15th Meeting of the Expert Review Committee (ERC) On Polio Eradication & Routine Immunization in Nigeria

Kano, Nigeria

9 - 10 July 2008

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Executive Summary

The 15th ERC was convened at an extraordinary point in the national and international effort to eradicate this devastating disease.

Just days prior to the ERC, the Minister of Health established a high-level Steering Technical Committee and Task Force on Polio Eradication and Routine Immunization to urgently address the escalating polio outbreak. Deeply alarmed by this outbreak, the World Health Assembly had in May specifically urged Nigeria to intensify eradication activities to reduce the risk of international spread. By June, however, continued expansion of the outbreak required the World Health Organization to warn its Member States, under the *International Health Regulations*, of the increasing risk. Most recently, the Kingdom of Saudi Arabia announced polio immunization requirements for all Nigerians travelling for Hajj, to reduce the risk of polio to other pilgrims and the communities to which they would be returning.

The ERC is deeply concerned that since its March meeting the already alarming outbreak of Type 1 polio has increased 10-fold, paralyzing nearly 400 Nigerian children to date in 2008, with spread to Benin and the Niger-Burkina Faso border. Disappointingly, key emergency recommendations from the ERC in March to address the outbreak have not been implemented. The ERC noted that in Kebbi, which had largely followed the recommendations, polio immunization coverage is now much higher than in most other northern states and only 2 type 1 polio cases have occurred, despite the intensive outbreak in adjoining states.

Despite the outbreak's intensity, nearly 50% of cases have been reported from just two states (Kano, Zamfara) with a further 5 states accounting for 36% (Bauchi, Katsina, Kaduna, Jigawa, Borno). The outbreak is clearly due to a failure to immunize, as only 42% of children in high polio burden states received $\geq$3 doses of vaccine, compared with 87% in the polio-free states.

This situation could be reversed if the new political commitment to polio eradication and immunization is urgently translated into operational improvements in IPD quality at field level. Some northern Nigerian states have clearly demonstrated that polio can be stopped rapidly when there is strong Governor leadership, with LGA Chairmen held fully accountable for the IPDs in their areas.

Major ERC Recommendations:

1. *Launch of a Presidential Initiative on Polio Eradication & Routine Immunization*: the ERC strongly welcomes this initiative as critical to rapidly improving IPD quality by formally engaging the Governors of all key states in this emergency effort and alerting LGA Chairmen to their responsibility for local eradication.

2. *Optimizing the Impact of the Steering Committee & Task Force*: by end-July, appropriate mechanisms and reporting lines should be established to ensure that ERC recommendations and directives of the Steering Technical Committee and Task Force, are effectively translated into field operations.

3. *State-Level 'Emergency' Task Forces*: in all northern states, a Task Force for Polio Eradication should be established, under the auspices of the Governor and headed

by the Commissioner for Local Government, to ensure the directives of the National Task Force are translated into real improvements in IPD coverage.

4. *Timeline for Intensifying Eradication*: given the time needed to stop polio under the best of circumstances, and that key states have yet to improve IPD quality, the Government should plan a 12 month intensified effort to stop type 1 polio.

5. *IPD Quality*: highest priority for State and LGA governments must be ensuring by August a marked increase in the proportion of children immunized in each IPD by:
   - establishing and monitoring the application of minimum criteria for the age, qualifications and gender balance in the selection of vaccination teams,
   - developing new microplans in all wards in all high-risk LGAs,
   - supervising every vaccination team at least 2 times a day,
   - using mass media to alert populations to polio risks and the urgent need to vaccinate all children in each IPD,
   - ensuring availability of sufficient add-ons to meet community expectations.

6. *IPD Monitoring*: to effectively identify high risk areas for repeat activities, guide improvements in team selection and supervision, and hold LGA Chairmen accountable, by August the capacity to assess IPD quality must be improved by:
   - using primarily out-of-house monitoring of finger-marking to estimate the proportion of children immunized in each area during each round,
   - establishing, through government and partners, a sufficient network of independent 'field monitors' to conduct the monitoring of each round in each LGA in the high burden and high risk northern states.

