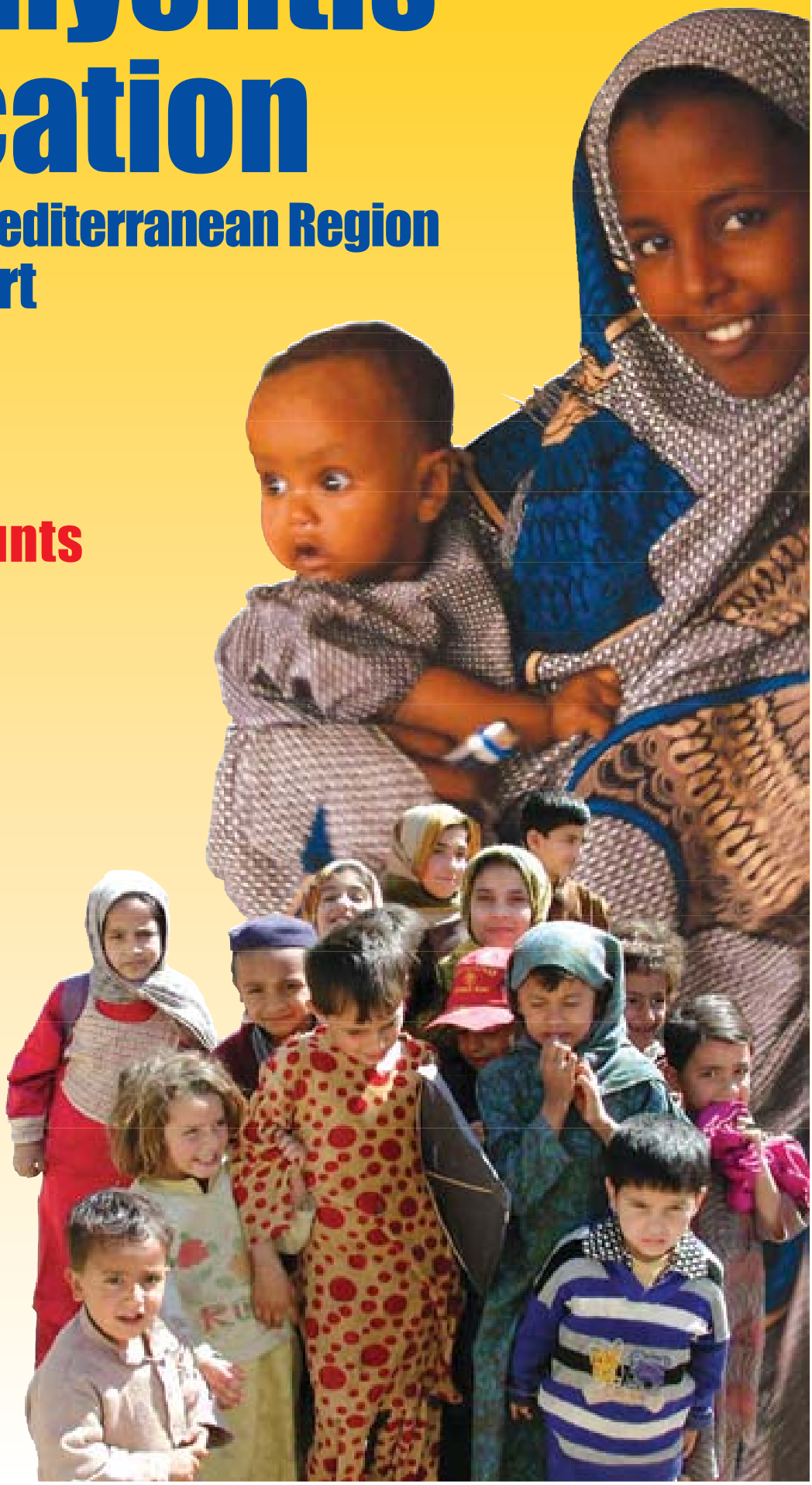
WHO-EM/POL/209/E/G

Poliomyelitis Eradication

in the Eastern Mediterranean Region
Progress Report
2002

Every Child Counts



WORLD HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean

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Cairo 2003

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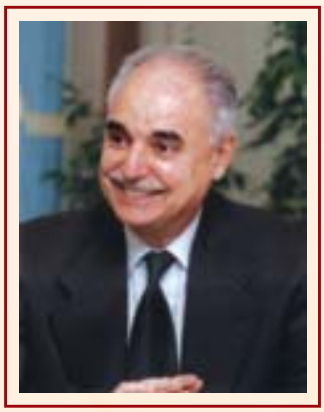
FOREWORD



Hussein A. Gezairy, MD, FRCS

It is now 14 years since the Regional Committee for the Eastern Mediterranean passed a resolution adopting the target of eradication of poliomyelitis. We are now running the last mile of the eradication marathon. Nineteen (19) countries of the Region are now polio-free, of which 18 have been polio-free for more than 3 years. In addition there is significant achievement in the remaining countries. It is expected that virus circulation in the Region will be stopped during 2003. The kinds of problems we face during this phase are different from the ones that we faced before. On the one hand, we must keep the momentum of and the enthusiasm for the activities in the still endemic countries. On the other hand, there is the necessity to maintain the eradication activities in polio-free countries; and particularly to face the fact that with the disappearance of polio cases the eradication initiative in these countries has dropped down the list of priorities of both the national decision-makers and the donor agencies.

Activities in polio-endemic countries are very closely monitored and independent international experts frequently undertake technical and manergerial reviews. In addition, technical advisory groups for the priority countries regularly review the epidemiological situation and national plans. The Regional Office has ensured the availability of technical assistance in all aspects of NID planning, implementation and evaluation. Surveillance for AFP cases has been up to standard and is improving all the time.

