

**21st Meeting of the Expert Review Committee (ERC)
On Polio Eradication & Routine Immunization
in Nigeria**

Abuja, Nigeria

7 - 8 March 2011

Executive Summary

The tremendous effort to eradicate polioviruses from Nigeria is at a critical crossroads. There is now a time-limited (6-9 months) opportunity to improve the quality of activities sufficiently to interrupt the final chains of wild and vaccine-derived poliovirus before the accumulation of susceptible children results in major new outbreaks that would undermine the strong prospects for imminent success.

Wild polioviruses (WPVs) now appear largely limited to Borno in the northeast and Kebbi/Zamfara/Sokoto in the northwest, with circulating vaccine-derived polioviruses (cVDPV2) mainly in Kano and Kaduna. This geographically limited circulation, combined with the availability of bivalent OPV, provides an unprecedented opportunity to complete polio eradication in this country before end-2011.

To achieve this it is absolutely imperative that the operations and communications lessons learnt since the last ERC to improve the quality of mop-ups, IPDs and AFP surveillance be vigorously applied immediately.

Major Recommendations:

1. ***Focus on the Infected States - Borno, Kebbi, Zamfara, Sokoto, Kaduna & Kano:*** technical support, advocacy and innovations should be concentrated in these last states known to be most infected with WPVs, cVDPVs or both. The Abuja Commitments should be publicly monitored at LGA level in these states.
2. ***Intensify All Mop-ups:*** initiate mop-ups within 28 days of confirmation of all WPVs and cVDPVs, target a minimum of 500,000 children, systematically engage traditional leaders, incorporate communications and operational interventions, and apply enhanced independent monitoring, with results to NPHCDA within 8 days.
3. ***Enhance AFP Surveillance Around Orphan Viruses:*** all areas (multi-LGAs) with an orphan or long-chain WPV or cVDPV should aim to double surveillance sensitivity for 12 months to guide mop-ups and prove eradication of the virus.
4. ***Conduct 5 OPV Rounds in Priority States:*** Child Health Weeks (CHWs) in May and November, should be complemented with 3 large scale SIPDs in June, August and September, targeting 8-20 states, depending on the evolving epidemiology. The May CHW should include a 'nested mop-up' in 6 states.
5. ***Implement LGA-Specific Plans in Highest Risk Areas:*** by the June SIPD, all of the very high risk LGAs should have tailored plans to improve IPD quality.
6. ***Establish & Implement a Cross-State Migrant/Mobile Population Strategy:*** by the June SIPD, this strategy should be in place, with detailed activities to identify, reach and immunize the migrant/mobile populations who are increasingly important to stopping all transmission and who are chronically under-vaccinated.

Introduction:

The 21st Expert Review Committee for Polio Eradication and Routine Immunization was convened on 7-8 March 2011 in Abuja, in the context of the 95% reduction in wild poliovirus cases in Nigeria in 2010 compared to 2009, and the urgent need to ensure that actions are taken to complete the job of polio eradication in 2011.

As part of their deliberations, the Executive Director NPHCDA requested the ERC to consider some key questions:

- How can mop-ups be improved so that they achieve maximum impact?
- How can surveillance gaps be identified and addressed?
- How can data be more timely to drive programme decision-making and to improve quality in highest risk areas?

The ERC was very pleased to have representatives of key states and partner agencies participate fully in the meeting. This report summarizes the main findings, conclusions and recommendations of the 21st meeting of the ERC.

Report on the 20th ERC Recommendations:

The ERC noted the report on the status of implementation of the 20th ERC recommendations. The ERC notes the continued monitoring and reporting on the Abuja Commitments by the national programme, while noting the gaps against the indicators. The national programme has clearly made major efforts to address the recommendations, including the establishment of the National Mop-Up Task Team, and the implementation of the full recommended SIA schedule. There is evidence of continued improvements in the immunization status of children in endemic states, although this improvement remains uneven. However the ERC considers that certain elements of the recommendations have not been successfully addressed, in particular the implementation of recommendations for high risk LGAs is uneven, and repeating of immunization activities in wards with high levels of missed children during SIAs remains unsatisfactory.

