Overview of Routine Immunization in Nigeria

Presented by;
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at the WAVA Workshop held at the Hawthorn Suites Abuja
6th October 2016
Outline

• Background
• Contexts (global and national)
• Historical perspectives
• Organization of Operations
  – Immunization Environment
  – Routine Immunization flow
  – National policy
  – Strategies
  – Operational structures
  – Government role
  – Partnerships
• Performance
• Opportunities and threats
• Challenges
• Roles of Stakeholders
Background:
Nigeria, one nation, 180 million+ people, 250 languages, many cultures

- Governance
  - Federal system, 6 geopolitical zones, 37 states, including the Federal Capital Territory, 774 Local Government Areas

- Demography and Health Indices
  - Large under five population, Large National birth cohort: 7m+, and surviving infants: 6m+; birth registration 30%; under-five mortality rate 157, infant mortality rate 75; 25,413 HF offering routine immunization

- Others
  - Roads, unstable power, dense and rural populations, poor sanitation
  - West Africa’s transport and migration hub bordering four countries
Global Context

• Global Vaccines Action Plan (GVAP 2011 – 2020)
  – To achieve the goals of the decade of vaccines
    • Ensure access to vaccines of assured quality to all eligible persons whoever they may be or wherever they live
    • Systems strengthening which ensures integration of sector-wide plans for human resources, financing and logistics

• Regional EPI goals of AFRO
  – Drawn from the Global goals
National Context

• Concurrency of Health in 1999 constitution (Political but no Fiscal federalism)

• Comprehensive Multi-Year Plan 2016 -2020

• Introduction of new vaccines and technologies

• Several studies, dialogues and workshops highlighting the issues of routine immunization
Historical perspective - Globally

- **1974**: EPI established through a WHA resolution 27.57 targeting to build on the success of small pox eradication
- **1977**: Global policies for immunization to provide universal childhood immunization by 1990 (UCI)
- **1978**: Alma-Ata declaration
- **1988**: WHA resolution 41.28 –GPE by the year 2000
- **2002**: Reaching Every District (RED) strategy for African region launched
- **2010**: DoV collaboration 2011-2020
Historical perspective - Nigeria

- **1979**: EPI established
- **1991**: UCI EPI targets achieved (coverage survey) but not sustained
- **1996**: PEI activities commenced in Nigeria
- **1997**: EPI restructuring to a parastatal NPI
- **2004**: Nigeria adopted the Regional Strategy of Reach Every District (RED) to Reaching Every Ward (REW)
- **2007**: Health sector reform merged NPI to NPHCDA
- **2008**: Intensification of REW approach and other strategies such as PIRI, LIDs, CHWs
- **2010**: National Strategic Health Development Plan (NSHDP) that includes Routine Immunization strengthening activities
- **2010**: Introduction of bivalent OPV for PEI campaign
The Immunization Environment

The Immunization System Environment

The Routine Immunization System

Planning & Management

Vaccine Supply & Quality

Surveillance

Service delivery

Logistics

Advocacy & Communication

Monitoring & Using Data for Action (Feedback)

Finance

Human Resources & Capacity Building

External Environment
Health System
Immunization System
Flow of the RI system

1. Planning and forecasting: Annual forecasting of national vaccine needs
2. Procurement: Quarterly procurement of vaccines through UNICEF
3. Central cold store: All vaccines arrive at central store located in Abuja
4. Zonal cold stores: Vaccines should be 'pushed' to 6 zonal cold stores on a quarterly basis
5. State cold stores: Vaccines are 'pushed' to each state cold store on a quarterly basis

Responsibility:
Fed govt: 1-5
State govt: 6
LGA: 7 & 8

Delivery to patients: Administration of vaccines to children and adults
Primary Health Centers: Routine immunization services should be provided at ~26,000 PHCs across the country
LGA cold stores: 776 LGAs receive vaccines for one month or less at a time

Slide courtesy of Solina Health
National Immunization Policy (revised 2009)

- GoN policy is to provide potent vaccines free to all population at risk of VPDs
- Immunization is a collaborative venture between Government and Partners
- Many policy documents and standards are available (Injection safety, Multi-dose vial policy, standards of practice, BGSP, REW manual, cMYP, Training manual)

### National Targets

1. Improve and sustain routine immunization coverage of all antigens to 90% before the year 2020.
2. Interrupt Polio transmission by end of 2013 (Missed)
3. Eliminate maternal and neo-natal tetanus by the end of 2010 (Missed)
4. Eliminate Measles by 2020
5. Introduce new vaccines (Penta, PCV, Rota & HPV) before 2015 (Partly achieved)