Fifteen (15) countries have submitted their documentation for certification of polio eradication and regularly submit annual updates. As part of the post-eradication strategies, laboratory containment activities are being accelerated in all polio-free countries with some countries having already completed the first phase.

These achievements towards polio eradication cannot be credited to a single player, but to an unparalleled partnership spearheaded by WHO, Rotary International, the Centers for Disease Control and Prevention and UNICEF, and involving the United Nations Foundation, Bill & Melinda Gates Foundation, the United Kingdom Department for International Development, the Japan International Cooperation Agency, the Danish International Development Agency, United States Agency for International Development, and the governments of the Netherlands, Oman, United Arab Emirates, Saudi Arabia as well as the Red Cross and Red Crescent societies and many others. All have responded generously to the needs of Member States for external support in their efforts to achieve polio eradication.

Since the Forty-first World Health Assembly declared the commitment of the World Health Organization to the global eradication of poliomyelitis (WHA41.28), three WHO regions (the Americas, the Western Pacific and Europe) have been certified as having eradicated polio. It is hoped that the Eastern Mediterranean Region will be the next to be certified in the near future.

This report is the third of a series of reports documenting the eradication of poliomyelitis from the Eastern Mediterranean Region. It covers progress up to the end of 2002 and describes the current situation, major developments, important events and achievements in the main strategies for polio eradication, as well as containment of the wild virus and certification.

Hussein A. Gezairy, MD, FRCS
Regional Director for the Eastern Mediterranean

1. CURRENT REGIONAL SITUATION

Rapid and significant progress towards the eradication of poliomyelitis continues to be witnessed in all countries of the Eastern Mediterranean Region. In 1988, poliomyelitis was a widespread disease. Cases were reported from 22 of the 23 countries of the Region. A total of 2342 cases were reported that year although the surveillance system in most countries was not sensitive enough to reflect the true incidence of poliomyelitis (Figure 1). As of the end of 2002, poliovirus transmission had been interrupted in 18 countries of the Region for more than 3 years (Figure 2). In addition, Sudan has not reported a single poliomyelitis case since April 2001. Moreover, virus transmission had become geographically localized in Afghanistan, Pakistan, and Somalia.

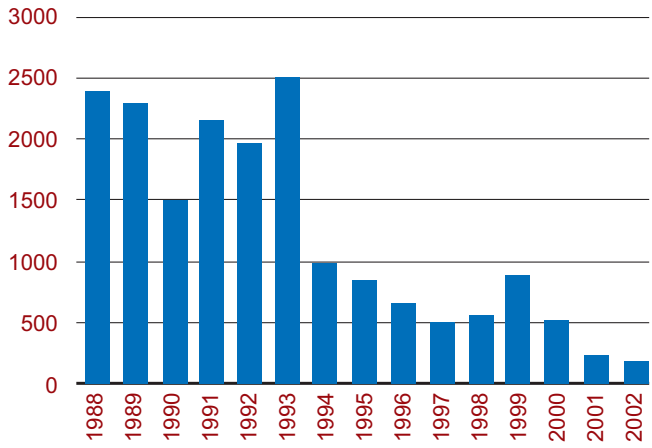


Figure 1. Reported cases of poliomyelitis, Eastern Mediterranean Region, 1988–2002

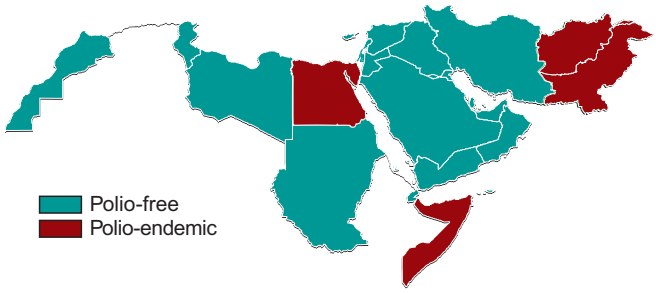


Figure 2. Status of poliomyelitis endemicity in countries of the Eastern Mediterranean Region, 2002

Number of virologically confirmed cases in countries of the Region (2002)

Pakistan	= 90
Afghanistan	= 10
Egypt	= 7
Somalia	= 3
Regional Total	=110

In the presence of a very well developed and efficiently performing surveillance system, the number of confirmed cases of poliomyelitis reported during 2002 further decreased from 143 in 2001 to 110 cases, reported from only 4 countries (Afghanistan, Egypt, Pakistan and Somalia). Wild polioviruses types 1 and 3 were detected in Afghanistan and Pakistan, type 1 was detected in Egypt and type 3 was detected in Somalia. Wild poliovirus type 2 has not been detected in the Region since 1997.

Genetic sequence analysis is now routinely performed on all wild poliovirus isolates from 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 presence of shared virus reservoirs between Pakistan and Afghanistan, while reservoirs are unique in Egypt and Somalia. Another important observation is the decreasing genetic diversity of viruses pointing to the progress made towards achieving the poliomyelitis eradication goal in the remaining endemic areas.

Poliomyelitis eradication activities are very closely monitored in the countries of the Region. Technical and managerial reviews are frequently undertaken by independent international experts. In addition, Technical Advisory Groups (TAG) for the priority countries regularly review the epidemiological situation and national plans and provide technical advice. Their collective conclusions indicate that if high-level commitment to achieve polio eradication is continued with enhanced strategy implementation, it is likely that poliovirus transmission in the Region will be interrupted during 2003. In addition a Regional Technical Advisory Group (RTAG) was established to provide leadership for poliomyelitis eradication activities in the remaining polio endemic countries and to advise Member States on other technical issues, as the Region approaches certification, including those related to the immunization policies after certification. The RTAG will conduct its first meeting in 2003.

