

Report on the

**Fifth Meeting of the Regional Technical
Advisory Group on Poliomyelitis Eradication**

Muscat, Oman
8–9 May 2007



**World Health
Organization**

Regional Office for the Eastern Mediterranean

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1. INTRODUCTION

The fifth meeting of the Regional Technical Advisory Group on Poliomyelitis Eradication was held in Muscat on 8–9 May 2007. The meeting was attended by members of the Regional Technical Advisory Group (RTAG), country representatives and officials from Rotary International, the Centers for Disease Control and Prevention, USAID, UNICEF and WHO. The meeting programme and list of participants are included as Annexes 1 and 2, respectively.

The meeting was opened by Dr Ali Jaffer Mohamed, Adviser, Health Affairs, Ministry of Health, Oman, who also chaired the meeting. The opening address was delivered by Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean, who welcomed participants and expressed his gratitude to the Government of Oman for hosting the meeting. He noted that considerable progress had been made towards polio eradication in the 12 months since its fourth meeting in Cairo in May 2006. Among the re-infected countries, only Somalia was still experiencing transmission of the wild poliovirus. While the two polio endemic countries, Pakistan and Afghanistan, had reported an increased number of cases in 2006 compared with the previous year, transmission was now limited to well-defined high-risk areas. Upon the invitation of the Director-General to the stakeholders' consultation held in Geneva in February 2007, high-level delegations from Pakistan and Afghanistan had attended the meeting and strong national commitment was confirmed. This commitment was reinforced, he noted, during his recent joint visit with the Director-General of WHO to both countries in late April 2007.

2. FOLLOW-UP OF THE RECOMMENDATIONS OF THE FOURTH RTAG MEETING

Dr M. H. Wahdan, WHO/EMRO

The fourth RTAG meeting had produced many recommendations covering the topics of progress in endemic countries, in re-infected countries, the global risk, preparedness and response to importation, surveillance, supplementary immunization activities, coordination, cessation of oral poliovaccine (OPV), poliovirus laboratory containment, certification and coordination between the poliomyelitis eradication initiative and the Expanded Programme on Immunization (EPI).

During its fifth meeting, the RTAG noted with satisfaction that the recommendations made in its previous meeting had either been fully implemented or were in the process of being completed. The RTAG also acknowledged that many of the recommendations remain valid and further endorsed them as key parts of the regional and national programmes. In particular, the RTAG re-affirmed the recommendations of its fourth meeting on ensuring strong commitment at all levels, pursuing immunization during periods of tranquillity in conflict zones, on close coordination of activities across borders, especially in endemic and re-infected countries, the avoidance of immunity gaps, most critically in high-risk areas with persistent transmission, the use of appropriate monovalent vaccines when dealing with known virus transmission and in preparedness and response to importation.

The RTAG specifically acknowledged the significant role played by the Regional Office in strengthening polio eradication in Nigeria, largely through the work and commitment of the Regional Director for the Eastern Mediterranean. This was done through consultation with the Regional Director for Africa, obtaining clear interpretation of immunization issues from religious leaders and notably by the posting of consultants, with experience in polio eradication in the Eastern Mediterranean Region, to work in Nigeria.

Good progress has been achieved in the development of contingency plans to deal with possible importations and these are being assessed as part of surveillance reviews. Recommendations on surveillance have been fully implemented and the proposed programme of supplementary immunization activities has been completed as planned. For both surveillance and supplementary immunization activities, coordination between neighbouring countries is being pursued and is well developed.

3. EPIDEMIOLOGICAL SITUATION

3.1 Global situation

Dr Bruce Aylward, WHO/HQ

The past 12 months have been a time of significant progress towards global polio eradication, most notably the achievement of Egypt in successfully interrupting wild poliovirus transmission and the regaining of polio-free status by most of the countries re-infected due to importation.

Much of the progress has resulted from the introduction of monovalent vaccines, which have been used in 30 countries and have resulted in dramatic reductions in reported polio. In Nigeria, their use resulted in 16 type 1 cases reported in the first quarter of 2007, compared with 238 for the same period in 2006. Similarly, less dramatic declines have been reported in India, reporting a total of 44 cases to date in 2007, and in Pakistan with just 7 confirmed cases (only 2 due to P1). It is considered important that countries should protect their supplies of monovalent vaccines by licensing at least two vaccines of each type. The new algorithm introduced in the polio network laboratories has resulted in more rapid efficient testing of specimens.

The greatest risk to continued success in the global initiative is the looming funding gap of US\$ 575 million in 2007–2008, with the G8 and the European Commission committing just US\$ 467 million for 2006–2008 compared with US\$ 1,011 million in 2003–2005.