### Target Groups

1. Eligible children 0–11 months (Routine vaccines against killer diseases)
2. Eligible children 0-59 months (OPV vaccination for Polio Eradication)
3. Women of Reproductive Age 15–49 years (Td vaccination)
4. Other at-risk groups especially in out-break situations and those travelling to endemic areas.
5. International travellers (YF and CSM vaccinations)
<table>
<thead>
<tr>
<th>Contact</th>
<th>Min. target age</th>
<th>Antigen</th>
<th>Dosage</th>
<th>Route of admin</th>
<th>site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>At birth (HepB must be given within 14 Days of life; OPV0 within 14 days of life)</td>
<td>BCG</td>
<td>0.05 ml</td>
<td>intradermal</td>
<td>Rt upper arm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HepB</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Antero-lateral aspect of Left thigh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OPV 0</td>
<td>2 drops (1 ml)</td>
<td>oral</td>
<td>Mouth</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>6 weeks</td>
<td>OPV1</td>
<td>2 drops (1 ml)</td>
<td>oral</td>
<td>Mouth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Penta 1</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Antero-lateral aspect of Left thigh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCV 1</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Anterolateral aspect of right thigh</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>10 weeks</td>
<td>OPV 2</td>
<td>2 drops (1 ml)</td>
<td>oral</td>
<td>Mouth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Penta 2</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Antero-lateral aspect of Left thigh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCV 2</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Anterolateral aspect of right thigh</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>14 weeks</td>
<td>OPV3</td>
<td>2 drops (1 ml)</td>
<td>oral</td>
<td>Mouth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Penta 3</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Antero-lateral aspect of Left thigh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCV3</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Anterolateral aspect of right thigh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IPV</td>
<td>0.5 ml</td>
<td>Intramuscular</td>
<td>Anterolateral aspect of right thigh</td>
</tr>
<tr>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>9 months</td>
<td>Measles, Yellow Fever</td>
<td>0.5 ml</td>
<td>subcutaneous</td>
<td>Left upper arm</td>
</tr>
<tr>
<td>DOSES</td>
<td>WHEN TO GIVE</td>
<td>EXPECTED DURATION OF PROTECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td 1</td>
<td>At first contact or as early as possible in pregnancy</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td 2</td>
<td>At least 4 weeks after Td 1</td>
<td>1-3 Years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td 3</td>
<td>At least 6 months after Td 2 or during subsequent pregnancy within 3 years</td>
<td>5 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td 4</td>
<td>At least 1 year after Td 3 or during subsequent pregnancy</td>
<td>10 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Td 5</td>
<td>At least 1 year after Td 4 or during subsequent pregnancy</td>
<td>All the child bearing years</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our Strategies in RI

• Vaccination approach
  – Fixed post, Outreach and mobile

• Programmatic approach
  – Reaching Every Ward (five components)
    • Later being operationalized as 1, 4, 3 Strategy
  – Periodic intensification of Routine Immunization
    (Immunization Plus Days, Local Immunization Days, MNCH weeks)
  – Reducing Unimmunized Children (prioritizing and focussing on training, supervision and data on areas with highest numbers of susceptible population)
  – New Vaccine Introductions (Penta, IPV PCV,, MenA, Rota, HPV)
  – Accountability
Operational Structure

National level – NPHCDA & 6 Zones

State level – SMoH/P HCDA/B

LGA Level- MoLG/ Health Dept

RI working group

State Task Force
State Team

NLWG

NSMWG

ICC-Finance Committee

M&E

Training

RI Working Group
- NPHCDA
- WHO
- UNICEF
- USAID and Flagship programs (MCSP)
- DFID and flagship programs (MNCH2)
- EU SIGN
- CHAI
- HERFON

• BMGF
• GAVI
• Solina Health
• Save the Children
• IVAC
• CDC
Government Role

National level

- Policy formulation
- Provision of potent bundled vaccines
- Coordination
- Resource mobilization
- Monitoring, Evaluation & Feedback
- Technical support to States/LGAs

State

- Resource mobilization (funding of activities)
- State level Coordination
- Monitoring, Supervision and Feedback
- Infrastructure for PHC services

LGA

- Human Resource for health (HRH)
- Infrastructure for PHC services
- Service provision
Funding for RI & the dynamics