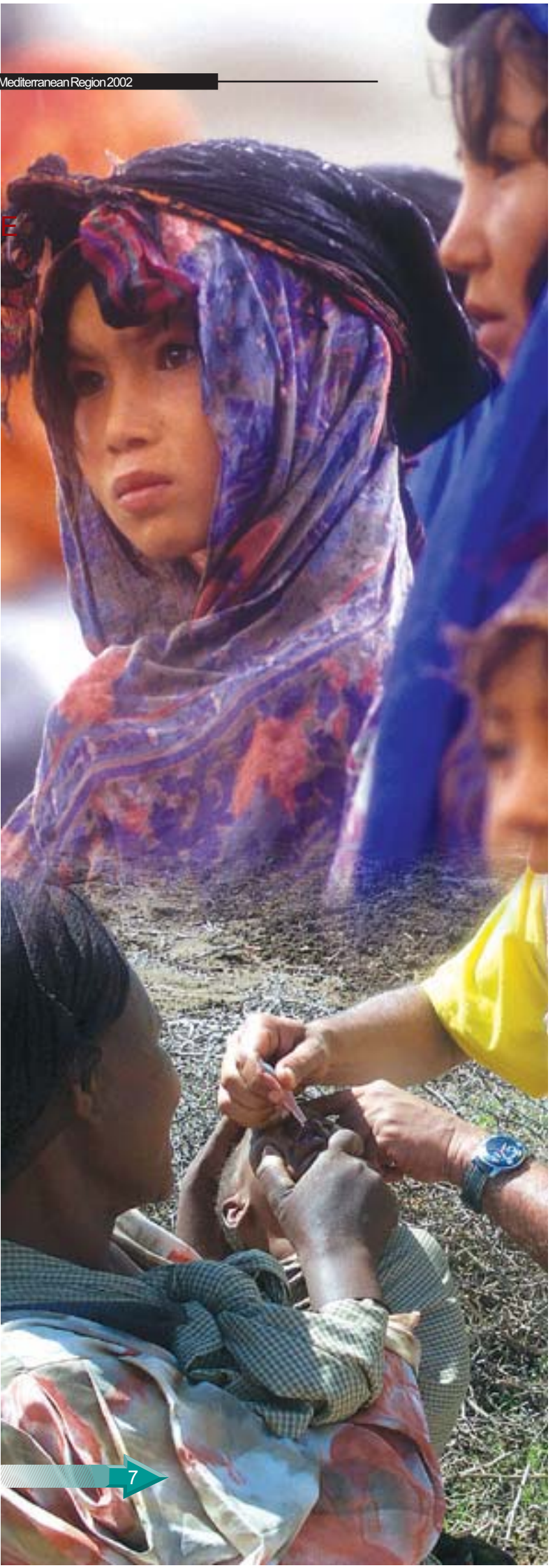
2. IMPLEMENTATION STATUS OF THE BASIC POLIOMYELITIS ERADICATION STRATEGIES IN THE REGION

2.1 Routine immunization

Achieving and sustaining high routine immunization coverage of infants with at least 3 doses of oral poliovaccine (OPV) is given a high priority in the Region. The regional coverage has improved after a decline in the early 1990s. In 2002, the total regional coverage of infants with at least three doses of oral poliovaccine (OPV3) was 79%. Coverage levels of less than 80% were reported from six countries, among them 3 of the 4 still-endemic countries for poliomyelitis. Routine immunization coverage rate (OPV3) in Afghanistan was 48%, Pakistan 71% and Somalia 40%.

Since the initiation of the programme and in line with the spirit of the World Health Assembly and Regional Committee resolutions, poliomyelitis eradication efforts have been made to strengthen the delivery of routine immunization services.

- All poliomyelitis eradication staff are involved in the strengthening of routine immunization.
- A substantial amount of funds made available for poliomyelitis eradication have been utilized in refurbishment of the physical infrastructure for routine immunization.
- The terms of reference of the regional technical advisory group and Inter-Agency Coordination Committee, established originally in support of poliomyelitis eradication, have been expanded to support routine immunization.
- Active surveillance services, NIDs,communications, information and social mobilization services emphasized during poliomyelitis eradication efforts have been expanded to include other vaccine-preventable diseases and improve routine immunization services.
- The strategic planning process introduced for poliomyelitis eradication activities, and lessons learned from it, have been used in other initiatives in support of routine immunization services, such as in the GAVI application process.
- In addition, routine immunizations have benefited from poliomyelitis eradication efforts in other areas such as in programme management, improved coordination and enhancement of political awareness and support.




قيم التمريض


Polio will be eradicated

2.2 Supplementary immunization activities with OPV

The intensification of national immunization days (NIDs) and other supplementary immunization activities, which started during 1999, reached a peak in 2001 and continued in 2002 in both endemic countries (Afghanistan, Egypt, Pakistan, Somalia) and recently polio-free countries (Iraq and Sudan). All of these countries conducted more than two NID rounds each year.

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 important, house-to-house vaccine delivery. Monitoring and evaluation activities showed that these intensified campaigns were very effective in further increasing the coverage of children under 5 years of age. The allocation of additional financial resources by partners has made it possible to undertake these intensified activities.

During 2002, all endemic and recently polio-free countries conducted at least two pairs of NIDs and one or more rounds of sub-national immunization days (SNIDs) in high-risk districts. These rounds were of the highest quality and reached all children through house-to-house immunization.