Current epidemiological situation:

In 2011 one case due to wild poliovirus (WPV1) has so far been reported, with onset on 7 February, from an LGA in Borno state (Marte) that was previously infected in 2010. Although genetic data is not yet available on this case, it is highly likely that it represents a continuation of the 2010 transmission in the same area. One case due to cVDPV2 has also been reported, from Zamfara, with onset in January.

In 2010 Nigeria reported a total of 21 cases due to WPV (8 WPV1 and 13 WPV3), from 21 Local Government Areas (LGAs) in 8 states, versus 388 cases from 198 LGAs in 27 states in 2009. This is the lowest incidence of both types over a 12 month period that Nigeria has ever recorded. Circulating vaccine derived poliovirus (cVDPV) incidence also dropped significantly in 2010, with 27 cases reported from 23 LGAs in 8 states versus 154 in 96 LGAs in 15 states in 2009.

The 8 cases of WPV1 detected in 2010 have been in 3 different transmission areas; the earliest WPV1 case of the year, in Sokoto in April, was a continuation of transmission within Sokoto from 2008-2009. No further cases have since been

detected in this transmission chain. The four cases in Borno and the one case in Kano (in addition to multiple cases in Chad) are genetically related to each other and are due to a continuation of transmission within Borno from 2009 (and as noted above, it is likely that the February 2011 case is from the same transmission chain). The two Kebbi cases are related to each other, although there is a genetic evidence indicating missed transmission, and represent continuation of transmission in north-central and far north-western areas from 2008 and 2009.

The 13 WPV3 cases from 2010 demonstrate different transmission patterns. While there is one clear example of continuation of transmission from 2009 in the same area in Zamfara, several states have reported cases that appear to be due to sporadic importations (Delta, Katsina, one of the Zamfara cases, FCT); and the biggest group of 7 cases spread across 3 north-western states (Zamfara, Kebbi, Sokoto) is due to an introduction of WPV3 previously circulating (2009) in north-eastern states on the other side of the country. This transmission chain also spread to Niger and Mali.

Fifteen of the 27 cVDPV2 cases with onset in 2010 are from two clear transmission chains, one involving Kano, Kaduna, and Kebbi, and the other Kano, Borno, and Yobe. There is evidence from Kano in particular, but also Kaduna, Sokoto, and Kebbi, of transmission continuing from 2009. Clearly cVDPV2 is also being moved through the country, and in 2010 a case related to Sokoto transmission was reported from Niger Republic. One case due to cVDPV2 has been reported in 2011, from Zamfara.

Poliovirus transmission over the last 12 months therefore shows two patterns; one pattern is of continuation of transmission in key areas, often undetected for relatively long periods; and the other is of movement of virus often across wide areas, with genetic gaps indicating that different transmission chains have been missed for several months. Although case numbers have been much lower than in previous years, **the evidence of missed transmission, along with the continued detection of all three poliovirus types, represent significant epidemiological risks.**

As noted in October 2010, **detailed case investigations show that polio cases, whether due to WPV or cVDPV, are overwhelmingly un-immunized or under-immunized.** There is a high preponderance of failure to immunize due to reported non-compliance, and community surveys around cases confirm the importance of non-compliant and under-informed communities in sustaining poliovirus transmission.

Programme developments

The ERC noted some key developments since their last meeting:

- **Formation of the national Mop-Up Task Team and adoption of mop-up strategy.** The MUTT has overseen the process of planning mop-ups which have been carried out or planned in response to all wild poliovirus reported since October 2010. Although there remain significant issues of timeliness, size, and quality, this is a positive development.
- **Implementation of Enhanced Independent Monitoring in all high risk states.** EIM is providing much more reliable information on the true quality of IPDs and is identifying far more areas with missed children and quality gaps, although since introduction of EIM is recent it is too early to identify trends in quality.