3.2 Situation in countries with viral circulation in the Eastern Mediterranean Region

Major progress has been made in the past 12 months. Wild poliovirus transmission is now limited to three countries, Afghanistan, Pakistan and Somalia. Persistent transmission is focused on geographically small parts of these countries, occurring in well defined areas with evident high risk factors. These high risk factors include a range of problems to be tackled by programme staff, overwhelmingly uncertain security, population mobility, relatively low

immunization uptake, both for supplementary and routine services, limited and difficult access and some community or individual resistance to accepting OPV. It seems highly probable that the problems leading to continuing transmission is the failure to reach eligible children rather than in their refusal to accept vaccine.

3.2.1 Afghanistan

Afghanistan remains beset by major problems of conflict and poor security. Despite these challenges, there has been a steady improvement in immunization coverage over most of the country and a good level of surveillance, including specimen collection and transfer.

Type 1 wild polio persists in the southern provinces, which are those most affected by fighting. After 4 months with no reported cases, the last isolate was detected in Helmand province on 10 April 2007. Although this occurred in a child of a family that consciously refused vaccine, it indicates persistent low-level transmission, which must be assumed to be relatively widespread in the area, with sub-clinical infections, incomplete surveillance or access problems preventing its detection.

It appears probable that the great majority of Afghanistan is polio-free and that priority attention should be directed at the three southern provinces where wild poliovirus (WPV) transmission persists. With only type 1 being currently detected, and with monovalent vaccine available, priority is being given to the frequent conduct of subnational immunization campaigns using every opportunity to reach all children living in the area assumed to be infected. A three-pronged approach is adopted in this regard:

1. Work towards achieving days of tranquillity
2. Use of every window of opportunity to reach inaccessible areas with vaccines
3. The continued development of services in accessible areas.

3.2.2 Pakistan

The use of monovalent OPV1 has been effective in reducing type 1 incidence to extremely low levels, with the last detected case having onset on 30 January 2007. It appears likely that the use of this vaccine was not only effective but may have prevented a significant increase in cases in an "epidemic" year. Although it is far too early to consider that transmission has been interrupted, it is possible that any future type 1 isolation could be rapidly controlled with high quality, effective mopping up, using this monovalent vaccine.

In contrast, type 3 poliovirus transmission is persisting in the area encompassing northern Sindh and adjacent areas of Baluchistan. With the last isolation having onset on 27 March 2007, it must be assumed that, although the number of cases is decreasing, transmission is still present in several districts. It is possible that trivalent OPV will eventually stop further spread, although the use of mOPV3 could probably achieve the same result, more reliably and sooner.

Epidemiological analysis of the characteristics of polio cases showed that 91% are among children aged less than three years, 35% are from among mobile and minority groups, 66% live in multiple family dwellings and 93% are from families where fathers have no formal education.

While good progress has been made in reaching high coverage levels in most areas, it is a cause of concern that OPV coverage among non-polio acute flaccid paralysis (AFP) cases in Quetta block has failed to improve over the past three years, suggesting a worrying failure to correct identified problems.

It was indicated that nearly two thirds of the population of Pakistan live in polio-free areas as a result of the high quality of work achieved by programme staff, through effective supplementary immunization activities and good surveillance. By sustaining high coverage, both through routine services and supplementary immunization, it is probable that any sporadic spread from the high-risk areas to the polio-free areas could be rapidly contained.

3.2.1 Somalia

Somalia is facing a constant security crisis, to the point where United Nations staff cannot travel or visit polio-infected areas. Despite these difficulties, some level of surveillance has been maintained throughout the country, reflecting the work of 434 reporting sites and the presence of the almost 200 national staff employed by WHO. Although accurate quality assessment is not possible, significant numbers of AFP cases have been detected and reported over the past 3 years, 354 in 2005, 184 in 2006 and 85 to date in 2006. However, surveillance gaps in some areas continue to exist, especially with regard to low stool adequacy rates.

In 2006 and the first four months of 2007, nine national immunization day campaigns (NIDS) and four subnational campaigns (SNIDs) have been conducted. However, the quality of these activities cannot be assured or verified.

Accepting the inevitable imperfection and incompleteness of the data, it is clear that Somalia, after a period being apparently polio-free, experienced a major type 1 epidemic with 186 cases in 2005, 36 in 2006 and 7 to date in 2007. In 2007, 5 cases have occurred in Togdher district, one in Hiran and one in Mudug. Two monovalent type 1 NIDs and two SNIDs have been conducted in 2007.

It is not possible to be certain whether wild poliovirus transmission is limited to Somali territory in Somalia or whether it extends across the border into Ethiopia.