The Regional Office has ensured the availability of technical assistance in all aspects of NID planning, implementation, monitoring and evaluation, particularly for the remaining endemic or recently polio-free countries. The recruitment of more than 100 international experts and 700 national staff has been instrumental in this regard.

The substantial experience gained by national and district level staff in all aspects of planning and implementing the national immunization campaigns, represents a major contribution to human resource development in all countries. The impact has been most apparent in countries faced with difficult circumstances (Afghanistan, Somalia and Sudan). The experience gained in accessing children in high-risk areas and previously not reached children constitutes the basis for delivering other health services including prevention, control and elimination of other diseases. Mass immunization campaigns have also been used to deliver other health interventions, particularly vitamin A (in Afghanistan, Iraq, Pakistan, Somalia, Sudan and Republic of Yemen).

2.3 Surveillance for acute flaccid paralysis

One of the main achievements in poliomyelitis eradication in the Region is that all countries of the Region have established well functioning national systems for acute flaccid paralysis (AFP) surveillance, which has also improved the capacity for detection and reporting of other EPI target diseases. 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.

Non-polio AFP rate under 15 years of age

Target = at least 1/100 000

Regional rate = 2.26

All countries are above the target except Djibouti and Palestine

During 2001–2002, AFP surveillance continued to improve throughout the Region. The required level of sensitivity (non-polio AFP rate exceeding one case per 100 000 children under 15 years of age), which was reached at the regional level for the first time in 1999, continued to improve, as shown in Figure 3, and reached 1.9 in 2001 and 2.26 in 2002. In addition, during 2002, AFP rates of one or more case per 100 000 children under 15 years of age were reported from all countries of the Region except two, Djibouti and Palestine.

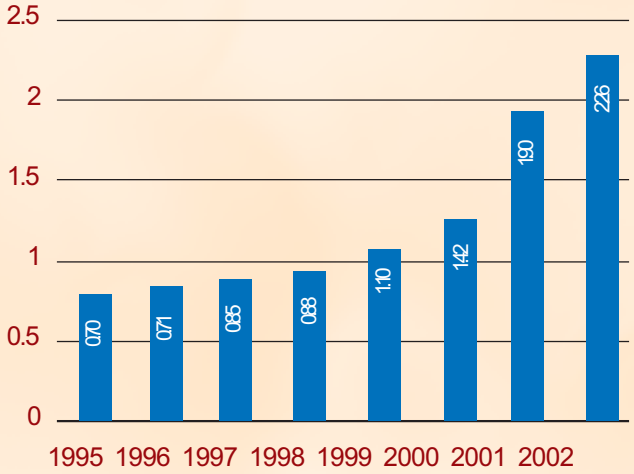


Figure 3. Regional non-polio AFP rate, Eastern Mediterranean Region, 1995–2002

The second key indicator for quality of AFP surveillance is the adequacy of stool specimen collection: at least 80% of all AFP cases should have adequate specimens (two stool specimens at least 24 hours apart collected within 14 days of the onset of paralysis and arriving at the laboratory in good condition). Region-wide, the percentage of AFP cases with adequate stool specimens increased from 68% in 2000 to 83% in 2001 and reached 88% in 2002 (Figures 4 and 5). In 2002, only four countries (Bahrain, Kuwait, Somalia and United Arab Emirates) reported adequate stool collection below the 80% target, but all are above 65%.

As a part of the acceleration efforts, active AFP surveillance was initiated and strengthened in all countries. Recruitment of sufficient national surveillance officers and provision of required supplies, equipment and technical support from the WHO have been instrumental in this regard. In view of continued progress of surveillance, all countries of the Region are currently using the virological scheme in the classification of AFP cases. This high quality surveillance is guiding targeted immunization activities.

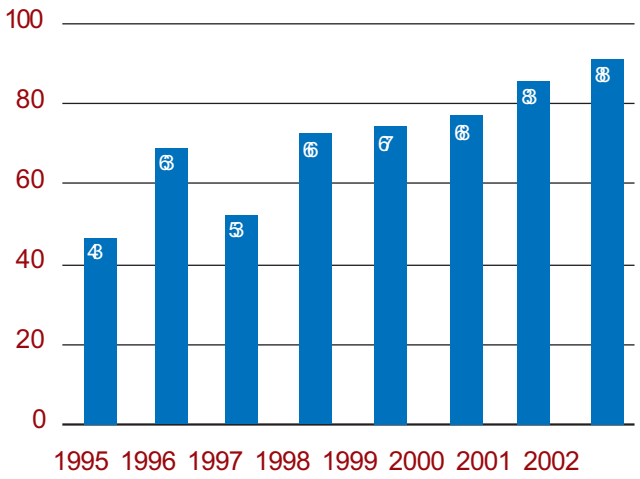


Figure 4. Percentage of AFP cases with adequate stool specimens, Eastern Mediterranean Region, 1995–2002

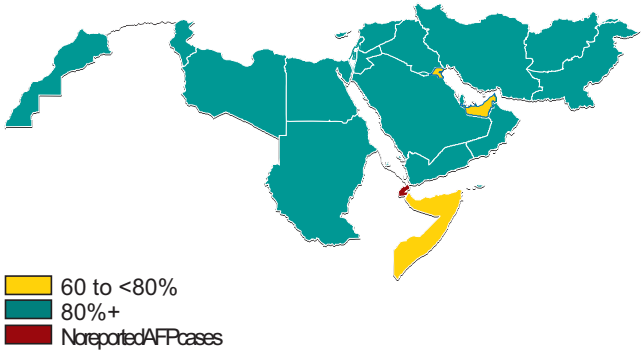


Figure 5. Percentage of AFP cases with adequate stool specimens, in countries of the Eastern Mediterranean Region, 2002

Establishment of AFP surveillance has provided an opportunity for training the national staff in communicable disease surveillance and has helped strengthen the infrastructure and the capacity for disease reporting in general. Moreover, in some countries, AFP surveillance has been the only disease reporting system currently established (e.g. southern Sudan) and is being used as the first step towards phased development of communicable disease surveillance. The AFP surveillance system in Afghanistan and the Republic of Yemen has been expanded to include reporting of other vaccine-preventable diseases, such as measles and neonatal tetanus.

