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Report on the

Technical consultation on polio eradication in Afghanistan and Pakistan

Muscat, Oman
1–2 October 2007

World Health Organization
Regional Office for the Eastern Mediterranean

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1. INTRODUCTION

A technical consultation on poliomyelitis eradication in Afghanistan and Pakistan was held in Muscat, Oman on 1–2 October 2007. The objective of the consultation was to review progress towards poliomyelitis eradication in the two countries, particularly during the six months since the meeting of the Technical Advisory Group (TAG) on poliomyelitis eradication in Afghanistan and Pakistan, which was held in Islamabad in April 2007. The consultation also aimed at discussing planned activities in the remaining period of 2007 and early 2008 and making recommendations on technical aspects necessary to help the programme to achieve the milestones set by the Urgent Stakeholder Consultation on Interrupting Wild Poliovirus Transmission, held in Geneva in February 2007.

The consultation was addressed by Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean and by Dr Ali Jaffer Mohamed, Senior Adviser to the Minister of Health in Oman. It was attended by some members of the TAG on poliomyelitis eradication in Afghanistan and Pakistan, national managers of the Expanded Programme on Immunization (EPI) and WHO representatives of both countries, WHO and UNICEF staff from headquarters, regional and country levels and representatives from the Centers for Disease Control and Prevention (CDC, Atlanta) and the United States Agency for International Development (USAID). Dr Nicholas Ward, Chairman of the TAG on poliomyelitis eradication in Afghanistan and Pakistan, chaired the meeting. The programme and list of participants are attached (Annexes 1 and 2).

2. EPIDEMIOLOGICAL SITUATION

2.1 Global situation

Dr Bruce Aylward, Director, Polio Eradication Initiative, WHO/HQ

Utilizing the milestones set by the stakeholders' consultation in February 2007 as indicators of progress, the first indicator (% decrease in number of infected districts) shows more than a 50% decrease in type 1 polio infected districts in each of the four endemic countries. With regard to the second milestone set by the stakeholders' meeting, in general, the average number of doses per child in endemic zones is nearly comparable to that of polio-free zones. However, the percentage of zero dose children in endemic zones is particularly high in Nigeria and in the southern zone of Afghanistan, while in India, Pakistan and eastern Afghanistan the rates in endemic and polio-free zones are around 1%.

With respect to the third milestone related to re-infected countries, 31 of the 34 importations in 2006 have stopped in 2007 and only three are continuing. In addition, five new importations were reported in 2007. As regards the forth milestone, namely that the programme would have received the required funding for 2007 by the middle of the year, the 2007 budget still has a shortfall of US $60 million.

New data on the impact of mOPV1 show that irrespective of the setting or type of study, there has been 2-fold to 4-fold higher per dose efficacy against type 1 polio as compared with tOPV. Although efficacy data on mOPV3 are not yet available, from the epidemiological impact

in India it appears that this vaccine has a per dose efficacy at least similar to that of mOPV1. While mOPVs were originally designed for areas of particularly intense poliovirus transmission, the very high per dose efficacy of these vaccines may be especially valuable in areas where access to children is limited and/or sporadic, such as in some insecure and conflict-affected areas. The eradication programme has already taken advantage of these characteristics of mOPVs to conduct multiple rounds of vaccination with a specific mOPV within a very short time-frame (i.e. 10–14 days) during the windows of opportunity when access was possible.

2.2 Situation in Afghanistan and Pakistan

In Pakistan in 2007, up to the end of September, 13 cases due to wild poliovirus (WPV) were detected compared to 23 reported during the same period in 2006. They comprised six cases due to WPV type 3 and seven cases due to WPV type 1. Cases due to type 3 occurred mostly early in the year and represented the tail of the type 3 outbreak observed from mid 2006. They were mostly concentrated in a limited geographical area between Baluchistan and North Sindh provinces. Four of the seven cases due to WPV type 1 were reported from NWFP/FATA, one of them being the case that was discovered in Australia. Two of the other three cases were reported from Baladia town of Karachi and the third was from the neighbouring Thatta province in Sindh.