7. *IPD Schedule & Vaccines:* recognizing the international threat posed by the ongoing type 1 outbreak and the continued low-level transmission of type 3 wild poliovirus and a type 2 vaccine-derived poliovirus (cVDPV):
   - July & August IPDs should be conducted with mOPV1 as planned,
   - mOPV1 should be added to the measles campaigns in Nov/Dec,
   - an additional IPD with mOPV1 should be conducted in high burden and high risk states prior to the end of 2008,
   - 2 nationwide IPDs should be conducted in the 1st quarter of 2009, one with mOPV3 and the other with trivalent OPV, followed by another tOPV round in any states with a cVDPV case in the previous 12 months,
   - additional sIPD rounds in endemic states should be conducted in 2009, the number, extent, and vaccine of choice depending on the epidemiology.

   Further specific decisions on 2009 IPD frequency and vaccines should be finalized in the last quarter of 2008, based on the evolving epidemiology.

8. *IPD Strategy:* as the house-to-house strategy has variable impact, the IPDs should be refined where needed, potentially with a street-to-street approach to engage local leaders to mobilize and ensure vaccination of all children in their area.

9. *Protecting Reinfected Areas:* the mop-up strategy must be properly and immediately applied in re-infected areas, rather than waiting for the next IPD.

Introduction:

The 15th Expert Review Committee for Polio Eradication and Routine Immunization was convened from 9 - 10 July in Kano State. The meeting convened against the background of the ongoing major outbreak of wild poliovirus type 1 (WPV1) in northern states, where a 10-fold increase in cases has occurred since the March meeting of the ERC. Nigeria is now reporting 90% of all the type one poliovirus in the world, and while in all other endemic and infected countries WPV1 transmission is on track to be stopped by the end of 2008, Nigeria is rapidly becoming the biggest risk to global polio eradication.

Fortunately the ERC also met in an atmosphere of increasing political engagement at Federal and State levels, with the recent formation of a national Task Force on polio eradication, and a national Steering Committee chaired by the Minister of Health. These are very positive demonstrations of engagement by the Government, as is the direct financial support of polio eradication and immunization activities by the Federal and State Governments.

The ERC was welcomed by the Executive Director of the NPHCDA, and by the Chairman of the newly-formed national Task Force on Polio Eradication, who both reaffirmed the commitment of the Government of Nigeria to strengthen routine immunization and eradicate polio, and who then participated in the full deliberations of the ERC. The ERC was pleased to have representatives of endemic states participate fully in the meeting. Representatives of partner agencies attended and expressed their continued strong support.

This report summarizes the main findings, deliberations and recommendations of the 15th meeting of the ERC.

Report on the 14th ERC Recommendations:

The ERC noted the report on the status of implementation of the 14th ERC recommendations and appreciates the efforts of the national programme. Of the 22 substantive recommendations made in March, 16 are reported to have been achieved or are ongoing, 3 partly achieved and 3 not achieved. While overall this looks like a reasonable rate of achievement, the ERC noted that some crucial recommendations, particularly those aimed at improving SIA quality in very high risk LGAs, were partly implemented or un-implemented. These recommendations were those that were critical to closing quality gaps and ensuring children are immunized, and must be implemented if Nigeria is to eradicate polio.

Current epidemiological situation:

As at 4 July a total of 416 WPV cases with onset in 2008 had been reported in Nigeria, 380 due to WPV1 and 36 due to WPV3. Eight endemic northern states account for 83% of all cases, with Kano alone reporting 33% of the national total. Transmission outside the north has been limited, with sporadic cases in middle-belt states, and small outbreaks of both WPV3 and WPV1 in previously polio-free states in the south.