However, it must be emphasized that much remains to be done in order to maintain the standard of surveillance required to certify poliomyelitis eradication all over the Region in the future.

2.4 Regional laboratory network

Since its establishment laboratory surveillance for wild polioviruses, the core component of AFP surveillance, made substantial progress. In 2002, 10 out of the 12 poliovirus network laboratories were fully accredited by WHO. The regional reference laboratory in Kuwait and the national polio laboratory in Jordan were provisionally accredited.

Virological investigations were performed on 4624 AFP cases during 2002. A total of 10 840 specimens were tested in the lab network, of which 9401 were from AFP cases, 1159 were from contacts, and 280 were from environmental samples, healthy children and other sources. The percentage of stool specimens received in the laboratories within 3 days of collection from AFP cases amounted to 71%. This represents a continuing improvement from 52% in 2000 and 62% in 2001. Ninety-eight percent (98%) of the specimens were received in good condition. Results were reported within 28 days for 95% of the cases, and non-polio enteroviruses were isolated from 14% of the samples.

Compared with previous years, laboratory indicators have improved during 2002. The regional poliovirus laboratory network is supported by WHO/EMRO through training, monitoring, supervision and the provision of supplies and equipment.

2.5 End-game strategies

As the polio eradication initiative moves into its final phase, with only four endemic countries in the Region at the end of 2002, increasing attention is being given to polio "endgame" issues: the laboratory containment of wild poliovirus, the certification of polio eradication and the development of post-certification immunization policy for polio.

Laboratory containment of wild poliovirus and potential infectious material

High priority is given to securing laboratory containment of wild poliovirus. This is part of a global initiative to prevent the chance introduction of viruses from laboratories into communities after polio eradication and cessation of immunization. A regional

plan for containment was developed and endorsed by the Regional Committee in 2000. Guidelines were also developed to help countries in formulation of national plans. WHO is providing support to countries in developing and implementing their plans through consultant visits and organization of meetings for national containment coordinators.

Thus far, national containment coordinators have been nominated in 19 of the 23 countries of the Region, 13 of which have also established national containment committees. By the end of 2002, 18 countries had prepared national containment plans. It should be noted that three out of the remaining five countries still have on-going virus transmission. The first phase of the plan is to conduct an inventory of laboratories that handle or store wild poliovirus material or potential infectious material and to ensure the implementation of enhanced biosafety level-2 (BSL-2/Polio). This phase has been successfully completed in five countries and is currently being implemented in another 13 countries.

Containment activities

First phase completed

Bahrain, Lebanon, Oman, Qatar, United Arab Emirates

First phase in progress

Cyprus, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Libyan Arab Jamahiriya, Morocco, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia

National plan to be developed

Afghanistan, Palestine, Pakistan, Somalia, Republic of Yemen

Certification of poliomyelitis eradication

According to the recommendations of the Global and Regional Commissions for Certification of Poliomyelitis Eradication (GCC and RCC respectively), all countries of the Region except Somalia have established National Certification Committees (NCC) with appropriate membership. The NCCs of 15 countries (Bahrain, Cyprus, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of Yemen) that have high quality AFP surveillance and have not reported cases of poliomyelitis for at least 3 years, submitted reports and national documentation to the RCC. The RCC has reviewed these reports and provided appropriate feedback. The RCC is also reviewing annual updates provided by countries whose initial reports were satisfactory. These annual updates will be submitted yearly until regional certification is achieved. The RCC continues to guide all aspects of the certification process in the Region. Some of its members have made country visits to review the status of the certification activities and available documentation.

To certify a region as having eradicated poliomyelitis the following conditions must be achieved:

- All countries of the region must have had no cases of poliomyelitis due to wild virus for at least 3 years in the presence of certification-standard surveillance
- Each country must illustrate the capacity to detect, report and respond to “imported” poliovirus
- All countries must provide data to demonstrate the full implementation of the first phase of containment activities outlined in the WHO global action plan for containment of wild polioviruses

Post-certification polio immunization policy

The Global Polio Eradication Technical Consultative Group (TCG) is overseeing a programme of research and consensus building, which will lead to the development of post-certification immunization policy options. These options will be considered by the World Health Assembly for final decision. Individual decisions by countries on whether to stop or to continue oral poliovaccine (OPV) use after certification of polio eradication could place populations that no longer use the vaccine at risk of exposure to circulating vaccine-derived polioviruses (cVDPV). For this reason any cessation of OPV use would require an internationally coordinated approach. It is satisfying to note that none of the countries in the Region is taking unilateral decisions in this regard.

3. STRATEGIC PLAN FOR POLIOMYELITIS ERADICATION, 2003–2005

The Regional Strategic Plan of Action for Poliomyelitis Eradication has been updated and resource requirements have been estimated for 2003–2005. This updating was required because of the dynamic nature of the eradication initiative, and was conducted by WHO in close consultation with national health authorities and appropriate international agencies within each country, in particular UNICEF. The strategic plan is also based on recommendations of global, regional and country level technical advisory groups on polio eradication.

