

Report on the

**SEVENTH MEETING OF THE
EASTERN MEDITERRANEAN REGIONAL COMMISSION
FOR CERTIFICATION OF POLIOMYELITIS ERADICATION**

Cairo, Egypt, 6-8 November 2001

1. INTRODUCTION

The Regional Commission for Certification of Poliomyelitis Eradication (RCC) held its seventh meeting at the WHO Regional Office for the Eastern Mediterranean (WHO/EMRO) in Cairo from 6-8 November 2001.

The meeting was attended by members of the RCC, chairpersons of National Certification Committees (NCCs) and National Polio Eradication Officers of Bahrain, Jordan, Kuwait, Lebanon, Morocco, Syria, Saudi Arabia, Tunisia, representatives of the Centers for Disease Control and Prevention (CDC), Atlanta, UNICEF and WHO staff from WHO/HQ, AFRO and EMRO.

Dr Ali Jaafar, chairman of the RCC, opened the meeting by welcoming participants and acknowledging the participation of Dr Gezairy RD/EMRO, a reflection of commitment of EMRO management to Polio Eradication. Dr Jaafar indicated that the RCC has so far reviewed reports from twelve countries and is reviewing national documentation from two more countries and annual updates from some of those countries whose national documentations were reviewed before.

The chairman referred to the significant decrease in the number of cases of polio in the region from one year to the other indicating hopefully that the region will be on track for timely certification. In this regard he acknowledged the support extended by WHO and various partners to the remaining endemic countries.

Dr Jaafar invited Dr Gezairy, RD/EMRO to address the meeting.

In his address to the meeting Dr Gezairy welcomed the participants and expressed his thanks to members of the RCC for their continued effort in the process of certification of poliomyelitis eradication from the region. He also acknowledged, with thanks, the effort of the National Certification Committees and nationals from participating countries for their cooperation in preparing and presenting national documentation for certification.

The Regional Director, then reviewed some of the main achievements since the last meeting of the commission particularly improved surveillance and at the same time significant decrease in the number of cases in all endemic countries of the region particularly the epidemiologic block of Afghanistan/Pakistan, the main reservoir of infection in the region. He indicated the substantial curtailment of the intensity and geographic extent of the wild virus circulation in this block.

Dr Gezairy then referred to the situation in Afghanistan in 2001 where up to early September there was successful localization of polio in and around Kandahar (9 cases).

Referring to 11 September, he indicated that what happened was a cause of great sorrow and at the same time great concern for polio eradication efforts. WHO, however, was able to ensure the conduct of the fall NID (September and November) as planned with reasonably good coverage. Adjustments were made in the polio eradication plans for Afghanistan and Pakistan to take into account population movement and the developing refuge situation in and around Afghanistan.

The RD closed his remarks by wishing the commission success in their deliberations and pleasant stay in Cairo.

The programme and list of participants are given in Annexes 1 and 2 respectively.

2. IMPLEMENTATION OF THE RECOMMENDATIONS OF THE SIXTH MEETING OF THE REGIONAL CERTIFICATION COMMISSION

The meeting was informed that all the recommendations made were implemented.

- 1- There are regular consultation between EMRO and other regional offices to ensure coordination of dates of RCC to avoid conflict and ensure participation of all members.
- 2- EMRO is facilitating participation of members of EMR/RCC into meetings of EUR, AFR and SEA Regional Commissions.
- 3- The matrix reflecting the status of national documentation and annual reports was developed and will be presented to the RCC.
- 4- EMRO has already invited the chairpersons of the NCCs to the RCC meeting at the time of reviewing annual updates.
- 5- A meeting of chairpersons of NCC is scheduled March 2002. To this meeting the Regional Office is also inviting the chairpersons of National expert groups.

The RCC noted with satisfaction that all its recommendations were implemented by WHO/EMRO and suggested some amendments in the matrix reflecting the status of National documentation to add more information and clarity.

3. PRESENT SITUATION OF POLIO ERADICATION

3.1 Global Overview

Extraordinary progress towards polio eradication continued during 2000 and 2001. Polio-endemic countries have increased the number of rounds of supplementary immunization activities (SIAs) since 1999 in order to rapidly interrupt wild poliovirus transmission, and have improved the quality of SIAs to reach previously unreached children by delivering oral polio vaccine (OPV) house-to-house. The number of national immunization days (NIDs) rounds in most endemic countries, especially in the 10 global priority countries, doubled between 1999 and 2000.