In the endemic states several LGAs have reported multiple cases, some above 10. This is a very high number of cases to be reported from this administrative level. For example, Gusao in Zamfara has reported 15 cases, Katagum in Bauchi 13 cases, Gabasawa in Kano 10 cases. Even in those states reporting fewer cases, some LGAs are heavily infected, such as Gorayo in Sokoto with 5 cases, and Paikoro in Niger with 4 cases. **This is indicative of large numbers of non-immune children in LGAs in endemic states.**

Wild poliovirus type 1:

The rise in cases due to wild poliovirus type 1 that formed the major point of concern during the 14th meeting of the ERC has continued, and developed into a significant outbreak in the northern states, with a ten-fold increase in the number of cases. **This outbreak threatens to continue to spread into other areas of Nigeria, and internationally.**

Of the 380 cases of polio due to WPV1 that have been confirmed to date in 2008, eight endemic northern states account for 87%. Just four of these states, Kano, Zamfara, Katsina, and Jigawa, account for 252 cases (66%). Kano alone has reported 132 WPV1, 35% of the national WPV1 total. Weekly incidence of WPV1 continued to rise into April and May and does not yet show clear signs of declining; the impact of the April and May IPD rounds with mOPV1 is still not apparent due to the time lag in data availability.

Wild poliovirus type 3:

WPV3 cases have remained low following the February national round using mOPV3. In the whole country 36 cases due to WPV3 with onset in 2008 have so far been reported, and monthly incidence is remaining steady. The outbreak in the southern states of Oyo and Ogun may have been stopped, with the last reported case having onset on 6 March. However, a steady trickle of cases is now being reported from the northern endemic states. Sporadic WPV3 transmission has also been detected in middle belt states. The ERC expects that WPV3 transmission will likely stay relatively low for the coming quarter, but will gradually rise thereafter until SIAs are conducted with a type-3 containing vaccine.

Circulating VDPVs

Circulating cVDPVs continue to be detected at low levels in northern states. As previously noted by the ERC, transmission persists only in LGAs of poor performance and very low immunization coverage; cVDPVs are being detected from un-immunized and under-immunized children. Most LGAs infected with cVDPVs also report wild poliovirus, indicating very weak immunization activities and high numbers of un-immunized children in these places.

Reasons for the continuing outbreak of WPV1 in the endemic states

The WPV1 outbreak is occurring in a handful of endemic states, and as the ERC has so often pointed out, there are very large numbers of children in these states who are repeatedly missed during immunization activities. These children remain susceptible to infection by WPV and are fuelling the very large outbreak now occurring. Analysis

of the immunization status of wild poliovirus cases demonstrates that they continue to be overwhelmingly un-immunized or under immunized. **Analysis of the immunization status of non-polio AFP cases demonstrates that the high burden states have major gaps in immunity in children less than 5 years of age, due to failure to immunize; nearly 60% of children in these states are un-immunized or under immunized.**

Within these states, cases are overwhelmingly being reported from known high-risk LGAs. As noted in the previous meeting of the ERC, most cases occur in LGAs that have shown persistent WPV transmission in the past, that continue to detect zero dose AFP cases, that persistently miss more than 10% of children during IPDs according to monitoring data, and that continue to have clustering of non-compliant households.

Conclusions and Recommendations

The ongoing WPV1 outbreak in northern Nigeria clearly demonstrates a failure to reach and immunize children in a handful of key endemic states. This failure is partly operational, partly a failure to create demand and acceptance, but mostly a failure of state and local government engagement and accountability. At their 14th meeting the ERC made very specific recommendations on the need for State Governors to engage Local Government Chairmen and to hold them accountable for performance in their areas. These recommendations have not been uniformly implemented and there is a clear difference between those states and LGAs with strong local government engagement, and those without that engagement.