The largest share of the costs of poliomyelitis eradication in the Region has been provided by the Member States. External financial assistance is needed to support certain aspects of poliomyelitis eradication activities in the Region, especially in seven countries. The external funds needed in support of activities in Egypt, Iraq, Pakistan, Sudan and the Republic of Yemen are to bridge the shortfall that remains after the major share of the total cost has been committed by national authorities. However, in Afghanistan, Somalia and southern Sudan, all activities have to be supported through funds provided by international partner agencies and donor governments.

The human resources required to implement the Plan, whether international or national staff, will be maintained. However phasing out of staff will occur gradually starting with the currently or recently polio-free countries (Sudan and Republic of Yemen) and eventually including the still-endemic countries after the interruption of poliovirus transmission.

Components of the regional strategic plan for poliomyelitis eradication include intensified supplementary immunization activities, enhancing AFP surveillance and maintenance of the laboratory network, laboratory containment of wild poliovirus, certification of eradication and strengthening EPI.

Intensified supplementary immunization activities

Intensified and high quality NIDs and mop-up campaigns are required to interrupt the last chains of transmission in endemic countries and to prevent resurgence of poliomyelitis in recently polio-free countries, especially those with low routine immunization coverage. During 2003, the primary focus will be on intensifying NIDs and mop-up immunization to interrupt virus transmission in the still-endemic countries.

In addition to ensuring house-to-house vaccination, emphasis will be placed on better local planning, increased supervision and better logistical support to reach all children. NIDs and SNIDs will include coordinated cross-border immunization activities.

It is hoped that in 2003 all countries of the Region will have succeeded in interrupting wild virus transmission and from 2004 to 2005 these priority countries will be conducting one pair of NIDs. Additionally, sub-national campaigns will be implemented according to epidemiological developments.

Enhancing AFP surveillance and strengthening the laboratory network

Efforts will continue to improve and sustain high quality AFP surveillance. All countries in the Region are expected to achieve/maintain certification-standard surveillance. It is hoped that all laboratories in the regional network will be fully accredited during 2003 and beyond. Certification-standard surveillance should be maintained through global certification.

Laboratory containment of poliovirus and potential infectious material

Efforts will be made to ensure implementation of the Regional Plan of Action for Laboratory Containment in its different phases and to align containment activities with certification.

Certification of poliomyelitis eradication

From 2003 to 2005, certification activities will be further accelerated to provide documentation of the absence of wild poliovirus for the Regional and Global Certification Commissions. The Regional Certification Commission (RCC) will continue to meet twice a year and will review documentation including national annual reports. Members of the RCC will visit countries as required to validate data.

Strengthening EPI

EPI strengthening has already been initiated through advocacy, social mobilization and human capacity-building through poliomyelitis eradication activities. From 2003 to 2005 and beyond, the polio eradication initiative will continue to work in partnership with the Global Alliance for Vaccines and Immunization (GAVI) to strengthen routine EPI, ensuring maximum utilization of lessons learned from poliomyelitis eradication.

4. REGIONAL AND GLOBAL PARTNERSHIP

The impressive progress towards eradication of poliomyelitis in the Region is the result of the extraordinary efforts of national authorities and the support provided by a consortium of partners spearheaded by WHO, UNICEF, Centers for Disease Control and Prevention in Atlanta, USA, and Rotary International. In addition, significant support was received during 2001 and 2002 from the UK Department for International Development, United Nations Foundation, Bill & Melinda Gates Foundation, Government of the Netherlands, JICA, United States Agency for International Development, Red Cross and Red Crescent societies, and many others.

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Partnership for Polio Eradication

The largest share of human and financial resources for the eradication efforts in the Region has been committed by the countries, which continue to support large-scale eradication activities in close collaboration with EMRO and partners.

Polio partners met several times during 2002 to discuss how to overcome the key remaining challenges to polio eradication, including securing the necessary financial resources. Two major meetings included the 11 June, Regional Inter-Agency Coordinating Committee meeting in Cairo, and the 25 September, Horn of Africa Polio Partners' Meeting in Nairobi, Kenya attended by over 30 partner organizations. World-renowned photographer, Mr. Sebastião Salgado, urged partners at the Horn of Africa meeting to continue all efforts to succeed in the final stretch towards polio eradication. Partners at these and other forums pledged their continued support to the polio eradication initiative.

5. FUTURE CHALLENGES

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. The main challenges are as follows.

Maintaining political support

The eradication effort has now entered its final and most difficult phase, requiring consolidation of strong political commitment to reach the eradication goal in the remaining endemic countries. Commitment must be translated into effective action to solve persistent gaps in management and implementation at all levels. In polio-free countries, political commitment is needed to maintain supplementary immunization activities to protect against importation of poliovirus, to attain certification standard surveillance and to achieve laboratory containment of poliovirus stocks.

Ensuring access to all children

Securing continued access to all children, particularly in countries and areas affected by war and conflict, is needed to allow implementation of high-quality immunization and surveillance activities.

Securing financial resources

One of the remaining challenges facing the programme is to ensure the financial support required to implement the regional plan for eradication through 2005. Financial resources must be provided in a timely fashion to maintain the technical and operational support needed to ensure high-quality eradication activities (Figure 6). It should be noted that the amount needed for NIDs and OPV will decline from 2003 to 2005 while that needed for surveillance will remain the same.

It should be noted that for the year 2003, the regional plan is facing a critical shortage of resources which could adversely affect eradication activities. Several efforts are being made to raise funds from different donors from within and outside the Region and it is hoped that the required resources will be secured to ensure implementation of the activities.