Compared to 30 countries considered endemic at the end of 1999, wild poliovirus was identified in only 24 countries throughout all of 2000 (13 in the African Region, 7 in the Eastern Mediterranean Region and 4 in the South-East Asia Region). Transmission was detected in only 20 countries during the second half of 2000. Further progress was noted in 2001, where wild virus was detected from 11 countries up to November with decrease in the intensity of transmission

Following the polio-free certification of the Americas in 1994, the Western Pacific Region became the second WHO Region to be certified as free of transmission of indigenous wild poliovirus in October 2000. No wild poliovirus has been isolated, under conditions of high-quality acute flaccid paralysis (AFP) surveillance, in any Member State of the European Region since September 1998.

The number of polio cases reported globally declined by 60%, from 7141 cases in 1999 to 2836 cases in 2000, the lowest level ever recorded despite substantial improvements in surveillance quality between 1999 and 2000. The global non-polio AFP rate increased from 1.3 in 1999 to 1.6 per 100 000 in 2000, and the proportion of AFP cases with adequate stool specimens increased from 67% to 75% in 1999 and 2000, respectively. Further decline in the number of cases was noted for 2001. Up to 6 November 2001, wild poliovirus was isolated from 261 cases compared to 464 cases for the same period in 2000.

Type 2 wild poliovirus has not been detected since October 1999, when it was last isolated in Aligarh, Western Uttar Pradesh State, India.

Challenges during 2000 included continued poliovirus importations from endemic into polio-free areas, demonstrating the fragility of any area's "polio-free" status and highlighting the paramount importance of maintaining high polio immunization coverage as well as certification-standard surveillance.

The outbreak of vaccine-derived poliovirus (VDPV) on Hispaniola Island (Haiti and Dominican Republic, see below) would not have occurred in the presence of sufficiently high population immunity. The outbreak reaffirms the need to maintain high immunization coverage and sensitive surveillance for AFP to allow early detection of and response to such outbreaks.

During 2000 and 2001, countries of the three polio-free WHO regions and selected polio-endemic countries have begun creating national inventories of laboratories containing wild poliovirus. Larger countries in these regions have made significant progress towards contacting thousands of laboratories and collecting the necessary information.

Experience during 2000 indicate that reaching the eradication goal in the remaining polio-endemic countries will increasingly depend on meeting three key challenges: (a) gaining access to and immunizing as many children as possible, particularly in conflict-affected countries, (b) maintaining and improving government commitment and multisectoral involvement in view of a disappearing disease, and (c) assuring that the necessary external funding needed to finish the task will be made available.

3.2 Regional Overview (EMR)

Significant progress has been made towards interruption of wild Poliovirus transmission in the Region through acceleration in implementation of polio eradication strategies.

1- Routine immunization coverage with OPV3 showed improvement particularly in countries with previously low rates.

2- The intensification of NIDs and other SIAs which started during 1999 in endemic and recently endemic countries (Afghanistan, Egypt, Iraq, Pakistan, Somalia,

and Sudan) continued and reached its peak in 2000 and 2001. In 2000, each of the endemic and recently endemic countries conducted more than two NID rounds; Egypt, Iraq and Sudan (including war-affected parts of southern Sudan) conducted four NID rounds plus sub national campaigns. Afghanistan and Pakistan conducted four rounds of intensified NIDs, and Somalia conducted sub national campaigns in addition to 3 rounds of NIDs. By end 2001, each of the 6 endemic countries will have conducted 4-5 rounds of NIDs and additional mopping-up or sub-national campaigns.

These intensified NIDs and other mass campaigns were characterized by detailed micro planning, multisectoral involvement, intensified supervision, greater focus on high-risk areas and, most importantly, house-to-house vaccine delivery. Monitoring and evaluation activities showed that these intensified campaigns, which also benefited from the allocation of additional financial resources by partners and increased technical input by international experts, have been very effective in further increasing the coverage of children under 5 years.