Nonetheless the ERC believes that there are many reasons to believe that polio in Nigeria can still be eradicated in the near future. These reasons include:

- The recent high level national Government engagement and the formation of both a national Task Force and a national Steering Committee to guide and oversee polio eradication and immunization
- The engagement of some State Governors in strongly pushing polio eradication activities, including the Governors of Kebbi, Jigawa, and recently Kaduna
- The success of non-endemic states in maintaining high levels of population immunity and in staying largely polio-free despite the severe outbreak of WPV1 in the endemic states
- In the endemic zone, the success of Kebbi and Gombe in protecting higher proportions of their children through immunization, and in staying largely polio-free despite the intense circulation of WPV1 all around them
- Activities to mobilize and engage local communities are being widely conducted across endemic states and are meeting with some success

Given the very welcome high profile being taken by the Federal Government and the Minister for Health in particular, and the oversight mechanisms being put into place, there is a clear opportunity for Nigeria to rapidly improve the quality of activities over the coming months. **The key will be to translate the commitment at federal level to the states and LGAs, so that polio eradication becomes a truly national goal.**

The ERC emphasizes that objective of activities in the coming months should be to stop all transmission of wild poliovirus type 1 in Nigeria by mid 2009.

Recommendations:

1. The ERC considers the following to be the strategic priorities for polio eradication in Nigeria for the coming months:
   - rapid suppression of the WPV1 outbreak in the endemic states and continued priority on eradicating WPV1 as the most dangerous of the WPV types
   - interruption of transmission of WPV in all non-endemic middle belt and southern states with detected transmission or importations
   - significant improvement in quality of supplementary immunization activities in the high risk endemic states, in particular Kano, Jigawa, Katsina, Sokoto, Zamfara, Borno, and Bauchi
   - appropriate use of tOPV and mOPV3 to maintain population immunity against WPV3 and to keep transmission at low level, and to stop cVDPV transmission
   - finally cessation of all WPV1 transmission by mid 2009

2. The ERC strongly welcomes the launch of a Presidential Initiative on Polio Eradication and Routine Immunization and believes it is critical to rapidly improving IPD quality by formally engaging the Governors of all key states in this emergency effort and alerting LGA Chairmen to their responsibility for local eradication.

3. By end-July, appropriate mechanisms and reporting lines should be established to ensure that ERC recommendations and directives of the newly formed Steering Technical Committee and Task Force are effectively translated into field operations.

4. In all northern states, a Task Force for Polio Eradication should be established, under the auspices of the Governor and headed by the Commissioner for Local Government, to ensure the directives of the National Task Force are translated into real improvements in IPD coverage.

5. Given the time needed to stop polio under the best of circumstances, and that key states have yet to improve IPD quality, the Government should plan a 12 month intensified effort to stop type 1 polio.

Supplementary Immunization Activities (SIAs) Schedule

The July and August mOPV1 rounds will be critical to curtailing the WPV1 outbreak, and preventing further spread. However, it is clear that a major improvement in SIA quality is needed in key endemic states, and it is also clear that further activities will be necessary before the end of 2008 to ensure that the WPV1 outbreak is stopped.

The major objective for activities up to end of 2008 must therefore be to stop the WPV1 outbreak and to interrupt WPV1 transmission in as many endemic states as possible. Subsequently, in early 2009 a mix of vaccines will need to be used in SIAs to ensure that high levels of immunity are achieved against all poliovirus types.

Recommendations:

6. The ERC recommends the following SIA schedule:

   2008: following the planned July and August sIPDs using mOPV1:
   - November/December: add mOPV1 to the planned measles follow-up campaigns in all states
   - December: an sIPD round in high burden states using mOPV1

   2009:
   - January: a national IPD round using mOPV3
   - February: a national IPD round using tOPV
   - March-May: two sIPD rounds in high risk states using the appropriate OPV
   - June-December: Up to 4 sIPDs using a mix of tOPV and mOPVs appropriate to the epidemiology.

   Decisions on the extent, timing, and type of vaccines for sIPDs in 2009 should be made at the next proposed ERC meeting in October 2008, based on the epidemiological situation.

7. IPD rounds should continue to be phased, with the very highest risk states covered separately to the others, to ensure that all available resources can be concentrated on these highest risk areas.