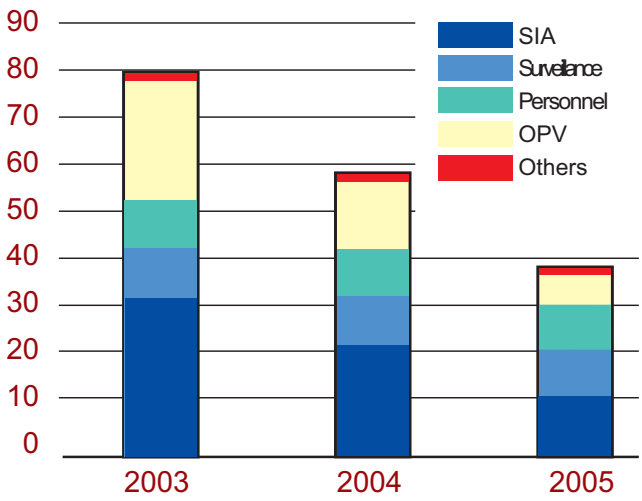


Figure 6. External resource requirement (in million US$), by activity, Eastern Mediterranean Region, 2003–2005


Highlights of Polio Eradication Activities in the EMR Countries

6. HIGHLIGHTS OF POLIOMYELITIS ERADICATION ACTIVITIES IN COUNTRIES OF THE REGION

6.1 Endemic or recently polio-free countries

Pakistan

Over the past few years, significant progress has been made in implementing polio eradication strategies and reducing the transmission of poliovirus in Pakistan. The total number of cases reported in 2001 declined by nearly 40% compared with 2000 (119 compared to 199). During 2002 the number of cases dropped further to 90. Moreover, the geographical extent of transmission was reduced to fewer districts in each province. During 2002, cases were reported from 35 districts, compared to 39 in 2001 and 59 in 2000.

Since 1994 two or more rounds of national immunization days (NIDs) have been conducted each year. In the light of routine immunization coverage below the expected level immunization activities have markedly intensified since 1999 with the adoption of a house-to-house vaccination strategy. The Government of Pakistan has invested substantial human and financial resources to meet the global eradication goal. In addition, a large proportion of the total budget, which includes vaccine, international technical support and partial operational costs, has been provided by the partner agencies.

The reported routine OPV3 coverage in 2002 was 71%. Supplementary immunization activities (SIAs) were intensified in 2002. in addition to NIDs, targeted SNIDs were conducted in areas identified as polio reservoir characterized by persistent year-round transmission, including in particular the low transmission season. During 2002 a single targeted SNID round was conducted in January followed by two rounds of NID in March and April. Two more targeted SNID rounds were conducted in June and July, focusing on smaller geographic areas, and were followed by NID rounds in September and October, and lastly a SNID in December. Similar activities are planned for 2003 in order to ensure interruption of wild virus transmission. Because it is believed that Afghanistan and Pakistan represent a single epidemiological block of poliovirus transmission, SIAs in both countries are coordinated to occur at the same time, at least for the common border areas. In addition, cross-border immunization posts have been established to vaccinate children crossing the border in either direction.

AFP surveillance has met WHO-established targets for key indicators since 1999 and the country shifted to virological classification in 2000. The non-polio AFP rate increased from 1.5 in 2000 to 2.1 in 2001 and further to 2.75 in 2002. The rate for adequate stool collection increased from 71% in 2000 to 83% in 2001 and to 87% in 2002.

Testing of all samples is carried out at the virology laboratory at NIH, Islamabad, which is accredited by WHO as a regional reference laboratory (RRL). There is strong coordination between the laboratory and the EPI programme and quality laboratory results are provided in a timely manner and hence promoting prompt response in the field.

Genetic sequence data has assisted in differentiating districts with frequent introductions of virus from other areas and identification of areas with persistent indigenous circulation. Additional international and national technical staff were recruited and placed in priority districts. Also it is essential to sustain the robust AFP surveillance system, which provides a sound basis for programmatic decisions. It is hoped that the coalition of international partners will ensure that gaps in financial resources are bridged on time and are not permitted to stall the eradication efforts so close to success.

Afghanistan

Despite the continued conflict and state of complex emergency in Afghanistan, progress towards polio eradication has been consistently maintained. Supplementary polio immunization was first conducted during annual multi-antigen campaigns from 1994 to 1996 with limited national coverage. Since 1997 annual NIDs have been conducted with very high coverage. Acceleration of polio eradication activities started in 2000 with more rounds and qualitative improvements using house-to-house vaccine delivery exclusively. It continued through 2001 even in the midst of the war situation in the last part of the year. During this period, NIDs were implemented by the national staff recruited by WHO and UNICEF with whom the international team made every effort to maintain communication and guidance. Adjustments were made to address difficulties in access and the large population movements. In Spring 2002 two rounds of high quality NIDs were conducted in order to address the significant population movement, preceded by a SNID and succeeded by another 2 SNIDs targeting the high risk areas. Another two nationwide campaigns were conducted during Fall 2002 in full coordination with Pakistan, in addition to a SNID in December. It should be noted that the routine OPV3 coverage in 2002 was 48% indicating the importance of supplementary immunization activities to prevent the accumulation of susceptible children.

AFP surveillance was established in Afghanistan in 1997. It has gradually expanded and reached an excellent level of quality, which has enabled the programme to shift to the virological classification scheme since 2001. The AFP surveillance system is also being used to report measles and neonatal tetanus cases. The viral laboratory at the National Institute of Health, Pakistan extends the necessary support for examination of stool samples from AFP cases in Afghanistan.

With successful localization of virus circulation in early 2001, Afghanistan was on the verge of eliminating wild poliovirus. However, the deteriorating security situation in the last months of the year has led to the displacement of staff and focal points and the disruption of surveillance activities. In addition, the massive population movement within Afghanistan and between Afghanistan and Pakistan, where the virus is still circulating, may have reintroduced the wild virus to many areas across the country. Data from 2002 indicate the restoration of the quality surveillance system and resumption of progress towards eradication.