Campaigns are coordinated among groups of neighbouring countries within and outside the EMR. Cross-border coordination within EMR is continuing between Afghanistan, Pakistan and Iran. Coordination and synchronization of NIDs between countries of WHO's Eastern Mediterranean and European Regions under operation 'MECACAR' (Middle East, Caucasus, Central Asian Republics) have been greatly successful. Annual meetings continue to improve the coordination of polio eradication activities between countries of the Eastern Mediterranean and African Regions in the Horn of Africa and between Sudan and surrounding countries.

Several countries that have become poliomyelitis-free, with good quality AFP surveillance, have scaled down the scope of SIAs from national immunization days (NIDs) to sub-national immunization days (SNIDs), targeting provinces and areas at risk of poliovirus importation and/or with sub optimal immunization coverage and/or inadequate surveillance.

3- All countries of the Region have established national systems for acute flaccid paralysis (AFP) surveillance. Establishment of effective AFP surveillance in countries affected by war and in areas with rudimentary or virtually non-existent health care services, such as in Afghanistan, Somalia and south Sudan, has been a great achievement. In 2001 all countries except Cyprus and Djibouti have achieved or exceeded the WHO-established minimum AFP reporting rate indicative of a sensitive surveillance system (\geq 1 non-polio AFP case per 100,000 children aged <15 years) with a regional annualized non-polio AFP rate of 1.9/100.000, compared to 1.4 in 2000.

The second key indicator for the quality of AFP surveillance is the adequacy of specimen collection: at least 80% of all AFP cases should have adequate stool specimens collected. Region-wide, the percentage of AFP cases with adequate stool specimens increased from 67% in 1999, to 70% in 2000. Data up to the end of September 2001 indicate further improvement with 83% of AFP cases having adequate stool specimens region-wide. During 2001, 16 countries met or exceeded the criteria of adequate stool collection. In the remaining countries there was marked improvement. In view of continued progress of surveillance in all member states, it is hoped that all EMR countries will reach certification standard surveillance before the end of 2001.

Despite substantial improvements in AFP surveillance, the number of confirmed cases of poliomyelitis reported during 2001 in countries of the Region indicated continued decrease. Up to the end of September 2001, only 91 laboratory-confirmed cases of poliomyelitis were reported from 5 countries (Afghanistan, Egypt, Pakistan, Somalia and Sudan). More than two times as many cases - 206 - were reported during the same period in 2000. In 2001, wild polioviruses of both types 1 and 3 were detected in Pakistan. Only type 1 was detected in Afghanistan, Egypt and Sudan while only type 3 was detected in Somalia. Wild poliovirus type 2 has not been isolated in the region since 1997.

Pakistan continued to report the largest number of virus-confirmed cases in the Region, although the total number of cases reported from Pakistan continued to decline. From January through September 2001, the total number of virologically confirmed cases has declined by 43% compared with the same period in 2000 (74 compared to 130). The extent of transmission was reduced to a fewer districts in each province. The viruses isolated up to the end of September were reported from 34 districts compared to 59 districts in 2000.

Similarly, the extent of virus transmission - both the number of viral isolates and number of affected districts - was greatly reduced in Afghanistan. Compared with 21 virologically confirmed cases reported from Afghanistan through September 2000, only 9 cases have been reported during the same period in 2001, from only 3 adjacent provinces in the southern region.

4- The Regional poliovirus laboratory network (eight national and four regional reference laboratories) continued to support AFP surveillance. In 2000, eleven network laboratories were fully accredited by WHO, and one provisionally accredited. Up to end September 2001, the regional laboratory network tested 5503 stool specimens obtained from 99% of 2767 AFP cases from 21 countries in the Region. Network laboratories also tested 827 stool specimens from case contacts or from other sources. Specimens from 162 AFP cases reported from Somalia and south Sudan were tested in the laboratory network of the WHO African region. Laboratory results were timely reported (within 28 days of receipt of specimen) for more than 80% of stool specimens tested during 2000 and 2001.

Genetic sequence analyses are now routinely performed on all wild poliovirus isolates found in the Region, providing useful information on relationships between virus lineages, as well as on the pathways and patterns of wild virus transmission within and between countries. Recent sequence data have clearly indicated the continued existence of virus reservoirs shared between Pakistan and Afghanistan. With improvements in surveillance, independent and unique transmission chains of poliovirus types 1 and 3

have been identified in both Sudan and Somalia. Continued circulation of a limited number of virus lineages in Egypt was confirmed by sequence results of virus isolates derived from both AFP cases and from sewage samples. Sequencing of wild poliovirus isolates obtained in Iran during 2000 confirmed that the strain represented a recent importation from Pakistan. The decreasing genetic diversity of viruses in several countries points to the significant progress being made towards achieving the poliomyelitis eradication goal.