4. ADDRESSING THE RISK OF IMPORTATION

4.1 Surveillance progress and issues

Mr Jalaa' Abdelwahab, WHO/EMRO

Dr Humayun Asghar, WHO/EMRO

AFP surveillance is well established in all countries of the Region with high sensitivity and quality. The overall non-polio AFP rate in the Region for 2006 and 2007 (annualized) has been greater than 3.5 per 100 000 population under 15 years of age. Almost all countries achieved a rate of greater than 1 per 100 000 population under 15 years in 2006 except Palestine and the United Arab Emirates. Additionally, polio-infected countries and those at high risk of importation achieved a rate of more than 2 per 100 000 at the national level, except Djibouti, Oman and Saudi Arabia. Annualized rates for 2007 show that Qatar and Palestine still have not achieved the target rate of more than 1 per 100 000 population under 15 years and Saudi Arabia has not reached 2 per 100 000. However, these rates are only for the first quarter of 2007 and it is hoped that they will improve as the year unfolds. At the subnational level, most areas in polio infected countries have rates higher than 2 per 100 000 population under 15 years. However, some gaps exist in high risk countries and areas such as governorates in western and southern Sudan, Mecca and Jeddah in Saudi Arabia and a few governorates in Djibouti and Yemen. Data from Morocco continue to show sub-optimal performance in governorates with high populations such as Rabat and Sousse.

As for stool adequacy, at regional level the rate is 89% and 91% for 2006 and 2007 respectively. Nationally, only Lebanon, Djibouti and Morocco did not achieve the target of 80% in 2006, and the Islamic Republic of Iran and Lebanon have not yet reached the target of 80% in 2007. At subnational level, the gaps highlighted were again in some populous governorates of Morocco and high-risk areas in Somalia, Sudan (including the south) and Yemen.

Overall, timeliness of the surveillance system in the Region has improved, especially for the average number of days between collection and arrival of specimens at the laboratory, to reach an average of 3 days in 2007.

The sensitivity of AFP surveillance in the Region has been further enhanced with the expanded implementation of the regional guidelines for contact sampling, which started in the priority countries of Pakistan, Afghanistan, Egypt, Somalia and Yemen. A new data management program was introduced at country and regional level for monitoring and ensuring the quality of the contact sampling system; indicators from this system will be included in future EMR polio faxes. The value of contact sampling is clearly illustrated by the identification of newly infected districts in the three polio-infected countries based on isolation of wild poliovirus among contacts of AFP index cases with negative laboratory results, which guided necessary field interventions.

Environmental surveillance continues to be implemented in Egypt and Palestine. In Egypt this process is being closely monitored to ensure the quality of the system by assessing non-polio enterovirus isolation rates by site and month.

The quality of the AFP cases is regularly monitored by reviewing final diagnosis of AFP cases and calculating the GBS (Guillain-Barré Syndrome) rate to monitor any trends and ensure that countries maintain a minimum rate of 0.6 GBS cases per 100 000 population under 15 years of age. Most countries have achieved such levels in the past three years, with a few exceptions in less populous countries such as Bahrain, Djibouti and Qatar. Additionally, a declining rate of GBS rate in Oman was noted in the past three years. The GBS rate in Somalia cannot be calculated due to limited capacity in field diagnosis there.

Surveillance reviews are also being conducted regularly in the countries of the Region to assess the quality of the system and look beyond the indicators. In 2006, internal reviews were conducted in Iraq and Pakistan while international surveillance reviews were conducted in Egypt and Jordan. Follow-up visits were conducted to Djibouti, Lebanon and Syrian Arab Republic in 2006 and Iraq, Morocco and Tunisia in 2007. Starting in mid 2006, AFP surveillance reviews in polio-free countries included an assessment and review of the national preparedness for and response to wild poliovirus importation. The main findings of the reviews confirm overall sensitivity and reliability of the system. The reviews helped identify the need for a regional AFP surveillance meeting, which occurred in March 2007. The meeting was attended by all surveillance officers and focused on AFP and measles surveillance to standardize procedures and update surveillance officers, support AFP/measles integration and address issues of quality, timeliness and overall strategies. The report and recommendations of the meeting were included in the background materials for review by RTAG members.

Emerging issues in AFP surveillance were also presented. An overview of the vaccine-derived poliovirus (VDPV) cases in the Region (10) in the past three years showed regular isolation of such viruses. Most of the cases were among children under 2 years of age with multiple OPV doses. These cases were classified as immunodeficient VDPV (iVDPV) and did not result in any local circulation, reflecting good population immunity. Most of these VDPV were of type 2; only two were type 3. Regional guidelines to respond to VDPV were presented and endorsed by the RTAG. Delayed receipt of sequencing results for timely identification and response to VDPV cases was also noted.

With most of the countries in the Region being polio-free, the second emerging issue in AFP surveillance is the increased classification of vaccine-associated paralytic polio (VAPP) cases. This seems to be due to over-diagnosis of VAPP cases among some countries. Some of these cases do not even fulfil the basic definition criteria for VAPP and reflect a need to better brief the Expert Review Committee and country programmes about means to assess the risk of VAPP appropriately based on the definition as well as a detailed clinical and epidemiological review of each potential case, considering VAPP as a diagnosis of exclusion.