- GoN funds RI vaccines & given FREE to all Nigerian children
- ALL vaccines budgeted funds are released directly to UNICEF from the CBN using an existing MOU with GoN
- In 2012: Total RI and New Vaccine fund = N5.2Billion
- First charge on the capital expenditure
- Accountability framework project commenced
- Regularizing and stabilizing vaccine and devices stocks
Current RI Performance as at JULY 2016 (Administrative Data)
Proportion of community link conducted July 2016

Community link conducted by STATE

- 12 States (32%) conducted > 80% of the planned CL activities as at July 2016.
- 7 (19%) States conducted < 50% of planned CL activities.
- No CL report from Kebbi, Katsitna & Jigawa States

Key: Coverage

- < 50%
- 50 - 79.99%
- Above 80%
- No Report

Community link conducted by LGA
Proportion of Health Education sessions conducted July 2016

Health Education conducted by STATE

• 13 States (35%) conducted > 80% of the planned CL activities as at July 2016.
• 4 (11%) States conducted < 50% of planned CL activities.
• No CL report from Kebbi, Katsina & Jigawa States

Health Education conducted by LGA

Key: Coverage

- < 50%
- 50% - 79.99%
- Above 80%
- No Report
Proportion of immunization sessions (fixed and outreach) conducted July 2016

<table>
<thead>
<tr>
<th>Categorization of LGAs</th>
<th>Fixed</th>
<th>Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions</td>
<td>&lt;50%</td>
<td>50 - 79.9%</td>
</tr>
<tr>
<td>Fixed</td>
<td>56</td>
<td>87</td>
</tr>
<tr>
<td>Outreach</td>
<td>134</td>
<td>177</td>
</tr>
</tbody>
</table>

631 LGAs (82%) and 463 LGAs (60%) conducted > 80% of their planned Fixed & outreached sessions respectively in July 2016. The LGAs that conducted <50% of their planned fixed or/and outreach sessions are in Kwara, Kogi, Plateau, Kaduna, Bayelsa, Yobe, Jigawa, Katsina, Oyo, Ekiti, Lagos, Bayelsa, Rivers, Akwa Ibom, Enugu, Imo, Anambra Delta and Edo states.
<table>
<thead>
<tr>
<th>State</th>
<th>Cumulative Session Coverage July 2016</th>
<th>Cumulative vaccination coverage - July 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fixed Sessions</td>
<td>Outreach Sessions</td>
</tr>
<tr>
<td>Abia</td>
<td>86%</td>
<td>62%</td>
</tr>
<tr>
<td>Adamawa</td>
<td>89%</td>
<td>83%</td>
</tr>
<tr>
<td>Akwa Ibom</td>
<td>92%</td>
<td>78%</td>
</tr>
<tr>
<td>Anambra</td>
<td>83%</td>
<td>68%</td>
</tr>
<tr>
<td>Bauchi</td>
<td>95%</td>
<td>97%</td>
</tr>
<tr>
<td>Bayelsa</td>
<td>50%</td>
<td>22%</td>
</tr>
<tr>
<td>Benue</td>
<td>94%</td>
<td>86%</td>
</tr>
<tr>
<td>Borno</td>
<td>53%</td>
<td>46%</td>
</tr>
<tr>
<td>Cross River</td>
<td>94%</td>
<td>82%</td>
</tr>
<tr>
<td>Delta</td>
<td>95%</td>
<td>69%</td>
</tr>
<tr>
<td>Ebony</td>
<td>98%</td>
<td>95%</td>
</tr>
<tr>
<td>Edo</td>
<td>98%</td>
<td>91%</td>
</tr>
<tr>
<td>Ekiti</td>
<td>92%</td>
<td>79%</td>
</tr>
<tr>
<td>Enugu</td>
<td>100%</td>
<td>65%</td>
</tr>
<tr>
<td>FCT</td>
<td>92%</td>
<td>88%</td>
</tr>
<tr>
<td>Gombe</td>
<td>90%</td>
<td>87%</td>
</tr>
<tr>
<td>Imo</td>
<td>86%</td>
<td>73%</td>
</tr>
<tr>
<td>Jigawa</td>
<td>96%</td>
<td>82%</td>
</tr>
<tr>
<td>Kaduna</td>
<td>94%</td>
<td>94%</td>
</tr>
<tr>
<td>Kano</td>
<td>97%</td>
<td>98%</td>
</tr>
<tr>
<td>Katsina</td>
<td>86%</td>
<td>75%</td>
</tr>
<tr>
<td>Kebbi</td>
<td>98%</td>
<td>97%</td>
</tr>
<tr>
<td>Kogi</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>Kwara</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>Lagos</td>
<td>93%</td>
<td>61%</td>
</tr>
<tr>
<td>Nasarawa</td>
<td>78%</td>
<td>62%</td>
</tr>
<tr>
<td>Niger</td>
<td>93%</td>
<td>85%</td>
</tr>
<tr>
<td>Ogun</td>
<td>95%</td>
<td>94%</td>
</tr>
<tr>
<td>Ondo</td>
<td>87%</td>
<td>82%</td>
</tr>
<tr>
<td>Osun</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Oyo</td>
<td>79%</td>
<td>42%</td>
</tr>
<tr>
<td>Plateau</td>
<td>97%</td>
<td>93%</td>
</tr>
<tr>
<td>Rivers</td>
<td>87%</td>
<td>54%</td>
</tr>
<tr>
<td>Sokoto</td>
<td>90%</td>
<td>96%</td>
</tr>
<tr>
<td>Taraba</td>
<td>85%</td>
<td>84%</td>
</tr>
<tr>
<td>Yobe</td>
<td>95%</td>
<td>88%</td>
</tr>
<tr>
<td>Zamfara</td>
<td>97%</td>
<td>90%</td>
</tr>
<tr>
<td>National</td>
<td>87%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Summary table of selected antigen coverage July 2016; States
Number of Un-Immunized children by zone July 2016 versus 2015