Acceleration efforts demanded provision of additional technical, financial and administrative support to priority countries. A detailed personnel plan has been developed to ensure adequate support to programs, particularly at the operational level. With WHO support, more than 80 international experts and 600 national staff were placed at the national and sub-national levels in all priority countries. Additional staff was also supported by UNICEF.

Despite the significant achievements in the remaining endemic areas, the eradication programme still faces a number of challenges and constraints that must be overcome to reach the final eradication goal. These include: -

- The need for continued strong political commitment to reach the eradication goal, both in polio-free and in remaining endemic countries.
- Securing access to all children, particularly in countries and areas affected by war and conflict. This will require extraordinary efforts from UN and other agencies, as well as considerable additional human and financial resources.
- Assuring that accelerated activities are supported by continued support from national governments and the timely provision of the necessary substantial additional financial resources from all partner agencies and bilateral donors.

Provided that these challenges can be overcome, countries of the Eastern Mediterranean Region will be able to interrupt virus transmission in the Region by the end of 2002.

3.3 European Region

Good progress towards certification continues to be made in EURO. Despite the scale of the task, with 51 countries to submit National Plans for review by the Regional Commission, there are good prospects for regional certification in 2002. All countries are now being asked for either annual updates or final amendments to their national documents. The updates ask for a summary from the NCC, information for 2001, summaries of supplemental surveillance (where appropriate), progress on laboratory containment, information on VAPP cases where OPV is used, follow-up actions in response to RCC recommendations, and plans to maintain polio-free status.

The last country that had indigenous polio (Turkey) has now been reviewed, and by 2002 the Region will have been free of polio for three years. However, in 2001, there was an importation into a gypsy community in Romania with the virus originating from North India. Although there were secondary cases in the immediate community, there was no more widespread transmission, because of prompt action by Romanian health authorities.

In 2001, there was good progress on laboratory containment for wild poliovirus. In this regard National Coordinators were designated in 48 of 51 countries. Forty-seven countries have prepared national plans, forty of whom have undertaken national surveys, and to date, 37, 267 laboratories have been identified in 28 countries.

3.4 African Region

Remaining endemic countries in the African Region have considerably accelerated activities, with AFP Surveillance approaching certification quality in most

countries. A number of central and west African countries were considered endemic in 2000 but no longer isolated virus, despite of certification-quality surveillance, in 2001: The Democratic Republic of the Congo and the Republic of Congo (Brazzaville), Chad, the Central African Republic, and several smaller West African countries. Nigeria (high intensity transmission) and Angola (continuing serious access problems due to conflict) are the most important remaining endemic countries, with transmission at focal level in Ethiopia.

Certification activities in the African Region are proceeding. Under the overall guidance of the African Regional Certification Commission (ARCC), most countries in the region constituted their National Certification Committees (NCCs) and National Expert Groups (NEGs) for polio eradication during 2001. Meetings to orient chairpersons of half of the newly formed African NCCs and NEGs were held in early 2001. The third formal annual meeting of the African Regional Certification Commission (ARCC), held in Harare in September, 2001, reviewed the first country progress reports from nineteen African countries. AFRO and the ARCC will conduct a series of meetings in early March in Douala, Cameroon, to orient chairpersons from NCCs and NEGs of the remaining countries in the Region. The next meeting of the ARCC is planned for September 2002.

3.5 South East Asia Region

The South – East Asia Region continues to make tremendous progress in polio eradication. In 2000, the Region accounted for 40% of the global burden of virus-positive polio cases. India accounted 97% of the cases in the Region. Transmission was most intense in the northern states of Uttar Pradesh and Bihar. Nepal reported four cases along the border with India, Myanmar reported two and Bangladesh one. Bangladesh's achievement in reducing the number of cases from 29 in 1999 to just one case in 2000 is particularly noteworthy. Since the detection of this case in August 2000, no wild virus has been found in Bangladesh despite good surveillance. The six remaining Member States of the Region have been polio-free more than three years. Surveillance quality has

improved to the extent that reservoirs of wild poliovirus transmission in the Region are now well defined.