The performance of the regional poliovirus laboratory network is sustained at certification standard. All network laboratories are fully accredited except Kuwait, which was provisionally accredited pending ELISA proficiency panel testing. All laboratories passed the WHO proficiency testing panel for unknown viruses for both primary virus culture and intratypic differentiation testing. The annual workload is high due to the demands of sustaining the AFP rate at ≥ 2 per 100 000 population under 15 years and collection of stool samples from contacts. A remarkable achievement is implementation of the new testing algorithm in all network laboratories, which has shortened the timeliness of reporting to less than two weeks for all virological results, with virus positive samples characterized within one week. In Egypt, environmental surveillance is continuing with good sensitivity, and one more site (Red Sea) has been added to 33 already existing sewage collection sites. The sequencing data show decrease in genetic diversity and localization of virus transmission in Afghanistan, Pakistan and Somalia. The number of clusters and chain of transmission are on the decline.

The RTAG concluded that in most countries, with the marked exception of Somalia, surveillance has been developed to high levels of competence and it seems unlikely that many polio cases are being missed or that transmission causing clinical cases would remain undetected for very long. While the absolute priority, for the moment, must be to stop wild poliovirus transmission as soon as possible, it is doubtful that further embellishment of AFP surveillance is really needed and its next priority, after poliovirus transmission appears to have stopped, must be to extend its capacity to other communicable and vaccine-preventable diseases. Similarly, laboratory capacity in the regional network appears excellent and in this regard there is no evident need for further RTAG advice.

4.2 Population immunity

Dr Faten Kamel, WHO/EMRO

Keeping high population immunity is vital in order to interrupt poliovirus transmission and guard against reintroduction of infection. This is achieved through routine and supplementary immunization and assessed by coverage figures and immunity profile of non-polio AFP cases. The reported routine OPV3 coverage rate is showing improvement in most countries where it was lagging.

The immunity profiles of children 6–23 months of age in some countries of the Region (Afghanistan, Egypt, Islamic Republic of Iran, Iraq, Saudi Arabia, Somalia, Sudan [north and south], Morocco, Pakistan, Syrian Arab Republic and Yemen) were analysed. From the analysis it can be concluded that the improvement of overall immunity profile continues in endemic and re-infected countries. However, areas with circulation in Pakistan/Afghanistan show lower average OPV doses among non-polio AFP cases than areas with no virus circulation, indicating lower routine and supplementary immunization coverage in these areas. The high risk countries that decreased the frequency of supplementary immunization activities are showing a changing trend that needs to be closely monitored.

Further analysis was done by looking at the impact of OPV through comparing the average number of OPV doses between polio (confirmed) and non-polio (discarded) cases. It is expected that non-polio cases received more doses, and that the larger the difference the more effective the vaccine. The analysis was presented for Afghanistan, Pakistan, Somalia, Sudan and Yemen, separating cases due to WPV1 and WPV3 in Afghanistan and Pakistan. This analysis confirms the improvement in endemic countries and gives indication of the better effect of mOPV by showing that the difference in Somalia is greater than Yemen, and that both are greater than in Sudan (mOPV1 was used in Somalia and Yemen). It was also noted that the difference was higher with P1 cases than with P3.

The RTAG concluded that in most polio-free countries of the Region and in the greater part of Pakistan and Afghanistan, excellent and sustained work by health staff and volunteers has resulted in high levels of immunization among eligible children, with increasing coverage being achieved by routine services to the extent that it seems possible that imported poliovirus would have only limited capacity to spread and could be readily controlled. A small number of countries, such as Somalia, Sudan and Yemen, still have inadequate immunization coverage either in total or in limited geographical areas and will require continued supplementary immunization activities until Nigeria and possibly other poliovirus-exporting countries are clearly polio-free.

4.3 Country experiences

4.3.1 Saudi Arabia

Saudi Arabia succeeded in interruption of indigenous wild polio transmission more than a decade ago, with the last indigenous cases reported in 1995. However, the risk of importation of wild virus is high due to the country's central geographical location between Africa and Asia and its millions of visitors including pilgrims and workers coming from different countries, including endemic countries. The risk increased with re-emergence and re-infection of several countries in the world. Importations were reported in Saudi Arabia in 1998 and 2004, with no virus spread or secondary cases.

The preparedness activities include the following.

- Maintaining high surveillance standards at national level and in high-risk areas using active and passive surveillance.
- Keeping high vaccination coverage at national and district levels.
- Looking for pockets of low coverage and conducting SNIDs in high-risk areas (especially Hajj and border areas).
- Implementing vaccination requirements for travellers coming from endemic/infected areas. All persons coming from endemic countries, regardless of age, are required to get one OPV dose 6 weeks before getting a visa and a second dose on arrival. The same applies for all children under 15 years coming from re-infected countries, where they should receive one dose before leaving followed by another upon arrival in Saudi Arabia.

