The Meningitis Vaccine Project Closure Conference
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MenAfriVac Vaccine rollout

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Epidemic meningitis in Africa: 1948-2013

Disease burden

<table>
<thead>
<tr>
<th>Years</th>
<th>Reported cases</th>
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<tbody>
<tr>
<td>1948</td>
<td>20,000</td>
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<tr>
<td>1950</td>
<td>40,000</td>
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<td>1955</td>
<td>60,000</td>
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<td>1960</td>
<td>80,000</td>
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<td>1970</td>
<td>140,000</td>
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<td>1980</td>
<td>170,000</td>
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<td>1990</td>
<td>200,000</td>
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<td>2000</td>
<td>100,000</td>
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Reported cases range from 19,685 to 188,345 across the years 1948 to 2013.
Background

- Following the deadly meningitis epidemics of 1995-96 (> 25 000 deaths), African Ministries of Health launched an appeal to WHO and partners for solutions (Ouagadougou Oct 1996)

- For the 1st time, a vaccine was requested by African Governments and public health leaders, for use in Africa, at an affordable cost (<$1/dose)

- The MVP: a partnership between WHO & PATH, was created in June 2001, with a Grant from the Bill & Melinda Gates Foundation, with the goal to “Eliminate meningitis epidemics in sub-Saharan Africa through the development, testing, licensure and widespread use of affordable conjugate vaccines”

- The MenAfriVac (PSA-TT) was manufactured by Serum Institute of India in collaboration with many partners ➔ North-South & South-South cooperation (Prequalified by WHO June 2010)
WHO Strategies for Meningitis A Elimination

1. Inducing herd immunity through the organization of mass vaccination campaigns in the 26 countries of the belt (2010-2017). Target = 1-29 yo

2. Protecting birth cohorts through:
   - Introducing MenAfriVac in routine immunization (9-18 months)
   - Organizing follow-up campaigns within 1-5 years following the catch-up campaign, every 5 years, for children not reached by routine immunization

3. Strengthening Surveillance and Epidemic Response
High level commitment of African Leaders and Partners

MenAfriVac Launch Ceremony 6 Dec 2010, Burkina Faso

Ouagadougou Appeal
(Oct 1996 meeting)

Yaoundé Declaration
(Sept 2008 RC58 meeting)
MenAfriVac Vaccine Rollout and Achievements 2010-2016

- Planned mass vaccination campaigns targeting over 277 million aged 1-29 years old in the 26 countries of the meningitis belt between 2010 and 2018

- 235,634,344 people vaccinated by the end of 2015 in 16 countries (Burkina Faso, Mali, Niger, Nigeria, Cameroon, Chad, Sudan, Ethiopia, Benin, Ghana, Senegal, Gambia, Togo, Mauritania, Guinea, Côte d’Ivoire)

- About 42 million to be vaccinated in the remaining 10 countries (DRC, South Sudan, Guinea Bissau, Chad, Kenya, in 2016) & (Burundi, Eritrea, Rwanda, Tanzania, in 2017)
MenAfriVac vaccine rollout plan and achievements
Standardized risk assessment tool

- risk indicators
- information required to map the priority ranking
- Local expert opinion

Conducted successfully in 12 countries

- Year previous to the campaign
Prioritization analysis at district level
Nigeria, 2011

Very High Priority LGAs (n = 42)
High Priority LGAs (n = 50)
Moderate Priority LGAs (n = 39)
Low Priority LGAs (n = 222)
Remaining States with enhanced surveillance (n = 10)
MenAfriVac vaccine roll out & achievements 2010-2016

Introducing CTC: Controlled Temp. Chain

- MenAfriVac stable at higher temperatures. Used under Controlled Temp Chain (40°C in 4 days)
  - 2012 pilot CTC test in the district of Banikoara (Benin). Successful implementation
  - 2014: > 1.6 million vaccinated during campaigns in 14 districts of Côte d’Ivoire, Mauritania, Togo
    - Wastage due to CTC (temperature or time) very low <0.1%
    - Reported coverage >95%
    - No serious AEFIs
    - Protocol well understood
    - Excellent Health Care Workers acceptance of CTC approach
    - Training, supervision, monitoring, specific indicators

- Importance of GAVI financial support
Meningitis bacteriologic trend in African meningitis belt (2003-2016)

Large predominance of NmA before 2010.

Significant decreasing trend of NmA after the introduction of MenAfriVac

Predominance of S.pneumo and NmW between 2011 and 2016

Increased circulation of NmC in 2015
Opportunities/ Threats

**Opportunities**

- Combining campaigns MenAfriVac/OPV boosts OPV coverage (Nigeria) and MenAfriVac/VAR (Ethiopia)
- Using MenAfriVac in Controlled Temperature Chain (CTC) to reach more children can halve the cost per child vaccinated from $0.24 to $0.12 (Lydon & al)
- SIIL is developing a thermostable pentavalent (ACWXY) conjugate vaccine

**Threats**

- Political instability or programmatic non-readiness
- Supply insecurity (SIIL = single source)
- GAVI level of financing & country co-financing for RI
- Outbreaks due to non-A serogroups can negatively impact results
Summary

- MenAfriVac is the first vaccine demanded by African leaders for Africa at an affordable cost
- Innovative collaboration model (North-South & South-South)
- MenAfriVac is successfully introduced with more than 235 million people vaccinated in 16 countries from 2010 to 2015
- No case of NmA reported among vaccinated individuals in 16 countries
- No carriage after vaccination in Burkina Faso (Christiansen & al) and Chad (Daugla & al)
- Decrease in NmA cases and overall meningitis morbidity in the belt, but increase in the proportion of other germs (Spn, NmW135, NmC)
Way forward


2. Organization of follow-up campaigns in the under 5 years olds birth cohorts in the early vaccinated countries

3. Introduce MenAfriVac in Routine EPI in early vaccinated countries

4. Support SIIL in the development of the pentavalent conjugate vaccine meant to prevent outbreaks due to the 5 most prevalent meningitis strains (ACWXY)
Collaboration with health authorities of 26 Sub-Saharan Africa countries & India
Merci - Thank you - Obrigado

ELIMINATE MENINGITIS EPIDEMICS IN AFRICA