- **New social mobilization and communications efforts.** The development of the Intensified Ward Communications Strategy offers a mechanism to intervene in key high risk areas with a package of interventions including majigis and engagement of traditional leaders and the mobilization of their networks.
- **Continued efforts to advocate with and engage political leaders and improve accountability.** The Abuja Commitments are monitored quarterly and the national programme has an active strategy of engaging national, state, and local leaders. State Governments have been supported in developing Emergency Plans in Borno, Zamfara, and Kebbi, although it is too early to judge the impact of these plans.
- **The sustained engagement of traditional and religious leaders.** The engagement of traditional leaders remains a strong feature of the programme, although there remains further scope for improving the impact of this.

Conclusions and Recommendations

Eradicating polio

Poliovirus transmission in Nigeria has been significantly reduced in 2010 following real progress in improving programme quality and community engagement, and reaching more children consistently with vaccine. This progress provides a strong platform for completing eradication in 2011. The developments noted above demonstrate that the national programme is actively seeking new and effective ways of improving quality and finishing the job.

However the ERC is worried by a number of issues. The continued circulation of all three poliovirus types, the continued evidence of quality gaps and failure to reach all children in key high risk areas during IPDs, and the evidence of surveillance gaps detected through genetic analysis and special field investigations all show that **polio can and will return with a vengeance if the programme does not rapidly succeed in further improving quality.** The inevitable distraction of political leadership in the period leading up to national and state elections is a further concern.

The ERC believes that the programme must rapidly step up intensity to close remaining quality gaps and complete eradication. The basic elements necessary for doing this already exist; **the key will be ensuring effective implementation of existing plans and strategies.** Mop-up responses must achieve the intended high quality; High Risk Operational Plans and Intensified Ward Communications Strategies must be developed and implemented in key high risk areas. The use of data to drive programme activities and improvements must be significantly enhanced.

Strategic Priorities for the national programme

In the light of the developments over the last 12 months and the current situation, the ERC considers that the strategic priorities for polio eradication in Nigeria for the coming 12 months are:

- **Ensure full implementation of the aggressive, intensive mop-up strategy** to respond rapidly and effectively to any new WPVs or cVDPVs
- **Fix known problems in high risk areas** by addressing the quality and coverage gaps in persistently under-performing high risk LGAs

- **Identify and cover mobile populations** with immunization and surveillance
- **Identify and close surveillance gaps** to rapidly and reliably detect poliovirus
- **Maintain high levels of population immunity** in all states through appropriate SIAs and through strengthened routine immunization

Recommendations

The ERC requests that the recommendations of the 21st meeting be taken in conjunction with recommendations of previous meetings which remain valid.

Government and traditional leaders

1. The ERC urges the Federal and State Governments:
 - to continue to lead polio eradication in Nigeria, to report on the Abuja Commitments on a quarterly basis, and to make every effort to ensure accountability of Local Government authorities for reaching every child.
 - to stay focussed on polio eradication during this critical period for eradication
 - to work with the governments of neighbouring countries to share information and plan activities to ensure that all populations in border areas are reached.
 - to concentrate advocacy and innovations in the states known to be most infected with WPVs, cVDPVs or both, and to publically monitor the Abuja Commitments bi-monthly at state and LGA level in these states.
 - to maintain a rolling 12 month planning timeframe for polio eradication activities, **recognizing that the next 12 months will be the most intensive period for polio eradication in Nigeria.**
2. The national programme and partners should continue their efforts to fully engage traditional and religious leaders in polio eradication activities, given the clear impact that their engagement has had on improving access to children. **This is particularly critical for ensuring the quality of mop-ups.**

Supplementary Immunization Activities (SIAs) Schedule

The ERC considered the epidemiological situation as well as the recommendations of the 20th ERC meeting. The recommended schedule should be regarded as flexible enough to be varied according to changes in epidemiology or vaccine supply.