4.3.2 Sudan

Sudan was affected by wild poliovirus importation in 2004, which was followed by an outbreak affecting 155 children. This importation was a practical test for the first national plan for preparedness and response to wild poliovirus importation. The poliovirus was detected early and the response was implemented early, and the size of the response was according to the previous ACPE recommendations. Based on this experience, the plan has been updated to include effective measures of immunization and AFP surveillance response. The main possible points of entry of wild poliovirus were identified. These are the Chad–Darfur border, Congo–Bahr Elghazal border, Ethiopia–Gedarif and Ethiopia–Upper Nile border. Airports might also be points of entry from the endemic/re-infected countries. The high-risk populations that might bring and disseminate the virus are pilgrims from western Africa countries travelling by road, nomads crossing the international borders, refugees and internally displaced populations (IDPs), and temporary labourers during the harvest seasons. The immunity level among non-polio AFP cases showed very good progress since 2004. Sudan has registered the lowest percentage of children who never received OPV since 2000. The main AFP surveillance performance indicators in 2006 and the first 4 months of 2007 met the required certification standard targets.

Actions taken to detect wild poliovirus importation and guard against virus spread included the following.

- Improving the routine immunization coverage using GAVI funds by conducting acceleration campaigns in high-risk areas and using windows of opportunities in insecure areas.
- Conducting 4 high quality NIDs rounds in 2006 and 2 NIDs rounds in the first 4 months of 2007.
- Vaccinating children under 5 against polio and other childhood diseases who are crossing the border with Chad in either direction.
- Identifying more sites for AFP surveillance at the border with Chad and training the immunization workers on AFP surveillance.
- Conducting continuous review of the AFP surveillance performance in Sudan generally and in high-risk areas particularly.
- Increasing the awareness of politicians, local authorities, technical staff and the public about the possible risk of wild poliovirus importation and the need for reporting as early as possible of any AFP case.
- Collecting stool samples from non paralysed children attending the clinics in IDP and refugee camps, and main hospitals in high-risk areas, in order to increase the sensitivity of AFP surveillance.

In conclusion, the response to the 2004–2005 polio epidemic following the importation was prompt and well documented, but not of the magnitude it should have been at the early stages. Wild poliovirus importation is a continuous real threat to polio eradication in Sudan and neighbouring countries until poliovirus transmission has been interrupted in the remaining affected countries.

5. ROUTINE IMMUNIZATION SCHEDULES

5.1 Outcome of GCC Joint Consultation Meeting, Oman, 2006

The Joint Consultation Meeting held in Muscat on 3 December 2006 produced a recommended schedule for immunization in member countries of the Gulf Cooperation Council (GCC). With regard to immunization against polio, the first dose at age of 2 months was recommended to be changed from OPV to inactivated poliovaccine (IPV), to be followed by OPV doses at 4, 6, 12 and 18 months of age and at 4 and 6 years. This recommended schedule needs to be endorsed by the health ministers of GCC countries before its implementation.

5.2 Country statements

5.2.1 Jordan

Jordan has been polio-free since 1992. However, 7 VAPP cases occurred between 1993 and 2004. All these cases were reviewed and seen by the expert committee using the criteria in the WHO regional guidelines for VAPP diagnosis and reporting. Three of the cases had immunity disorders. The National Immunization Committee held four meetings in 2002–2003 and recommended introduction of IPV in the first dose to prevent VAPP. In January 2005, the first dose IPV was introduced into the EPI schedule. In July 2006, the schedule changed again to include the first and the second doses as IPV. Combined vaccine (DPT + HBV + Hib) is given to reduce the number of injections. However, the second dose is given as IPV + OPV. OPV is used for third, fourth and booster polio doses. IPV is ordered through routine EPI/Ministry of Health mechanisms (tender). Preparations were done to accommodate logistical implications including increased cold chain capacity at national, district and health centre, maintaining injection safety, training of health care staff, and revision of documents. High coverage is maintained and it is planned to start using IPV combined vaccine with acellular pertussis in 2008 and in the post-certification era to stop OPV and continue to use IPV (2–3 doses). No VAPP was reported since IPV was used.

5.2.2 Saudi Arabia

OPV was introduced in Saudi Arabia in 1974. A royal decree in 1979 connected birth certificate issuance with completion of basic doses of vaccine (3 doses of OPV). OPV3 coverage has been at or above 95% since 2001. The situation of high risk of importation and preparedness activities were already referred to. Several VAPP cases were reported between 1995 and 2004 using the criteria expressed in the regional guidelines. The whole situation is being evaluated taking into consideration both the capacity to achieve high coverage and meet logistic requirements and the high risk of importation. The suggested sequential schedule of IPV/OPV for GCC countries needs to be endorsed by GCC health ministers before implementation.