In accordance with the guidelines laid down by the Global Certification Commission (GCC) in 1997, an independent seven member Regional Commission for Certification of Poliomyelitis Eradication (RCC) for WHO's South – East Asia Region was established to guide the process of certification in the Region. Currently every Member State in the Region has a National Certification Committee (NCC), which has begun the process of preparing country documentation on polio eradication for submission to the RCC for periodic review. The RCC generally meets annually and will hold its fifth meeting in New Delhi from 5-8 March 2002.

4. NATIONAL DOCUMENTATION

4.1 Morocco

The report of the National Certification Committee (NCC) for Morocco was introduced by the chairman of the NCC who highlighted achievements, particularly with respect to improvements that have occurred in the AFP surveillance system. He concluded that the NCC having been satisfied with the ongoing surveillance system, and the fact that routine coverage is high and NID coverage is over 90%, was convinced of the evidence that no wild poliovirus is circulating in Morocco.

The Regional Certification Commission (RCC) commended the efforts made by the national program and efforts of the National Certification Committee on the well-prepared report. The judgment of the NCC that Morocco is free of wild poliovirus was received favorably by the commission since it was based on solid AFP surveillance data, high immunization coverage figures for both routine and supplemental immunization, and good performance of an accredited lab. The commission was assured by the national program that the ongoing excellent surveillance performance would be continued, as it is a basic requirement for certification. The RCC raised few specific issues that will be

addressed to the chairman of the NCC by the chairman of the RCC for consideration before forwarding the report with the complete data for 2001 to the WHO EMR Office.

4.2 Lebanon

Dr Ghassan Issa, Secretary of the NCC, introduced the report of Lebanon. He described the functioning of the NCC and indicated that they had met 17 times since March 2000. He alluded to the vaccination activities, routine and supplemental, and to AFP surveillance, which started in 1998. He summarized main findings of the NCC and concluded by stating that there has been no polio cases reported since 1994 with high immunization coverage, both routine and supplemental, and with a functioning surveillance system. However, he indicated that the NCC considers their report as a preliminary one and would appreciate the views of the RCC so that they can resubmit the report including full data for 2001 to the next meeting of the RCC.

The RCC noted with appreciation the progress made in Lebanon towards eradication and acknowledged the NCC for their efforts in preparing the country report. It has however noted that there are missing information and several items that required clarification. The commission expressed hope that the NCC will submit a full report for consideration during the next meeting in June 2002. Specific comments will be addressed to the chairman of the NCC by the chairman of the RCC to be considered before submitting their report to the next meeting.

4.3 Syrian Arab Republic

The annual update (2000) was introduced to the RCC by Dr Khaled Baradei (EPI Manager), as the chairman of the NCC was unable to participate. He reported that Syria has had no new polio cases since an imported case in 1999.

Surveillance quality has been maintained and a National Laboratory Containment Plan inaugurated.

The RCC noted that the report was clearly worded, helpful, and contained ample evidence to support the NCC assertion of remaining polio free. The commission accepted the report with the request that data for 2000 be separated from the 2001 data and that an updated report for 2001 through December be submitted to the RCC in early 2002 for consideration in its June meeting. Clarification was requested on a few minor issues and these will be addressed to the chairman of the NCC by the chairman of the RCC for consideration before forwarding the report with the complete data for 2001 to the RCC in 2002.

4.4 Jordan

The annual update (2000) for Jordan was introduced to the RCC by Dr Najwa Jaarour, EPI Manager of Jordan, as the chairman was unable to come. Dr Jaarour reported that Jordan has had no polio cases, has initiated a laboratory containment plan, and has formed a containment committee.

The RCC commended the NCC and accepted the report noting that it was clear, easy to follow, and contained a good outbreak response plan. A few minor amendments were requested and these will be addressed to the chairman of the NCC by the chairman of the RCC for consideration in finalizing the annual update of 2000. The RCC expects to receive the annual update of 2001 for consideration in its June 2002 meeting.

4.5 Tunisia

The Tunisia annual update (2000) was introduced to the RCC by Dr Zribi. Tunisia has had no new cases of polio in the past year and continues to maintain surveillance at acceptable levels.

