MENINGITIS EPIDEMIC TRENDS in AFRICA

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Background

- Epidemic Meningococcal meningitis = a challenging public health threat in Africa.
- 1996: Devastating meningococcal group A epidemic: > 250 000 cases and 25 000 deaths.
- NmA = main cause of major epidemics, despite emergence of NmW135 (Burkina F 2002) & NmX (Niger 2006).
- MVP’s new conjugate A vaccine to be introduced progressively starting 2009.
- What approach during the transition period and beyond?
Meningitis Surveillance/Control in the Belt

- Early detection = Weekly Attack Rates (alert/epid. Districts)
- Target population = Attack Rates/ Age groups
- Lab Identification = Confirmation/ serogroups/ serotypes

Enhanced surveillance (epidemiologic + lab)

Early detection for Efficient Vaccination
Meningitis: Geographic distribution of epidemic districts (red) and alert districts (yellow) in Africa in 2008
Meningitis: Geographic distribution of epidemic districts (red) and alert districts (yellow) in Africa in 2009 (Week 1 – 4)

2009 DATA at WEEK 6:
- Burkina: 3 alert districts
- Niger: 3 districts in alert and 1 in epidemic phase
- Nigeria: 9 LGAs in alert and 11 in epidemic phase (600 cases & 40 deaths in 10 States)
Nigeria CSM Surveillance: LGAs ever in Alert/Epidemic Threshold Week 01-06, 2009

(Week 6: 11 LGAs crossed epidemic threshold and 9 in alert
Week 1-6: 18 epidemic LGAs)
Distribution of meningitis by CSF isolates and age group (651 positive cases from Burkina Faso, Mali, Niger and Togo in 2007)

The under 30 years old represents 91.4 % of confirmed cases
Distribution of CSF isolates from countries during the epidemic seasons (2003 to 2008, Week 1 to week 26)

- Nm A: 52%
- W135: 7%
- Other Nm: 3%
- Pneumo: 24%
- Hib: 8%
- Other pathogens: 6%
Geographical distribution of Nm serogroups responsible for epidemics, 2007

Data Source: WHO
Map Production:
Public Health Mapping and GIS
Communicable Diseases (CDS)
World Health Organization
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Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.
The Beginning of a new epidemic wave?

- Spread of a new menA strain (ST-2859)
- Intense activity in hyper endemic countries since 2006

2009 DATA at WEEK 6:

- **Burkina**: 3 alert districts
- **Niger**: 3 districts in alert and 1 in epidemic phase
- **Nigeria**: 9 LGAs in alert and 11 crossed epidemic threshold (10 States recorded 600 cases and 40 deaths)
Ensuring epidemic response during the transition period before Men A introduction

- **Men A conjugate introduction begins**
- **Population at risk in the belt covered**

- **2008**
  - Risk of large epidemics persists
  - Large stockpile of vaccine needed for outbreak control

- **2009**

- **2010**

- **2011**

- **2012**

- **2013**

- **2014**
  - Low risk of A epidemics
  - Risk of epidemics by other serogroups remains
  - Small stockpile of vaccine for outbreak control

- **2015**
Funds received for Epidemic Response

- **US$55.2 million approved by the GAVI Board in June 2008**

- Availability of adequate quantities of Men Ps vaccines (AC, ACW) by:
  - Establishing epidemic-response stockpiles (WHO-UNICEF)
  - Improving timeliness of response (ICG).
CONCLUSION

- Monitoring of epidemic trends through **Enhanced surveillance** has dramatically improved the quality of surveillance data and laboratory identification of pathogens.
- Risk of major outbreak next 1-3 years.
- 45 million doses of stockpile available for the next 5 years for epidemic response (transition period).
- Support to surveillance /epidemic response through country capacity strengthening.
THANK YOU!