5.2.3 Syrian Arab Republic

The Syrian Arab Republic is considering shifting to include 2 doses of IPV in a sequential immunization schedule. The reason was stated as due to reported VAPP cases and pressure from clinicians and the need to revise the whole immunization schedule for other antigens in line with WHO recommendations.

The country has been free of polio since 1995. OPV coverage has been maintained at above 90% for several years. Supplementary immunization activities are being implemented as 4 rounds yearly since 1997 and the coverage is more than 90%. Surveillance performance indicators have met and maintained certification standard for several years.

The programme is planning to conduct epidemiological, financial, and operational implication studies before finalizing a change in policy. This will be preceded by a review of WHO recommendations and position paper and obtaining the agreement of decision makers and political leaders.

The challenges considered include the risk of polio importation, low coverage in some places and groups, low performance of AFP surveillance at some districts and need for full cooperation with private sector.

It is planned to adopt the new schedule in 2008. Operationally this will require expanding the cold chain capacity, increasing the vaccine budget, revision of all documents, preparing and distributing new posters and advocacy material to all health centres and clinicians and organizing training courses for health workers and awareness-raising of activities for clinicians and the general public.

There are still questions to be answered about the protection that IPV provides using EPI schedule and its role in limiting the spread of wild poliovirus after importation or the emergence and transmission of VDPVs. Clarification of these issues will help direct long-term policy.

6. REGIONAL CONTAINMENT ACTIVITIES

Dr Humayun Asghar, WHO/EMRO

Sixteen countries (Bahrain, Djibouti, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia and United Arab Emirates) have reported completion of phase 1 laboratory containment activities (survey and inventory), while Egypt and Palestine are in the process of completion. A national plan of action has been developed in Afghanistan and Yemen and has been submitted for the approval of their ministries of health. A national containment coordinator has been nominated in Pakistan, but the national plan of action has not been approved by the Federal Ministry of Health. To date, 21 858 laboratories have been surveyed and only 7 laboratories have been identified storing WPV material.

Reports documenting the quality of phase 1 containment activities have been submitted by 15 of the 16 countries who have completed phase 1 and have been reviewed by independent reviewers. After revision, reports were submitted by countries that have completed phase 1 containment activities, except Djibouti, Iraq, Kuwait, Lebanon and Sudan, to the Eastern Mediterranean Regional Commission for Certification of Polio Eradication (RCC) through their respective National Certification Committee (NCC).

7. REGIONAL CERTIFICATION ACTIVITIES

Dr Javid Hashmi, WHO/EMRO

At its 17th meeting, held on 24–26 April 2007, the RCC reviewed reports submitted by NCCs of 19 countries. This was the largest number of reports reviewed by the RCC so far. National documents have been accepted from 18 of the 19 polio-free countries in the Region and these countries have now begun to submit annual update reports. Twelve countries that have been free of polio for five years or more and have completed phase 1 laboratory containment activities have also submitted final national documents for regional certification. In addition to the above reports, provisional reports are also being submitted to the RCC on an annual basis by three countries (Afghanistan, Pakistan and Somalia) where wild poliovirus circulation is still ongoing.

Over the past year, the RCC has initiated preparation of documents in support of eventual regional certification. In this connection, the first draft of a regional overview and 7 country summaries were reviewed by the RCC at its last meeting.

RTAG's comments were sought on some technical issues that were raised by the RCC. These included the applicability of the revised target for non-polio AFP rate per 100 000 children under the age of 15 years to all countries. The RTAG decided that in this connection the recommendation of ACPE 4 remained valid. RTAG's views on other issues such as the use of VAPP cases as an additional evidence of the sensitivity of AFP surveillance, the introduction of IPV in the immunization schedule, immunization of children of illegal immigrant and/or refugees and the need for supplementary immunization activities in polio-free countries where the coverage with routine continued to be low, are covered in other sections of the report.

8. CONCLUSIONS

The polio eradication initiative is at a critical point. Through routine immunization and with many extensive supplementary immunization activities, backed up by good levels of surveillance, much progress has been made, to the extent where all but three countries in the Region can now be assumed to be free of wild poliovirus transmission. With high immunization coverage levels, they would predictably be able to prevent or limit the spread of any importations.

In Afghanistan and Pakistan, policies aimed at polio eradication have been effectively implemented over much of the country and wild poliovirus transmission is limited to well-known and well-defined “high-risk” areas. Two conclusions appear probable.

- In the next year, should cases occur, they will almost certainly occur – yet again – in the high-risk areas.
- Should these high-risk areas cause importations into the polio-free areas, transmission will be detected early and spread limited by high levels of immunity and operational effectiveness.

The RTAG concludes that the regional programme should re-emphasize to Member States with persistent wild poliovirus transmission that programme activities should be more focused on areas with persistent transmission and less on further developing and embellishing activities in “safe” probably polio-free areas.

