Introduction of Pneumococcal Conjugate Vaccine (PCV 10), Kenya

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Getting the Balance Right: Global Immunization Vision and Strategy (GIVS) WHA Side Meeting, May 18, 2011
Outline of presentation

- Country brief
- Background
- Planning for introduction
- Launch
- Memorable Quotes- President, Care Giver
- Post Introduction M&E
**Country brief, Kenya**

**Administrative**: 8 provinces, and 249 districts; 47 Counties Under New constitution

**Area**: 582,646 square kilometres

Regional Vaccine depots in each Province

EPI services provided in 4800 of 6700 health facilities – Public, Private, Faith based, NGOs, all supported by the Division of Vaccines and Immunization (DVI)
## Kenya, facts and figures

<table>
<thead>
<tr>
<th><strong>Total Population</strong></th>
<th>39.8 million</th>
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<tbody>
<tr>
<td>% Rural</td>
<td>68 %</td>
</tr>
<tr>
<td>% under 5</td>
<td>13.6 %</td>
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<tr>
<td>% under 1 Live Births</td>
<td>4%</td>
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<td>1.5 million</td>
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<thead>
<tr>
<th><strong>Health Systems</strong></th>
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<tr>
<td>% of Govt expenditure on health</td>
<td>6.4%</td>
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<tr>
<td>Health facilities</td>
<td></td>
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<tr>
<td>• Dispensaries</td>
<td>4767</td>
</tr>
<tr>
<td>• Health centers</td>
<td>3514</td>
</tr>
<tr>
<td>• Hospitals</td>
<td>691</td>
</tr>
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<td>562</td>
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<th><strong>Health</strong></th>
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<tr>
<td>Total fertility</td>
<td>4.6 per woman</td>
</tr>
<tr>
<td>Infant mortality</td>
<td>52 per 1000 live birth</td>
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<tr>
<td>Under five mortality</td>
<td>74 per 1000 live birth</td>
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<th><strong>Vaccination</strong></th>
<th>77%</th>
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<td>Fully immunised children</td>
<td>(KDHS 2008/2009)</td>
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Road map to PCV-10 introduction

- Immunization Program started as a unit within the Ministry of Health 1980

- No new vaccine introduction into EPI for over 20 years

- In 2002, Pentavalent vaccine *(DPT-HepB-Hib)* introduced, Hib introduction not backed by concrete evidence

- In 2003, promising conjugate vaccine against invasive *Streptococcus pneumoniae* led to the launch of pneumococcal surveillance facilitated by *Pneumo ADIP*, and coordinated by *NetSPEAR* (Network of Streptococcus pneumoniae research in East Africa)

- Demographic surveillance studies by the Kenya Medical Research Institute *(KEMRI)*, evidence of the high burden of invasive pneumococcal disease
Pneumococcal Sero type distribution, Kenya
Incidence of invasive pneumococcal disease, Kenya

![Graph showing incidence of invasive pneumococcal disease by age group in Kenya.](image-url)
Burden of Pneumococcal disease

- Pneumonia (all cause) is the leading cause of paediatric morbidity and mortality in Kenya.

- 1 in every 5 deaths among children < 5yrs in Kenya caused by Pneumonia.

- *Streptococcus pneumoniae* is the commonest bacteriological cause of severe and fatal pneumonia.

- Burden higher with increased HIV prevalence, National: 6.3%.
PCV-10 introduction in Kenya

- In 2006-- decision and application to introduce Pneumococcal vaccine in EPI

- In 2007 – GAVI offers to support Kenya to introduce PCV 7, discussed in ICC, Immediate expression of interest

- Preparations for PCV 7 introduction – cold chain expansion, co-financing arrangements finalised, Introduction delayed

- In 2009, GAVI revised the offer to PCV 10 with conditionalities

- Preparations for introduction in 2010 started
- GAVI financing USD 40,705,000; Government co-financing incremental amounts starting at USD 881,500 (USD 0.15 per dose)

2009 Slogan - Pneumonia, No. 1 Child Killer; It’s time to fight back’. Pneumonia theme also in 2010
National Co-ordination Structure

National Steering Committee

Technical Working Group (TWG)

- Logistics Sub-Committee
- Training Sub-Committee
- Advocacy, Communication & Social Mobilization Sub-Committee
- Monitoring & Evaluation Sub-Committee
### Samples of revised M/E tools