In Afghanistan, the first reported case due to WPV in 2007 had as its date of onset 10 April. Up to the end of September, 10 cases of poliomyelitis were detected compared to 28 cases reported during the same period in 2006. The first four cases (10 April to 16 June) were all due to WPV type 1. They were followed by six cases (30 June to 5 September), all caused by WPV type 3. Type 1 cases were reported as single cases, one from each of the provinces of Hilmand, Kandahar, Laghman and Nangarhar, while the six cases due to WPV 3 were three cases each from Hilmand and Kandahar provinces.

Epidemiological and virological data of the two countries indicate that there are two cross-border active endemic transmission zones. The first zone comprises the central NWFP/FATA region in Pakistan and eastern Afghanistan area, where both type 1 and type 3 polioviruses have been detected during the past 12 months, but where only type 1 has been isolated since January 2007. Access to children in this area has been compromised by a combination of factors including strong local autonomy, refusals, traditional culture, etc. In this transmission zone, optimal use of mOPVs can be accurately guided by surveillance data.

The second transmission zone is geographically larger, extending from the intersection of Hilmand, Kandahar and Uruzgan provinces in southern Afghanistan, through Baluchistan, into northern Sindh in Pakistan. Endemic viruses from this zone are regularly detected in Karachi and adjacent districts. Both type 1 and type 3 viruses have been detected in this area during the past six months, but with type 3 predominating in the southern Afghanistan–northern Sindh corridor (only type 1 poliovirus has been detected in Karachi). Access in this transmission zone is compromised by insecurity resulting from active conflict, particularly in southern Afghanistan, and the highly mobile nature of substantial populations in this zone.

In the second transmission zone, optimizing the use of mOPVs is complicated by the regular reappearance of each serotype in southern Afghanistan and, to a lesser degree, northern Sindh, after periods of 6–12 months without having detected it.

It was noted that there is progressive decrease in the genetic sub-clusters of wild viruses detected in the two countries. The 10 sub-clusters (seven type 1 and three type 3) detected in 2005 decreased to seven (five type 1 and two type 3) in 2006 and further decreased to only four sub-clusters (three type 1 and one type 3) in 2007. The origin and duration of existence of these sub-clusters show that they are surviving through movement between the two countries.

Assessing achievements against the globally set milestones for 2007 shows that the two countries are more or less on target with respect to the number of infected districts. As regards the immunity levels against polio among children 6–35 months, it is evident that in Pakistan in 2007, the percent of AFP cases, from 2006 infected districts, who received seven doses or more, have almost equal status to those cases from non-infected districts. In Afghanistan, AFP cases from infected districts of 2006 showed some improvement in the percent who received seven OPV doses, yet this rate is still lagging behind that of AFP cases from non-infected districts. It was also noted that the rate with zero dose increased from 4% in 2006 to 12% in 2007. This is mainly due to the difficult security situation, which continued to prevail in 2007 preventing accessibility to children.

2.3 Discussion

The meeting was impressed with the fact that in response to the recommendations of the TAG, the poliomyelitis eradication teams prepared plans of action to address the recommendations and they were implemented to a large extent.

- Concentration of efforts on known remaining areas of transmission.
- Maintenance of surveillance at certification standard all over Pakistan, as shown by the various indicators. In Afghanistan, surveillance continued to be generally good. However, some indicators are borderline reflecting delays in reporting, particularly in some regions. Laboratory support to the two programmes, through NIH, has been excellent and represents vital support to eradication efforts through rapid provision of laboratory results and by the genomic sequencing carried out on the isolates.
- Maintaining high levels of overall population protection. It was noted that additional opportunities to administer OPV were utilized, particularly in high-risk areas. The measles immunization campaign was one example. In Pakistan, it was particularly helpful in reaching children in areas with high refusal rates.
- Rapid detection of the appearance of WPV in polio-free areas and appropriate, timely mop-up in response, e.g. in Karachi and Thatta.
- Licensing of mOPV3 in Pakistan and initiating its use in the districts representing the corridor of movement between Pakistan and southern Afghanistan to guard against the possibility of spread of WPV type 3. It was also used in the September NID in areas of type 3 circulation in Afghanistan (Hilmand and Kandahar).