Both Afghanistan and Pakistan have policies which indicate that additional staff and resources are already being directed towards high-risk areas. However, the RTAG would appreciate data, regularly updated, showing and quantifying the movement of staff and resources to high-risk areas. Unless such movement is demonstrably quantified and evaluated for its effectiveness, it seems possible, even probable that wild poliovirus transmission will persist through the next 12 months.

“Business-as-usual” activities will not succeed in overcoming problems of access and achieving the universal coverage essential in areas where wild poliovirus is persisting.

The RTAG is fully aware of and endorses the priority attached to developing routine immunization on a sound well-planned basis. Such a policy should be pursued in all countries where wild poliovirus transmission is not known to be persisting and in polio-free areas of infected countries. In Afghanistan, Pakistan and Somalia, the intensified, focused activities aimed at high-risk areas should secure polio eradication within a short time, allowing more attention to be directed, sooner, at developing routine services.

Within high-risk areas, the present low intensity of wild poliovirus transmission makes it likely that the additional focus of resources and improved immunization coverage will achieve polio eradication by itself. Should polio cases occur, however, the conduct of extensive but high quality mopping-up in every incident will prove highly effective.

While it is uncertain that the polio cases being detected in Somalia represent the full extent of the epidemic, with a possibility that undetected cases may be occurring in both Ethiopia and Somalia, the few cases being detected indicate that activities similar to those being recommended for Afghanistan and Pakistan may be equally effective in stopping transmission.

9. RECOMMENDATIONS

Priorities

1. During the next 12 months, the priorities for polio eradication in the Eastern Mediterranean Region should be to:
 - conduct widespread “mopping-up” whenever wild poliovirus is isolated
 - intensify immunization and surveillance activities in defined “high-risk” areas in Afghanistan and Pakistan
 - improve the quality of mopping-up and other supplementary immunization activities in Somalia
 - make full use of every available opportunity to improve access and vaccinate all children especially in areas of conflict and mobile populations.

These priorities may require the movement of staff and resources from areas of high immunization coverage and good surveillance in order to raise the quality of work where further cases are most likely to occur.

Mopping-up

2. The RTAG recommends that any isolate of wild poliovirus, whether in countries with existing transmission or as the result of importation should result in an extensive mopping-up activity. Mopping-up should involve:
 - Complete immunization coverage of children aged under five years over an extensive area. While the WHO recommendation of a target of 2–5 million children may be unrealistic in some countries, the area to be covered should be determined epidemiologically by the responsible officials and should be guaranteed to well exceed the likely local spread of wild poliovirus, probably covering the affected and adjacent districts
 - Posting of an experienced competent official to plan and oversee the mopping-up. This official would be expected to be resident in the target area and to be accountable for its successful conclusion and should have the necessary authority to complete the task
 - Movement of resources from “safe”, i.e. non-infected, parts of the country to ensure that no management shortages threaten eventual success. These resources might be expected to cover transport, staff and financing.
3. Should further cases occur in the area covered by mopping-up, plans should be reviewed, possibly extending the target area, and the reasons for further cases should be carefully assessed.
4. The vaccine of choice should be the appropriate monovalent OPV, used in an initial round and repeated two weeks later, then repeated at most every four weeks. Where monovalent type 3 is not available, trivalent OPV should be used with at least four weeks between rounds.

5. While the designated official will accept full accountability for the mopping-up, provincial and national officials should guarantee frequent monitoring of progress. The key indicators of success would be:
 - No further occurrence of cases indicating a third generation of infection
 - The speed of detection of AFP cases in the target area
 - The completeness of immunization and the development of plans to overcome problems.

High-risk areas and populations

6. Programme managers in Afghanistan, Pakistan and Somalia should review and revise their plan of activities aimed at defining and eliminating high-risk areas and reaching under-reached populations. These areas would include:
 - Known areas of persistent transmission
 - Areas with cases in previous year
 - Areas with poor population access for any reason
 - Areas with low immunization coverage.
7. Based on those plans, programme managers should designate an experienced responsible official to oversee additional activities in the area and should move any required resources from safe areas to high-risk areas. Managers would be expected to document and quantify actions taken to remove high risk from these areas.
8. All countries should monitor population movements including immigrants, pilgrims, refugees and mobile communities across borders and ensure that these populations are adequately covered in both vaccination and surveillance activities.

Countries at high risk of importation

9. All countries that experienced direct or indirect importations from Nigeria must remain on full alert for further possible importations as long as wild poliovirus transmission remains anywhere in west Africa. Contingency plans should be reviewed annually to reaffirm their appropriateness and to ensure that international experience, e.g. in the use of monovalent vaccines, is incorporated into planning.
10. Djibouti, Sudan, especially in the south, and Yemen remain of concern since their routine immunization coverage is not at a sufficiently high level to minimize the risk of wild poliovirus spread should it be introduced. These countries should plan specifically to continue supplementary immunization activities as well as to strengthen routine services.
11. In a limited number of countries surveillance gaps remain especially at the subnational level. More efforts should be directed at strengthening surveillance to a uniformly high level in all parts of the country. Such areas include parts of Morocco, Sudan, Somalia, Yemen and Saudi Arabia.

