objectives

**Support to routine vaccine introductions** through catch-up campaigns and subsequent co-financing of routine vaccine

- 2010 to 2017

**Outbreak response** through stockpiles of men A and men ACWY containing vaccines

- 2009 to 2016

**Enhanced surveillance and epidemic response**, eg through data management, country workshops

- 2009
Comprehensive immunisation services – a joined-up approach to introducing men A vaccine
Catch-up campaigns of meningitis A vaccine have led to virtual elimination of disease

**IMPACT:**
Number of meningitis A cases:

<table>
<thead>
<tr>
<th></th>
<th>in 2008</th>
<th>in 2014</th>
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<tbody>
<tr>
<td>Niger</td>
<td>842</td>
<td>0</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>156</td>
<td>0</td>
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<tr>
<td>Mali</td>
<td>16</td>
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16 of the 26 countries have rolled out MenAfriVac

450 million people live in Africa's "meningitis belt" across 26 countries.

220 million people vaccinated since 2010.

450 million people threatened in 2014.

[Map and infographic showing impact of meningitis A campaigns in Nigeria, Burkina Faso, and Mali.]

Gavi The Vaccine Alliance
Country-specific data confirms strong impact

Chad epidemic, 2012

D M Daugla, et al. Effect of a serogroup A meningococcal conjugate vaccine (PsA–TT) on serogroup A meningococcal meningitis and carriage in Chad: a community study
Short-term economic impact of meningitis A vaccination campaigns, 2010-2016

Cost if reactive campaign | Cost preventive campaign | Cost saved
---|---|---
Health system case management | Households DNMC | Households IC
161 | 113 | 48
62 | 46 | 16
102 | 76 | 26

Total savings 2010–2016: US$ 90 million

Source: WHO
Bringing men A vaccine into routine systems

- To reduce outbreaks the vaccine should be in routine use **1–5 years** after campaigns are completed.

- **Combination of campaign and routine** provides long-term protection and coverage.

- This meeting creates a platform for countries to discuss preparations and plans for routine introductions.
Strengthening routine immunisation for measles control

**Coverage:** DTP3 has increased but measles flat-lining

**Routine immunisation:** only half of children get 2nd dose measles vaccine through routine system

**Coordination:** need more cohesive approach with routine immunisation at the core

**Coverage in Gavi supported countries**

- 2010: 78%
- 2011: 78%
- 2012: 78%
- 2013: 78%
- 2014: 80%
- 2015: 81%

**DTP3 (%)**

- 1st dose measles vaccine (%)
## Routine introduction plans

<table>
<thead>
<tr>
<th>2016 introductions</th>
<th>2017 introductions</th>
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<tr>
<td>1. Sudan</td>
<td>1. Burkina Faso</td>
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<tr>
<td>2. Nigeria *</td>
<td>2. Chad</td>
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* *Applied for March 2016 IRC round
* Note: 6 countries have expressed interest to introduce jointly with measles/yellow fever vaccines.

### Pending applications

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<tr>
<th>Benin</th>
<th>The Gambia</th>
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<tr>
<td>Burundi</td>
<td>Guinea</td>
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<td>Cameroon</td>
<td>Guinea-Bissau</td>
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<td>Côte d'Ivoire</td>
<td>Kenya</td>
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<td>Democratic Republic of Congo</td>
<td>Mauritania</td>
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<td>Ethiopia</td>
<td>Senegal</td>
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<td>Togo</td>
<td>South Sudan</td>
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<tr>
<td>Uganda</td>
<td>Tanzania</td>
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Routine meningitis can become part of "second year of life" immunisation platform

1. Potential to raise coverage of vaccines given at the same time
2. Important to keep this in mind in preparation for introduction and for sustainably increasing coverage

Pregnant women
1 visit (TT, flu)

Birth
1 visit (BCG, OPV, hepB)

Infants
6/10/14 weeks
3+ visits
Penta, PCV, RV, IPV-OPV,

Adolescents
9–13 years
2+ visits (HPV)

Toddlers
9 months–2 years
2+ visits
MCV, Men A, YF, JE

Not supported by Gavi
In 2016 Gavi will support 5 meningitis belt countries to identify coverage and equity (C&E) priority areas

Key priorities in line with Joint Appraisal recommendations

Gavi’s focus on C&E will help countries increase equitable uptake and coverage of vaccines

C&E contributions to country coverage

- Intensified focus on immunisation activities 4-5 priority areas
- Country increased effort for sustainability
- Continued historical coverage trend if no intervention occurs
- 1-5 years
- Historical coverage trend

Enhancing our focus on coverage and equity of immunisation in priority countries
Gavi investing >US$ 700m to strengthen health systems and raise coverage in the meningitis belt

All countries in the meningitis belt have received at least one health system strengthening (HSS) grant to support routine programmes

Examples:
- Health workforce
- Supply, distribution, maintenance
- Organisation, management

In the meningitis belt, 26 countries have received Gavi HSS support

Strong health systems are essential in expanding and sustaining immunisation coverage
Full country evaluations: health system strengthening
District level estimates – fully vaccinated child coverage (with BCG, measles, polio and DTP3)

Zambia

Bangladesh
Full country evaluations: under-5 mortality, 2000 and 2013

**Bangladesh**

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<th>2000</th>
<th>2013</th>
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**Mozambique**

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**Uganda**

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Outbreak response: support for vaccine stockpiles

- Meningitis A and ACWY stockpiles funded until end 2015 – a no-cost extension granted until end 2016

- Reviewing longer-term support for meningitis stockpiles as part of broader Gavi strategy on stockpiles/outbreak response
Outbreak response and other meningitis serogroups

One particular area with expanding trend:

- Niger, 2015: ~ 9000 cases (72% of positive = NmC)
- Nigeria: 2013-2014: ~1500 cases (100% of positive = NmC)
- Nigeria 2015: > 5000 cases (100% of positive = NmC)
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
A platform for innovation: controlled temperature chain (CTC)

Togo, Cote d’Ivoire, Mauritania used CTC in 2014

Results:

• Good compliance
• Very low wastage due to > +40°C exposure
• No severe adverse events
• Reduction in storage space
• Financial savings
• Paved the way for other vaccines to consider CTC opportunities

Implementation of CTC in 2016:
South Sudan and DR Congo
Challenges ahead

- **Evolving epidemiology**: new serogroups appearing, increasing need for conjugate multivalent vaccines
- Questions around **serotype replacement**
- **Sustainability of surveillance**
  outbreak detection / impact of the vaccine and advanced scientific studies needed to track the epidemiology of W, X and C
- **Increasing cost and reduced availability** of polysaccharide vaccines – largely limited to international travellers
- **Supply security**: both routine and campaign vaccines dependent on one manufacturer
THANK YOU