3. The ERC recommends the following SIA schedule:

The ERC proposes the following schedule for 2011:

- Sub-national IPDs should be carried out in March covering the 12 highest risk states, using bOPV
- A mop-up quality round should be carried out in May covering 6 states (Kebbi, Sokoto, Zamfara, Kano, Borno, and Yobe), using bOPV
- Three IPD rounds should be conducted between June and October, targeting 8 to 20 states depending on epidemiological and operational developments:
 - in June using bOPV
 - in August using tOPV
 - in September/October using bOPV
- These rounds should be supplemented by extensive mop-ups (see below).

- Maternal, Neonatal, and Child Health Weeks should continue to be a platform for tOPV immunization in fixed sites.
- Any state that has failed to conduct a planned IPD round in the first quarter of 2011 should catch up the missed round(s) by the end of April.

The ERC proposes the following schedule for 2012 for forward planning purposes:

- Two national IPDs, one round with bOPV and one with tOPV.
 - Up to 4 sub-national IPDs, two in the first half of the year and two in the second half, with the final number of rounds, extent, and vaccine of choice dependent on epidemiology.
 - This schedule should be reviewed and finalized at subsequent ERC meetings based on the evolving epidemiology.
4. The Government and the World Bank should ensure that arrangements for the buy-down for OPV for supplementary immunization activities are finalized as soon as possible to ensure availability of vaccine for crucial planned activities.
 5. An operational analysis of vaccine use and management in IPDs should be carried out during the March IPD round to inform decisions on ensuring the availability of OPV to cover SIA requirements.

Mopping up in response to circulating poliovirus

6. **Mopping up should be pursued aggressively as a central strategy of the national programme.** The National Mop-UP Task Team should ensure that:
 - A response is carried out to **all** wild poliovirus or cVDPV reported in 2011
 - The initial **detailed investigation and risk assessment** is initiated within 72 hours of the report and a **detailed, special mop-up plan** developed for the area concerned which will be followed in the mop-up and subsequent SIAs
 - The minimum size of mop-ups is **multiple LGAs and the target population is at least half a million children**. Where there is evidence of linkage of transmission to a potential reservoir area, that area should also be mopped up.
 - The first response round is carried out **within 28 days of confirmation** of the case; subsequent rounds should have as short an interval as possible and take into consideration planned IPD rounds.
 - A **rotating buffer stock of vaccines** (minimum 5 million doses of bOPV and tOPV) and other resources are available to cover the mop-ups
 - **Additional experienced human resources** are deployed to support state and LGA teams to plan and implement mop-ups and ensure high quality.
 - Intensive enhanced independent monitoring is carried out with results provided within 5 days of the round and **any ward with less than 90% coverage is re-immunized within one week of the round**.
 - Local Government Chairmen are charged with ensuring mop-up quality.
 - **Traditional leaders are engaged** to ensure that they provide oversight of ward and village heads supervision of mop-up quality.
 - A **communications package** is developed which can be rapidly applied as part of the mop-up response.