The meeting noted the multiplicity of efforts being made to address the problem of refusals, which has reached levels of concern in a limited number of districts. The meeting was pleased to note that a study is planned in Pakistan on the pattern and causes of refusals. It is expected that this study will provide useful results that may assist in addressing the problem.

It was noted with satisfaction that the efforts made by the programme in Afghanistan were successful in obtaining a letter from the Shura of Taliban in favour of the polio immunization campaign. For the first time in more than one year, over 80 000 children under 5 years of age were vaccinated during the September round. It is hoped that this accessibility will be maintained in future rounds. Continuation of efforts to engage the community leaders in Afghanistan and Pakistan is needed to ensure continued access to the under-immunized children.

Coordination of polio eradication activities between Pakistan and Afghanistan was pursued vigorously. The dates of supplementary immunization activities were coordinated and border area activities continued, especially immunization of crossing children. Unification of monitoring indicators and exchange of information continued to be implemented regularly.

3. COMMUNICATION REVIEWS

International communication reviews for the poliomyelitis eradication programmes in Pakistan and Afghanistan, were conducted during the two weeks preceding the consultation. The reviews made number of recommendations.

Pakistan has a strong national communication approach, which needs to be fine tuned at the district/sub-district level based on available data. It was noted that plans are being pursued vigorously to rapidly recruit the required human resources at provincial and district levels to intensify activities, particularly in high-risk areas. Planned activities will be based on the trend analysis and data driven strategies and measurement of impact.

In Afghanistan, the review noted the strong political commitment exhibited for poliomyelitis eradication, involvement of religious and community leaders and enhancement of social mobilization in high risk areas. However, gaps were identified in the communication strategy at national and provincial levels with insufficient human capacity to implement social mobilization/communication strategies and the limited programme data related to communication and limited use of existing data. The identified priorities included development of a comprehensive communication strategy for national and provincial levels, ensuring development of indicators and updated micro-plans at district and sub-district levels and strengthening capacity at different levels to ensure presence of a district communication coordinator in all high-risk districts.

4. CONCLUSIONS

The consultation was impressed by the continued efforts made by the programme in the two countries towards achievement of the target of poliomyelitis eradication. The low persistent

transmission does not reflect failure of the strategies being implemented; it is however a reflection of the last phase of the epidemiological situation and the operational difficulties of access in certain limited areas. The following were noted with satisfaction:

- Sustained political commitment at national and sub-national levels
- Continued improvement in the quality of supplementary immunization activities, particularly in high-risk areas
- Maintaining certification standard surveillance
- Close coordination of activities between the two countries especially in relation to border area activities
- Licensure of mOPV3 and start of its utilization in both countries
- Conduct of communication reviews in both countries
- Successful efforts to ensure accessibility to children living in insecure areas in southern region of Afghanistan
- Preparation of a three year plan in Pakistan with clear government inputs.

The vast majority of population, in both Pakistan and Afghanistan, live in polio-free areas, as wild poliovirus transmission is currently focal in two main areas: NWFP/FATA and neighbouring parts of eastern Afghanistan; and the corridor of movement from the southern region of Afghanistan through Baluchistan to northern Sindh.

There are still some important challenges facing the programmes, including:

- Need to achieve/maintain engagement of political leadership, particularly at peripheral levels
- Volatile security situation prevailing in Afghanistan and border areas of Pakistan
- Increasing percentage of refusals in some areas
- Continued threat of exchange of viruses through mobile populations.

