Yellow Fever - Session 11

Part 1: Long term Yellow Fever strategy

Epidemiology and risk of yellow fever in current context

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The presentation will consider:

• Recent changes in the epidemiology of yellow fever

• Major lessons learned from past control programmes

• The need for a strengthened and scaled up YF control strategy

• Challenges and opportunities of the EYE strategy
~ 70 years of reporting Yellow Fever to WHO

- South America
- Africa
THE RELENTLESS MARCH OF Yellow fever THROUGH AFRICA

1989-ANGOLA  2008-NAMIBIA
1992-KENYA    2009-R-CONGO
1994-GABON    2013-UGANDA
1995-BURUNDI  2016-ANGOLA, DRCONGO
2001-DRCONGO  UGANDA
2003-CAF,     KENYA,, CHINA

WEST AFRICA
Outbreaks and suspected cases of YF in Africa

Before 2006

After 2006
YF outbreaks in 2016

Countries reporting YF cases
As of Sep. 29, 2016
- 4,188 suspected cases / 373 deaths in 16 of 18 provinces
- 17M people vaccinated in ANG & DRC
- 7M vaccinated with fraction dose of YF vaccine

DR Congo as of 5 Oct 2016
- 2,870 suspected cases in 26 provinces
- 2,473 samples lab tested, 76 confirmed / 16 deaths
- Of 57 confirmed cases, 13 autochthonous
- Also cases exported to Mauritania (1) & Kenya (2)

China 11
Yellow Fever Initiative (YFI) and GAVI support

- YF-IC 2005
- YF-IC continuation 2008
- Final IC 2013
- YF-Long Term Strategy 2017-2026

- YF Position Paper 2003
- First RA 2007
- Revision Case definition 2010
- Strategic Framework 2012-2020
- YF Position Paper 2013
- Group A, B, C

> 134 m people protected
Achievement of the 2005 Initiative - 1

- 90 million people vaccinated
- No YF epidemics in WA since 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Vaccinated (in million)</th>
<th>Coverage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>2006</td>
<td>7.6</td>
<td>100*</td>
</tr>
<tr>
<td>Mali</td>
<td>2006</td>
<td>5.9</td>
<td>83</td>
</tr>
<tr>
<td>Togo</td>
<td>2007</td>
<td>3.6</td>
<td>98</td>
</tr>
<tr>
<td>Senegal</td>
<td>2007</td>
<td>3.1</td>
<td>99</td>
</tr>
<tr>
<td>Cameroon</td>
<td>2009/2014</td>
<td>7.5</td>
<td>99</td>
</tr>
<tr>
<td>Benin</td>
<td>2009</td>
<td>6.3</td>
<td>99</td>
</tr>
<tr>
<td>Liberia</td>
<td>2009</td>
<td>2.9</td>
<td>99</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>2009</td>
<td>4.1</td>
<td>96</td>
</tr>
<tr>
<td>Guinea</td>
<td>2010</td>
<td>6.0</td>
<td>89</td>
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<tr>
<td>Côte d'Ivoire</td>
<td>2011-12</td>
<td>15.4</td>
<td>84</td>
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<tr>
<td>Ghana</td>
<td>2011-12</td>
<td>7.6</td>
<td>88</td>
</tr>
<tr>
<td>CAR</td>
<td>2010-11</td>
<td>2.7</td>
<td>90</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2013</td>
<td>9.0**</td>
<td>76</td>
</tr>
<tr>
<td>Sudan</td>
<td>2014, 2015</td>
<td>4.0**</td>
<td>NA, 92.8</td>
</tr>
</tbody>
</table>

- * Administrative coverage
- ** Partial, not entire country
Control of Yellow Fever in West Africa

VACCINATIONS WITH FNV & REPORTED YF CASES: 1934-1953

GAVI THREE PRONG STRATEGY & REPORTED YF OUTBREAKS: 2004-2015
What is the risk of urban epidemics of yellow fever today?

Risk Factors

- Aedes aegypti and Ae. albopictus have global distribution
- At risk YF susceptible population exceeds 2.5 billion people
- Vector control has been unable to prevent epidemic dengue, chikungunya and Zika
- Mass preventive campaigns with high RI coverage .......?
**EYE Goal:**

To eliminate the risk of YF epidemics globally by 2026

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### Strategic Objective 1: Protect at-risk populations

- Where risk is high, vaccinate everyone: 475 mio vaccine doses for national preventive mass vaccination campaigns in 13 countries
- Vaccinate every child; find and vaccinate everyone who has been missed: 55 mio vaccine doses annually for routine immunisation in 26 countries, Catch-up campaigns where indicated
- Strengthen surveillance and build laboratory capacity: Cost and work plan to be defined
- Monitor immunity: Cost and work plan to be defined

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### Strategic Objective 2: Prevent international spread

- Protect high-risk workers: Cost and work plan to be defined
- Apply the International Health Regulations: Cost and work plan to be defined
- Build resilient urban centres: Cost and work plan to be defined

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### Strategic Objective 3: Contain outbreaks rapidly

- Ensure emergency stockpile vaccines always readily available: maintain 6 mio vaccine doses for emergency stockpile
- Prepare for rapid response: Cost and work plan to be defined
Five Keys to the success of EYE

1. Political commitment for sustainable national/regional YF control strategies

Essential for leadership in YF at-risk countries to committing to preventing epidemics and embracing the need to providing expertise and resources to work with EYE.

2. Governance and partnerships

Coordination of the implementation of EYE activities with continuous monitoring and evaluation of implementation is essential for success.
Three Keys to the Success of EYE

3. Accessible, affordable vaccines in sustained vaccine market

YF risk changes rare potentials for increasing YF vaccine demand and supply must be aligned for timely and effective risk reduction strategy.

4. Sustainable, efficient disease surveillance/lab. diagnosis

The rapid detection of and efficient response to outbreaks are essential for sustainable YF control.

5. Accelerated research and development for new tools and better practices

Research partnerships with all stakeholders essential for identifying needs for and development of effective tools for YF control.
Yellow Fever Partnership

Collaboration

- Ministries of Health
  - WHO: coordination and technical support
  - UNICEF: technical support and vaccine and supply procurement
  - GOARN (AMP, CDC, PATH, Institut Pasteur etc.) implementation, training
  - ICG (WHO, UNICEF, MSF, IFRC)
  - GAVI, ECHO, CERF financial support