Problems posed by poor security and by conflict

It is possible that, however high the potential to stop wild poliovirus transmission, the existence of dangerous conditions due to conflict may make this almost impossible. However, it is necessary to attempt to determine solutions for these areas.

12. In Afghanistan, the progress being made towards days of tranquillity must be pursued as long as the potential for them exists. Should they occur, they should be documented and details of successes made available to the different parties. Using monovalent vaccine makes it possible to conduct more frequent rounds and stop wild poliovirus transmission in the shortest time.
13. If success is not achieved, action should be taken to minimize the risk of wild poliovirus spread from the affected area by specifically raising coverage in adjacent provinces, in areas reached by nomads from the affected areas and in refugee settlements.
14. If accessibility of the area changes, rapid mass campaigns should be considered, before the area becomes inaccessible again.

Issues affecting vaccines

15. It is impossible to exaggerate the potential benefit to Pakistan of provision of mOPV3. The RTAG endorses the Pakistan TAG recommendations and encourages the country, WHO and the vaccine manufacturers urgently to pursue early registration of mOPV3.
16. To ensure vaccine availability, all countries which have registered monovalent vaccines should understand the need for approval for vaccine from at least two manufacturers.
17. In view of the risk of importations as long as wild poliovirus transmission exists anywhere in the world and the proven efficacy of monovalent OPV as the vaccine of choice for containment, all countries should consider registering such vaccines, both type 1 and type 3, to allow their rapid use, if necessary.
18. Recognizing that VAPP is the major factor affecting long-term vaccine policy, including the introduction of IPV and given its financial and operational implications, RTAG reaffirms the need for accurate diagnosis of all VAPP cases as per regional guidelines.
19. Any country considering introduction of IPV should examine the WHO position paper and supplement and assess their national situation in terms of risk of importation, ability to achieve high coverage and adopt policies compatible with the position paper. Further studies are also in progress to provide additional data and guidance on this matter.

Funding for polio eradication

The RTAG noted with appreciation that, in countries of the Region, essential polio eradication activities in areas where wild poliovirus transmission persists have never been prevented because of shortage of funds. However, the TAG noted with concern the shortfall of funding, both globally and regionally, for polio eradication activities in 2007.

20. The RTAG recognizes that efforts to bridge the financial gap by seeking additional funding must continue. Should the gap remain, the highest priority, both nationally and regionally, should be to continue fully funding critical activities in those areas where WPV is persisting, most especially in supporting mopping-up.

Annex 1**PROGRAMME****Tuesday, 8 May 2007**

- 08:00–08:30 Registration
Opening session
- 08:30–09:00 Opening Remarks / H.E. Dr Ali Jaffer Mohamed, Ministry of Health, Oman
Opening Address / Dr Hussein A. Gezairy, Regional Director, WHO/EMRO
- 09:00–10:00 Follow-up on implementation of fourth meeting's recommendations / Dr M. H. Wahdan, WHO/EMRO
Session I: Progress towards polio eradication
- 10:00–10:30 Global overview / Dr B. Aylward, WHO/HQ
- 10:30–11:30 Situation in infected countries
Pakistan / Dr N. Abid, WHO/Pakistan
Afghanistan / Dr T. Mir, WHO/Afghanistan
- 11:30–12:00 Somalia / Dr A. Debesay, WHO/Somalia
Session II: Addressing the risk of importation
- 12:00–15:15 Sudan / Dr S. Haithami, WHO/Sudan
Saudi Arabia / Dr A. Mishkhas, Saudi Arabia
Surveillance progress and issues / Dr H. Asghar and Mr J. Abdelwahab, WHO/EMRO
Population immunity / Dr F. Kamel, WHO/EMRO
Regional priorities and plans/questions to RTAG / Dr F. Kamel, WHO/EMRO
- 15:15–16:15 Closed meeting of RTAG

Wednesday, 9 May 2007

- 08:30–09:30 Meeting of RTAG members
Session III: Routine immunization schedules (IPV/OPV use)
- 09:30–10:00 Introduction / Dr B. Aylward, WHO/HQ
Outcome of GCC meeting / Dr S. Al Awaidy, Oman
- 10:00–11:30 Country statements
Saudi Arabia / Dr A. Mishkhas, Saudi Arabia
Jordan / Dr N. Jarour, Jordan
Syrian Arab Republic / Dr H. Nasri, Syria
- 11:30–12:00 Regional containment activities
- 12:00–12:30 Regional certification activities
- 12:30–14:30 Private meeting of Regional TAG Members
Closing session
- 14:30–15:30 Discussion of conclusions and recommendations / Dr N. Ward, RTAG member

Annex 2

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