5. RECOMMENDATIONS

Recommendations of the last TAG

1. The strategic directions and recommendations outlined in the report of the TAG meeting of April 2007 are still valid and generally represent the line of thoughts to be followed, particularly, in relation to the following priorities in order to achieve the eradication goals:

- Concentration of efforts on known remaining areas of transmission and high risk areas using the appropriate monovalent vaccine
- Improved access to all children and overcoming security problems
- Ensuring high level of operational quality of supplementary immunization activities and AFP surveillance
- Maintaining high level of overall population protection by periodic NIDs using tOPV in non-endemic areas and improvement in routine immunization coverage of infants

- Rapid detection and mop-up response to appearance of virus into polio-free areas using the appropriate monovalent vaccine.

Planned supplementary immunization activities and type of vaccine to be used

2. The following schedule and type of vaccine is recommended for the next six months:

Pakistan

- NID October:
  - mOPV3/mOPV1 transmission zones
  - tOPV all other areas
- SNID December – mOPV1
- NID January:
  - mOPV3 transmission zones
  - tOPV all other areas
- SNID February – mOPV1
- SNID March – mOPV3
- NID April
  - mOPV1 transmission zones
  - tOPV all other areas

Afghanistan

- NID October
  - mOPV3/mOPV1 transmission zones
  - tOPV all other areas
- SNID December – mOPV1
- SNID January – mOPV3
- SNID February – mOPV1
- NID March
  - mOPV1 or mOPV3 transmission zones
  - tOPV all other areas
- NID April
  - mOPV1or mOPV3 transmission zones
  - tOPV all other areas

Communication

3. The consultation endorses the general principles of the communications reviews, including the proposal to include a communications expert on the TAG, but requests the following actions.

3.1 Specific indicators that the TAG and country programmes can use to monitor progress should be clearly enunciated by the end of October.

3.2 Given the extensive recommendations arising from the communications reviews, priority should be given to those recommendations that will directly impact the programme during the coming six month period, with full integration of this work into the existing eradication programme and the avoidance, at all costs, of establishing separate structures.

3.3 Immediate priority should be given to activities that address the immunization of very young children, mobile populations and issues related to refusals.

Surveillance

4. In addition to the current analysis being undertaken, it is recommended that the Afghanistan team develop a series of rolling six-month maps for the southern region showing districts as ‘silent’ or ‘reporting’ in terms of AFP cases, in order to facilitate district-level monitoring of the evolving AFP surveillance sensitivity in this critical area.

Resources

5. The consultation commends the recent announcements by the Government of Pakistan of the allocation of substantial additional domestic resources for OPV procurement, and urges the finalization and publication of these long-term funding commitments as part of the government’s three-year plan for eradication activities.

6. To be able to respond to cases discovered outside zones of transmission, a reserve stock of 8 million doses of mOPV1 and mOPV3 (4 million each) should be established for each of Afghanistan and Pakistan.

Annex 1

PROGRAMME

Monday, 1 October 2007

08.45–09:00	Registration
09:00–09:30	Opening session • Address by Dr Hussein A. Gezairy, Regional Director, WHO/EMRO • Representative of the Ministry of Health, Dr Ali Jaffar, Oman • Objectives of the Consultation, Dr M. H. Wahdan, WHO/EMRO • Global progress towards polio eradication, Dr Bruce Aylward, WHO/HQ
09:30–10:30	Epidemiological situation in Pakistan / Dr N'ima Abid, WHO/Pakistan
10:30–11:00	Supplementary immunization campaign quality and plans / Dr N'ima Abid, WHO Pakistan
11:00–12:00	Discussion and questions to the consultation / National EPI Manager, Pakistan
12:30–13:00	Report on communication review, Pakistan / UNICEF
13:00–14:30	Epidemiological situation and surveillance data / Dr Tahir Mir, WHO Afghanistan
14:30–15:00	SIA quality and plans / Dr Tahir Mir, WHO Afghanistan
15:30–16:30	Discussion and questions to the consultation / National EPI Manager, Afghanistan
16:30–17:00	Report on communication review, Afghanistan / UNICEF

Tuesday, 2 October 2007

09:00–11:00	Discussion and finalization of recommendations
11:30–12:30	Closing

Annex 2

LIST OF PARTICIPANTS

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