8. Between the IPD rounds, and in particular in the period September-October 2008, activities to accelerate the routine immunization programme, such as REW and LIDs, should be carried out particularly in very high risk and high risk LGAs with known low coverage and immunity gaps.

9. Following any detection of WPV in any non-endemic state, emergency outbreak response/mop-up rounds should be implemented as per previous ERC recommendations and the May 2006 World Health Assembly Resolution.

10. Any LGA in which cVDPV is detected should immediately carry out 2 rounds of LIDs using tOPV.

SIA quality

It is clear that a dramatic improvement in quality is needed in key high burden endemic states. Immunization status data of non-polio AFP cases clearly shows large immunity gaps in these states which are associated with continued circulation of WPV. The ERC has persistently made recommendations on improving quality, in particular in the highest risk LGAs, which have not been fully implemented. The ERC wishes to stress that the engagement of the government structure at LGA level is critical to the implementation of activities to improve quality. Experiences from Kebbi and some other states in the endemic zone demonstrate that significant quality changes can be achieved with the engagement of the State and Local Governments.

The ERC reviewed SIA performance data including independent monitoring data, and noted a significant disconnect between data from some high burden endemic states showing increasing numbers of children reached and reducing percentages of missed children, and the major outbreak of WPV1 now raging in these same states. The SIA

data which seems to be more reliable is that from monitoring outside houses, based on finger marking of children. This, coupled with immunization status data for non-polio AFP cases, provides a much more accurate picture of immunity gaps.

Recommendations:

11. The ERC reaffirms previous recommendations that the high burden endemic states must close remaining SIA quality gaps to immediately reduce the proportion of 0-dose children to less than 10% by:
    b) fully implementing a package of interventions in all designated very high and high risk LGAs including:
    - review and revision of microplans, and development of new microplans in very high risk LGAs and wards
    - careful team selection and training
    - deployment of additional supervisors and monitors
    - systematic analysis of the reasons for missed and absent children and the adoption of strategies to reach, identify, and immunize these children
    - mobilization of local leaders to participate and engage their communities
    - ensuring availability of appropriate add-ons.

12. Local Government authorities must be held accountable for the quality of IPDs, through State Task Forces. State Governors are urged to convene a meeting of LGA Chairmen of the identified very high and high risk LGAs immediately prior to each IPD round, to review past performance, identify problems, and decide on solutions. These meetings should be supported by the state Health Commissioner and Commissioner of Local Government.

13. By the August campaign, LGA Chairmen in all very high and high risk LGAs should be holding vaccinator and supervisor teams accountable to achieving a target of >90% coverage in each ward, as assessed by independent monitors, with immediate repeating of the activity in any ward that fails to achieve this target.

14. State Task Forces should define criteria for selection of vaccinators and supervisors appropriate to the local circumstances. State officials should ensure that these criteria for selection are implemented at LGA and ward level.

15. Out-of-house monitoring should be implemented more systematically by well trained and supervised field monitors, and should become the principal tool for assessing the quality of SIAs. While in-house monitoring should continue, less emphasis should be placed on this as an overall assessment of SIA quality.

16. To ensure the best possible coverage of children outside houses or otherwise unavailable during house to house activities, flexible strategies using mobile teams/fixed sites should be explored in very high risk and high risk LGAs to improve engagement with communities and access to immunization.

17. The use of affordable and appropriate add-ons during IPDs should be more systematically planned to ensure the maximum benefit in attracting parents to bring children to immunization teams. Prior to the August round add-ons should be evaluated and assessed to determine which ones have the best attractive effect.

Surveillance & Laboratory

Surveillance quality in general continues to remain high, and focussed surveillance reviews are being carried out in key states. The ERC reaffirms that it is critical to maintain a high level of vigilance on surveillance quality. The performance of the Maidaguri and Ibadan laboratories has generally been good despite the high workload, with timeliness indicators improving significantly through 2007 and into 2008 following the implementation of the new testing algorithm. The ERC notes the recent difficulties of the Ibadan laboratory, currently provisionally accredited, and hopes that the return to full accreditation will be swift.