**Revised MCB**

**Revised Pg 16 of MCB**

#### Immunizations

**BCG Vaccine:**
- **At birth:** Date Given, Date of next visit
  - Dose: 0.05mls to non allergic child
  - Dose: 0.1mls for children below 1 year
  - Dose: 0.5mls for child above 1 year
- **BCG Scar Checked:** Date checked, Date BCG repeated
  - **PRESENT**
  - **ABSENT**

**Oral Polio Vaccine (OPV):**
- **Date Given:** Date of next visit
  - Birth Dose: at birth or within 2 wks (OPV 0)
  - 1st dose at 6 weeks (OPV 1)
  - 2nd dose at 10 weeks (OPV 2)
  - 3rd dose at 14 weeks (OPV 3)

**Diphtheria, Pertussis, and Haemophilus Influenzae Type b:**
- **Date Given:** Date of next visit
  - Dose: 0.5mls Intramuscular Left Outer Thigh
  - 1st dose at 6 weeks
  - 2nd dose at 10 weeks
  - 3rd dose at 14 weeks

**Pneumococcal Vaccine:**
- **Date Given:** Date of next visit
  - Dose: 0.5mls Intramuscular Right Outer Thigh
  - 1st dose at 6 weeks
  - 2nd dose at 10 weeks
  - 3rd dose at 14 weeks

**Measles Vaccine:**
- **At 9 Months:** Date Given
  - Dose: 0.5mls Subcutaneously Right Upper Arm

**Yellow Fever Vaccine:**
- **At 9 Months:** Date Given
  - Dose: 0.5mls Intramuscular Left Upper Deltoid

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**Only in selected districts in Rift Valley**
Examples of IEC materials

1. PCV 10 Poster - GAPP
The PCV-1O National launch

High level advocacy event – graced by HE president of Kenya and other high level dignitaries

Used the opportunity to advocate for media support and increased funding for immunization

Actual vaccination started as soon as health workers were trained and received the vaccines.
Memorable Quotes

- **His Excellency the President, Mwai Kibaki:** “The vaccine has come at an opportune time. It is acknowledged that one in every five deaths of children in our country is attributable to pneumonia.”

- “**I am happy to protect my child!** I have watched my neighbors lose their babies to pneumonia. It was so sudden. By the time they arrived at the hospital, it was too late. They were too sick to be saved. I would not want this to happen to mine,” said Dorcas Wanjiku, who had brought her 10-month-old baby Virginia Muthoni to receive the vaccination.
Post introduction monitoring & evaluation

- Programmatic monitoring to assess impact of the training and to document changes in the EPI system as a result of introduction & for WHO prequalification of vaccine -- conducted 6 wks, 6 months & 12 months post introduction, a local research firm contracted

- Adverse events following immunization (AEFI) study on going in 3 demographic surveillance sites in the country

- Catch up studies to allow rapid evaluation of:
  - Indirect effects of PCV10 herd-protection following immunization
  - Serotype replacement diseases
  - Population effectiveness of immunization with PCV10
  - Impact of PCV-10 effectiveness on invasive pneumococcal disease and radiologically confirmed pneumonia
## Challenges and Opportunities

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<th>Challenges</th>
<th>Opportunities</th>
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<td>Resource mobilization for new vaccine introduction</td>
<td>Real opportunity to achieve MDG 4</td>
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<td>High demand for the vaccine – real danger of stock outs</td>
<td>Renewed government/partners interest in immunization</td>
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<td>Community perceptions on multiple antigen vaccinations</td>
<td>Renewed community interest in Immunization</td>
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<td>Sustainability when GAVI support reduced or stopped</td>
<td>Training opportunity for Health workers</td>
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<td>Created momentum for holistic pneumonia control approach</td>
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Looking at the Horizon

Rotavirus Vaccine Introduction in 2013
Acknowledgements

- World Health Organization (WHO)
- United Nations Children's’ Fund (UNICEF)
- Maternal and Child Health Integrated Program (MCHIP)
- Clinton Health Access Initiative (CHAI)
- Centers for Disease Control and Prevention (CDC-Kenya)
- Kenya Paediatric Association (KPA)
- Bill and Melinda Gates Foundation
- Global Alliance for Vaccine and Immunization (GAVI)
- Kenya Medical Research Foundation
- Wellcome Trust Research
- Parents/Caregivers and children, Health Workers, Media, Citizens.
Thank you