Nationally 15% reduction in the number of number of un-immunized children in July 2016 compared to same period 2015.
Challenges
Nigeria’s Decentralized Health System

<table>
<thead>
<tr>
<th>Government Tier</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>National policy, monitoring; Tertiary teaching facilities</td>
</tr>
<tr>
<td>State</td>
<td>Population Health in State; Referral State Hospitals</td>
</tr>
<tr>
<td>Local Government</td>
<td>Primary Health Care Facilities</td>
</tr>
</tbody>
</table>

- Inconsistent health services varying by State and local government
- Health Funding: Some States and LGAs simply do not contribute enough
- Generally, health services, uptake and indicators in southern States better than northern States
Supply side barriers

*Weakness in the delivery of vaccines that is largely operational*

- Inadequate Cold Chain (CC) infrastructure
- Weak Preventive Maintenance (PPM) system of CC systems leading to rapid and continuous break down
- Inadequate supportive supervision
- Weak monitoring and use of data for action
- Slow integration of Private providers in RI service delivery
Demand side barriers

Weakness in generating the community demand for vaccines

1. Poor community participation in planning and implementation of Immunization activities
2. Non-functional Ward Development Committee's (WDC)s in many areas
3. Health seeking behaviour focuses on curative interventions
4. Poor involvement & participation of CBOs/NGOs in Immunization activities
5. Sub-optimal community enlightenment, health education and promotion
6. Community fatigue with the campaigns (too many rounds)
System wide barriers

1. Inadequate financing mechanisms to support recurrent costs at LGA level
2. Dilapidated infrastructure including transport
3. Inadequately staffed health facilities
4. Poorly accessibility of services (Geographical and cultural barriers)
5. Competing health priorities especially Polio and epidemics
6. Labour unrest
7. Security challenges
8. Natural Disasters
Data Issues

• Data tools and bank

• Quality of Administrative data over the years
  – Validation methods: DQS/DQA; NICS; NDHS; WHO/UNICEF Best Estimates; UNICEF’s MICS; WB; etc
Opportunities for RI - 1

• National Health Bill
• Systematic and sustained engagement of all stakeholders
  • Opinion leaders including professional groups (NMA, PAN, NANNM, AGMPN, etc), CSOs
  • Caregivers
  • Health workers
  • Policy makers (sub-national)
• Saving One Million Lives Initiative
• GIS mapping of Polio Eradication Initiative
Opportunities for RI - 2

• SURE-P MNCH program
  • Village Health Workers
  • Conditional cash transfers for immunization

• Private sector participation
  • PPHA (e.g. Dangote/Gates Alliance in Kano, Sokoto, Zamfara). Similar baskets for all states urgently desired
  • Private healthcare providers/NHIS
  • Vaccine distribution in collaboration with NURTW

• Accelerated Disease Control Intervention
  • Case based Measles surveillance as markers of where RI is underperforming
MNCHW is a simple one-off approach to delivering a combination of services that ensures universal coverage of high-impact, low-cost interventions through the health system (includes routine immunization).
Suggested Roles of CSOs

• Advocacy
• Resource mobilization
• Awareness Creation
• Social mobilization
• Research
• Pressure Group
Conclusion

The time is now for a movement around routine immunization, hoping all of you are in agreement.
Thank you