The RCC commended the efforts of the NCC and accepted the report. Some minor suggestions for amendments were made that will be addressed to the chairman of the NCC by the chairman of the RCC for consideration. The chairman expressed the hope that the annual report of 2001 would be received early in 2002 for consideration by the RCC in its June 2002 meeting.

4.6 Saudi Arabia

The annual update (1999 and 2000) for Saudi Arabia was introduced to the Regional Certification Commission (RCC) by Professor Ghazi Jamjoum, chairman of the National Certification Committee (NCC). Professor Jamjoum highlighted the kingdom's achievements this year including continued achievements of target surveillance indicators and good coverage (> 90%) in both routine and supplemental immunization. He also reported that a laboratory survey has been completed for the containment plan and a report is now ready. Finally, he concluded that the NCC was satisfied with the ongoing surveillance system and the high level of vaccination coverage for both routine and supplemental immunization. Based on the available evidence, the NCC is convinced that no wild poliovirus has circulated in Saudi Arabia since the last indigenous case in 1995 or following an imported case in 1998.

The RCC commented that the report is clear, helpful, and a good example for other countries to follow. The judgment of the NCC that Saudi Arabia is free of wild poliovirus was received favorably by the commission since it was based on solid evidence. The RCC raised a few specific issues that will be addressed to the chairman of the NCC by the chairman of the RCC for consideration before forwarding to the WHO EMR Office for consideration by the RCC in its June 2002 meeting. Specifically mentioned were the need to process all stool specimens once they were collected, and the need to make active surveillance site visits more often than quarterly.

4.7 Kuwait

Dr Ali El Saif, Assistant Under Secretary of Health, reviewed amendments to the National Certification Document that were previously recommended by the RCC. The RCC accepted the amendments but suggested a few more minor revisions for clarification. The current report will be accepted with satisfactory resolution of the revisions. The RCC expressed the hope that the annual update of Kuwait for 2001 would be submitted by February 2002 so that it can be discussed at the June meeting.

4.8 Bahrain

Dr Samir Khalfan, chairman of the NCC of Bahrain, addressed previously suggested revisions to the National Certification Document from the RCC. The RCC accepted the amendments with only two minor further revisions recommended for clarification. Dr Khalfan next introduced the annual update (2000) to the RCC highlighting the continued achievement of surveillance indicator targets, high routine OPV3 coverage (97%), and good quality mop-up immunization campaigns among expatriate communities whose residents are from endemic countries. It was commented that Bahrain is now working on an importation plan.

The RCC agreed with the NCC that the evidence supports a lack of circulation of wild poliovirus since 1994 but felt that several revisions were needed before the annual report could be accepted. The need to proceed with development of an importation plan was emphasized and several points were indicated where clarification is needed including the use of appropriate denominators in calculating vaccination coverage rates, the correction of several structural problems with the document itself, and the inclusion of some missing pieces of information. Other specific recommendations will be addressed to the chairman of the NCC by the chairman of the RCC for consideration and inclusion in a revised version of the update to be submitted in early 2002 for discussion in the June 2002 meeting. The chairman requested that the revised update be resubmitted excluding data from 1999 but including data for 2001 that were included in the current version.

5. REGIONAL PLAN AND PROGRESS TOWARDS LABORATORY CONTAINMENT OF WILD POLIOVIRUS

High priority is being given to achieve containment of laboratory stocks of wild polioviruses. This is part of a global initiative to ensure that the chance introduction of viruses from the laboratories into communities will not occur after the polio eradication goal is achieved. A regional plan for containment has been developed and endorsed by the Regional Committee. WHO, is providing technical support to countries to develop and implement the national plans through visits of consultants. Also, a meeting was held in EMRO for all national containment coordinators. Guidelines were developed to help countries in the formulation of National plans. Eighteen of the 23 countries of the Region have prepared national containment plans.

The first phase of the plan or the pre-eradication phase requires that each country make a national inventory of laboratories that handle or store poliovirus isolates or potentially infectious material and ensure that biosafety requirements (level 2) are met by these labs. The second phase is to be implemented one year after the detection of the last case due to natural infection with the wild polio virus and will require all laboratories to destroy the remaining stocks or place them in a maximum containment laboratory where essential scientific work can continue. The third phase of the containment plan will be implemented after global cessation of OPV immunization and will require destruction of all poliovirus including OPV stocks.