Identifying high risk areas and groups and improving SIA quality

7. Data from **Enhanced Independent Monitoring** should be available at state and national level within 8 days of the end of each IPD round to enable rapid action to be taken to address identified quality gaps. EIM should continue to be supplemented by LQAS as per current practice.
8. As a standard response, in any ward where monitors find more than 20% missed children following an IPD round **the activity should be repeated**. This process should be documented according to a standard format, including the number of children reached in the repeated activity, **and reported at state and national level following each IPD round**.
9. Based on recent epidemiology and data from Enhanced Independent Monitoring, a thorough review of risk categorization of LGAs and wards should be carried out by June to define high risk LGAs for the coming 6 months
10. Specific actions must be taken to improve quality in identified high risk LGAs:
 - the implementation of **High Risk Operational Plans** should be closely monitored at State and National level, and plans updated prior to each IPD round.
 - HROPs should include a strong communications component, including the Intensified Ward Communication Strategy for appropriate high risk wards.
 - Traditional leaders should be engaged to ensure that 100% of Ward and Village Heads play a supervisory role in IPDs in high risk LGAs, and to track indicators of their involvement closely.
 - State Governors are urged to regularly meet with Chairmen of high risk LGAs immediately prior to each IPD round, to identify problems and decide on solutions.
 - Chairmen of high risk LGAs should chair daily review meetings during IPDs to ensure problems are identified and addressed.
 - re-visit teams, market teams, and evening teams should be scaled up in high risk LGAs to increase opportunities to find and immunize missed children; the impact of these teams should be closely evaluated and reported to state and national levels.
11. Implementation of the State Emergency Plans for polio eradication developed in Borno, Kebbi, and Zamfara should be closely monitored at state and national level. Similar plans should be developed by mid-2011 in Kano, Yobe, and Niger states.
12. A specific strategy for mobile and migrant populations should be developed nationally and in each high risk state, with the objective of identifying mobile populations and mapping their movement routes to ensure that there are opportunities to reach them with immunization and surveillance.

Closing surveillance gaps and detecting all transmission

13. The ERC endorses the plan of action proposed by the national programme to identify and close surveillance gaps and achieve consistent excellent surveillance quality, as follows:
 - compiling and analysing all available data on surveillance quality from routinely collected data, detailed case investigations, laboratory and genetic data, peer surveillance reviews, and special investigations to identify any potential gaps and

issues; **this desk review should be completed by the end of March**

- **targeted rapid assessments/reviews** of surveillance in key areas of transmission and of high risk from March to June, with particular focus on those areas / issues identified by the desk review, and including assessment of the appropriateness of reporting sites and informers to ensure all AFP is detected, and of the inclusion of mobile populations in the surveillance system

- **a full national surveillance review in July**, taking account of the findings of the desk review and rapid assessments, leading to the development of an action plan to strengthen surveillance, eliminate gaps, and achieve consistently high quality

14. All areas with an orphan or long-chain WPV or cVDPV should aim to double surveillance sensitivity for 12 months to guide mop-ups and demonstrate cessation of transmission of the virus.

15. Plans for activities complementary to AFP surveillance should be finalized as soon as possible:

- the processes to commence supplementary environmental surveillance in key areas should be followed up and finalized as rapidly as possible with the objective of commencing testing no later than April 2011

- the planned seroprevalence survey to assess of levels of antibody to poliovirus in children in the highest risk states should be completed no later than May 2011 to establish a baseline for population immunity.

16. Laboratory indicators should continue to be closely monitored, particularly non-polio enterovirus detection and Sabin virus detection rates, and laboratories supported to maintain high quality despite increasing workloads.

Social Mobilization and Communications for polio eradication

17. The Intensified Ward Communication Strategy should be vigorously implemented and monitored, and progress reported regularly at state and national level, and to the next meeting of the ERC.

18. As part of the IWCS, a package of high impact communication / social mobilization interventions should be defined based on evaluation of impact, and materials including training packages developed to support their implementation.

- This package should include Majigi / dialogues, working with women's groups for mobilization, supervision and revisits, compound meetings, engaging traditional leaders, and new innovations such as engaging Mallamahs.

- Support should be provided directly to high risk wards to identify the complementary interventions to be supported

- The impact of existing and new interventions should be evaluated to identify what is working and what is not, and this information used to revise the intervention package and to guide scale up of effective interventions.

- Appropriate interventions from the basic package should be continuously implemented between rounds in high risk wards and communities, with the inclusion of messaging on routine immunization and other child survival issues such as nutrition and sanitation.

19. A rapid investigation methodology should be developed and implemented in areas with high or persistent levels of missed children or high levels of non-compliance,

to identify the reasons and to inform both national and local level operational and communication interventions.