Recommendations:

18. The programme should continue to carry out local surveillance reviews to identify any area where there may be weaknesses in the system, particularly in states and areas where orphan viruses have been detected, or where LGA surveillance indicators do not meet standards.

19. Every effort should be made to support the Ibadan laboratory to return to full accreditation in December 2008, and the national programme should address any need the laboratory has in order to achieve this.

20. Given the cross border transmission of wild poliovirus between Borno and Chad, and between other northern states and Niger, particular attention should continue to be given to ensuring that surveillance quality is of high standard in these areas.

Social Mobilization and Communications for polio eradication

The ERC recognizes the work made in the area of social mobilization and communication in the months since the 14th ERC met in Jos. Advocacy and efforts to engage community leaders, and analysis of data have contributed to local ownership and understanding of the ground reality to guide local level interventions. The development of a mass media operational plan has the potential, once implemented, to enhance visibility of the polio eradication programme and increase demand for OPV. However, while noting the considerable work being done in social mobilization and communications, the ERC is concerned that the strategies and activities are still not being driven by data, and are not being appropriately evaluated.

Recommendations:

21. The programme should expand operational research and data collection and analysis, including:
    - a close study of refusals and missed and absent children,
    - impact analysis of interventions at the LGA and/or ward level

22. Information from national studies as well as local information from post campaign monitoring and community dialogues should be framed in the form of communication objectives, with appropriate strategies put in place to meet the objectives. Activities should be monitored and evaluated through both specific

data collection opportunities (post campaign monitoring, sentinel site surveys) and through larger and less frequent qualitative and quantitative assessments.

23. In order to ensure communication support is provided at the scale appropriate to stop transmission, all very high risk states and LGAs require adequate human resources for planning, implementing and monitoring of social mobilization activities.

24. The national communication strategy should continue to address the issue of non compliance through the use of messages that emphasize polio as a threat to children's health and reiterate the safety of OPV and the need for multiple doses. These messages should be reinforced through national mass media and local interpersonal voices (dialogues, town criers, etc.).

25. The media operational plan should be implemented immediately, including retaining a PR agency. Advocacy through mass media and the identification of spokespersons and public figures should focus on the very high risk states and LGAs. The WHA resolution on Nigeria issued on 24 May 2008 should be publicized through mass media and cited in all official discussions of polio eradication in 2008.

26. IPC training for vaccinators should be fully implemented in all high risk states, and routinely monitored for quality.

27. Any review of social mobilization and communications activities should be led by the national programme, and all review recommendations reported to the ERC.

Routine Immunization

The ERC noted activities to improve routine immunization coverage, including discussions on innovative efforts in Kebbi and in Katsina. However the ERC continues to believe that there is a massive amount of work to be done to put routine immunization on a firm footing.

Recommendations:

28. Very high risk LGAs should be prioritized for activities to strengthen routine EPI, as these areas have the largest immunity gaps and the lowest immunization coverage for all antigens.

29. The current state of the cold chain represents a constraint to the effective provision of immunization services. A full assessment of existing facilities and a plan for rehabilitation should be developed as soon as possible.

30. Now that stable funding has been secured for vaccine supply, NPHCDA and the states should ensure that stock-outs of vaccine at any level do not occur.

31. The ERC would like to continue to receive progress reports on the status of REW implementation at LGA level, and any evidence of impact on session frequency and coverage.

9

Measles Control Activities

The ERC received a report on the status of preparation for the integrated follow-up measles campaign in 2008, including other child survival interventions, and OPV.

Recommendations:

32. The ERC emphasizes the need for careful planning for the 2008 integrated measles follow-up campaigns in November and December. The lessons from previous campaigns should be applied to ensure high quality.

33. Campaign planning should ensure that mOPV1 will be delivered along with measles vaccine in the November/December campaign.

Next ERC Meeting

Given the current volatile epidemiological situation and the intensity of activities, the ERC proposes that its next meeting should be scheduled for 27-28 October 2008.