The first phase is currently being implemented in eight countries (Jordan, Kuwait, Lebanon, Libya, Syrian Arab Republic, Tunisia and United Arab Emirates). Six other countries (Oman, Qatar, Bahrain, Cyprus, Morocco and Saudi Arabia) have completed the first phase of the plan and has submitted a national inventory of laboratories storing poliovirus infectious or potentially infectious materials. Work has not started yet in Djibouti, Iran, Iraq or Palestine and the wild virus is still circulating in the remaining countries (Egypt, Afghanistan, Pakistan, Sudan and Somalia). Thus far, 11 of the 23

WHO-designated poliovirus network laboratories in the region have provided inventories of stored materials.

Some common concerns have been expressed by countries implementing the first phase of containment plan. Firstly, it is challenging to obtain the collaboration and cooperation of laboratories working in the non-health sectors of government. Secondly, the systematic and thorough search of laboratories in some countries will require provision of resources and designation of the task to persons with sufficient time and authority to complete the job. Thirdly, in some countries, a national list of biomedical laboratories is not readily available and time and resources are needed to develop one. Finally, it is evident that strong political commitment is necessary to achieve laboratory containment of poliovirus and mechanisms must be established for inter-ministerial collaboration to complete the job. All countries will be required to provide evidence that the containment issue has been appropriately addressed before they can be certified as polio free.

6. FORMAT OF NATIONAL PLANS FOR PREPAREDNESS OF WILD VIRUS IMPORTATION

Detection of wild poliovirus in a polio-free country is a public health emergency. Countries should be prepared to respond appropriately to contain the situation in order to maintain the polio-free status.

Importation of wild poliovirus cannot be prevented until global polio eradication is achieved, but its spread within the country can be controlled.

Several importations have occurred in the region in Jordan, Saudi Arabia and United Arab Emirates. The recent documented importations of wild poliovirus occurred in four countries in the region;

In *Saudi Arabia*, in 1998 wild P3 virus was isolated from Afghani child, who did not travel but was visited by another Afghani family who came for Omra and had a sick

child. Genomic sequencing indicated the similarity between this virus and Afghanistan-Pakistan viruses.

In *Syria* a case of polio occurred in a village 17 km from Aleppo in November 1999 Wild P1 virus was isolated from the case and genomic sequence results indicate 97% similarity with wild P1 viruses isolated from Bihar, India around the same period.

In *Gaza* a sewage sample from Gaza taken in November 1999 was found to contain wild polio virus type 1. The isolate was obtained as part of the environmental surveillance system maintained in Israel, Gaza and the West Bank since 1988. The isolation was not associated with any paralytic case. Genomic sequencing analysis revealed that this virus was 98% similar to the viruses isolated from Sohag, *Egypt*. A similar virus was later isolated from a case in Qena late May 2000 indicating continued circulation of this virus.

Importation of wild polioviruses from Pakistan to the *Islamic Republic of Iran* was documented during 2000. Three cases associated with imported poliovirus strains were reported.

The main lessons learned from recent importation into polio-free areas include:

- ⇒ High quality surveillance is key for early detection of virus. There is absolute necessity of maintaining high quality AFP surveillance even years after stopping transmission
- ⇒ Mobile groups play a key role in virus importation
- ⇒ Epidemiological blocks affected by cross-border movements or risk of distant importation must be identified, including areas away from national borders
- ⇒ Special immunization and surveillance efforts in high-risk or minority cross-border populations are needed

⇒ High general population immunity achieved by routine and Supplementary Immunization Activities limits virus spread

A national plan for responding to poliovirus importation should be prepared and periodically updated by each country. The key elements of the plan should include:

1. Mechanism for ongoing monitoring and early detection of importation,
2. Ability to rapidly investigate the importation
3. Activities to enhance surveillance for AFP and wild poliovirus,
4. Ability to conduct an immediate and appropriate immunization response, and
5. Activities to document interruption of transmission.

Preparedness for importation was discussed in several Regional meetings. Guidelines and formats for National Plans were prepared and endorsed by Regional Certification Commission and were presented to EPI managers. National Plans are included as part of National documentation for certification. So far, national plans were prepared by Cyprus, Jordan, Saudi Arabia, Oman, Qatar, Syria and Tunisia.