20. Information on communications and social mobilization issues should be gathered through a range of investigations including:
 - collecting appropriate monitoring and evaluation indicators for communication and social mobilization in the standard monitoring processes, including LQAS.
 - social profiling using detailed polio case investigations to understand the communities where polio is still occurring, and to drive communications and operational improvements, including improvement in team quality, outreach, routine immunization and communications.
 - a review of all data sets related to community sentiment and behavior around OPV and immunization, including the CDC barriers study, the recently conducted UNICEF qualitative/quantitative studies and EIM results from recent IPDs.
21. Standard operating procedures should be developed for communications as part of the mop-up response to any detected virus, with specific activities linked to time lines, and with adequate human and financial resources to ensure quality activities.

The Broader Immunization Agenda

The ERC received presentations on strengthening immunization systems, new vaccines introduction, vaccine security and logistics issues, and lessons learned from Child Health Weeks, and was impressed by the range of activities being undertaken by the NPHCDA, State Governments, and partners.

A range of actions have been carried out by the national programme over the past 12 months, including prioritization of LGAs based on 2009 immunization performance (including the polio HR LGAs) and the initiation of a programme of work to strengthen performance in these areas. Interstate Supportive Supervision Teams (ISST) have provided support to several states in planning and implementing activities. There is some evidence of impact of this work in reducing the number of un-immunized children in key areas. The ERC notes the plans for introduction of new vaccines and the detailed programme of work prepared, and also notes progress in implementing the programme of work for strengthening cold chain and logistics.

The progress of the programme of work is encouraging, but it must be fully implemented to achieve longer term progress. Issues of resource availability at LGA level and vaccine stock outs still impair programme delivery. Major problems of the reliability of data on coverage still exist. The ERC again emphasizes that the maintenance of polio eradication in Nigeria, and the protection of the gains made in measles mortality reduction, and maternal and neonatal tetanus elimination will be dependent on the success of efforts to strengthen immunization services.

Recommendations

Implementation: reaching children with vaccine

1. The ERC endorses the broad programme of work proposed by NPHCDA and partners to strengthen implementation of immunization services and encourages

all States to fully implement plans to reduce the number of unimmunized children, particularly in identified high risk LGAs, to closely monitor implementation, and to report back on these activities during monthly RI review meetings in each state.

2. States should regularly update their action plans for the delivery of immunization services, with particular attention to:
 - identification of poor performing areas and areas with large numbers of unimmunized children so they can be prioritized for action
 - improving access to immunization services through ensuring immunization at fixed sites and in outreach sessions as per the REW and 1,2,3 Strategies
 - tracking children to reduce drop out rates by ensuring that children who receive the first dose in the series complete the full course
3. Every State & LGA should allocate resources and have a budget line item for routine immunization, to ensure the capacity to implement fixed and outreach immunization sessions; this should be tracked at State & Federal levels, as part of the monitoring of the Abuja Commitments.
4. Traditional Leaders should continue to be engaged by Federal, State, and LGA authorities, particularly for high risk LGAs with large numbers of unimmunized children, to systematically promote & support the broader immunization agenda, building on their very successful role in polio eradication.

Vaccine security and quality

5. The Federal Government is urged to ensure that adequate funds for vaccine are released well in advance of requirements every year to enable a reliable supply of vaccine at national level.

Introduction of new vaccines

6. The ERC notes the programme of work for the introduction of new vaccine and urges NPHCDA and partners to develop a substantial communications strategy around the launching of these vaccines to promote immunization in general and to increase community demand.

Maternal, Neonatal, and Child Health Weeks

7. The ERC applauds this major initiative to improve maternal & child health outcomes and strongly encourages rigorous monitoring of interventions delivered and coverage achieved, by state, to guide future planning and assess potential impact on key vaccine-preventable diseases such as polio and measles.

Next ERC Meeting

Given the need to closely monitor the programme and provide up-to-date and relevant advice at this critical stage, the ERC proposes that its next meeting be scheduled for July 2011.