During 2002, ten virologically confirmed cases were detected which is nearly the same number detected in 2001 (11). The cases were detected mainly in the southern region. Out of these 10 cases, two were reported from the northern regions where there were no cases for 2 years. However, these northern isolates were found to be genetically closely related to viruses in south-western Afghanistan and Baluchistan (Pakistan).

Every effort is made to sustain intensification of eradication strategies in 2003 and beyond in order to achieve and sustain interruption of wild poliovirus transmission. This involves:

- maintaining certification standard surveillance in all parts of the country;
- ensuring the highest quality of SIAs especially in areas with remaining virus circulation;
- closely coordinating activities, especially SI Pakistan.

Egypt

As one of only seven still-endemic countries in the world in 2002, Egypt is a high priority for the Global Polio Eradication Initiative. Although the Ministry of Health is implementing different polio eradication activities, circulation of poliovirus has persisted in several provinces as evidenced by both AFP and environmental surveillance.

During 2002, seven cases were reported. One case was from Assiut, Upper Egypt. Two cases were from Giza, near Cairo. Four cases were from governorates of Lower Egypt (one from each of Alexandria and Menofia and two from Sharkia). All cases were of type 1 and had onset in September or later, after

intensification of surveillance activities, which started in July 2002.

Egypt is reporting high levels of routine immunization, has conducted many rounds of supplementary immunization and is maintaining the surveillance for cases of acute flaccid paralysis (AFP) up to the certification standard. However, as shown by the continuing occurrence of clinical cases and the widespread detection of type 1 wild polioviruses in the environment, final achievement of eradication of all wild polioviruses has been delayed beyond expectation.

The reported routine OPV3 coverage in 2002 was 97%. Immunization campaigns with OPV have been conducted in Egypt since 1976. Annual national immunization days (NIDs) have been conducted since 1989. The quality of these campaigns has improved particularly recently by shifting to house-to-house vaccine delivery in urban areas as was being done in rural areas. This shift to urban house-to-house vaccination started in Upper Egypt and high-risk areas and slums in Lower Egypt several years ago. In Fall 2002 the three rounds of NIDs were implemented house-to-house in all areas of Egypt including main cities such as Cairo and Alexandria. In addition these NIDs involved for the first time volunteers from outside the Ministry of Health, from different national sectors such as universities and nongovernmental organizations, particularly the Red Crescent Society, the Scouts Movement and the Rotary Club. There is evidence that the SNIDs carried out in Spring 2002 and the NIDs carried out in Fall 2002 were of good quality with marked increase in the number of vaccination teams and intensified supervision and monitoring.

AFP surveillance was initiated in Egypt in the early 1990s. Surveillance quality, as measured by non-polio AFP rates and the completeness of collection of adequate stool specimens, has continued to improve over the past 5 years to reach the required level of performance at the national level. There were however several practices performed until recently which have worked against full transparency of surveillance activities. One of these was the punitive action taken in response to the detection of polio cases. These actions had established a pervasive “culture of fear” among health workers discouraging the rapid reporting of suspect AFP cases and leading to the possible suppression of wild poliovirus reporting. These practices were gradually overcome almost completely starting two years ago. Testing of all stool samples is carried out at the laboratories of VACSERA, Cairo, which is accredited by the WHO as a regional reference lab.

Due to the delay in the interruption of wild virus transmission beyond expectation a Technical Advisory Group (TAG) was established early in 2002 to review the situation of polio in Egypt and provide recommendations. In response to the recommendations of the TAG a comprehensive plan of action for polio eradication was developed for the second half of 2002. The AFP surveillance system has improved markedly with the development of standard operating procedures, and recruitment of national consultants by WHO to support activities in different governorates. With all these improvements the AFP rate for the second half of 2002 was above 3.5 compared to 1.2 in 2001. A recent surveillance review has indicated that since mid 2002 significant improvement in the performance of the surveillance system has occurred, including reduction, although perhaps not complete elimination, of the “culture of fear”. However, the review concluded that the AFP system is not yet complete, and it is likely that some cases of AFP with wild poliovirus continue to be missed in some governorates, primarily because of continued existence of important “silent areas” and inadequate involvement of other non-MOH health facilities in the surveillance system.

In summary it is believed that the programme in Egypt is progressing well towards achieving the eradication goal. However, sustaining these high quality activities will be crucial for achieving interruption of virus transmission in this challenging situation.

Somalia

Somalia is among the few remaining priority countries for polio eradication as a conflict-affected country where wild poliovirus is still circulating. The inter-clan fighting since 1991 has led to devastation of the country and an absence of any infrastructure for basic services including health. Fighting among clans continues in the highly populated southern and central regions of the country, including the highly contested and sub-divided capital city of Mogadishu where the transitional government is based. The polio eradication programme in Somalia is a complex, large-scale operation. It started in 1997 led by WHO and UNICEF. The two agencies coordinate, implement, and promote the polio eradication programme. Both agencies support a single strategic plan that is implemented through a common programme. Technical and field staff, both international and national, is hired by either agency and programme activities are implemented through decentralized hubs and offices, belonging to either WHO or UNICEF. Collaboration with nongovernmental and humanitarian organizations is done through the Somali Aid Coordinating Body (SACB).

During 2001, seven cases were identified in the highly populated regions of Lower Shabelle and Banadir (Mogadishu). During 2002, only three cases were identified, all in the highly populated regions of Mogadishu and a close-by region.

Despite tremendous challenges, considerable progress has been made in implementing the polio eradication plan in Somalia. NIDs have been conducted each year since 1997 with increasing areas of the country being covered and the quality of implementation improving. During 2002, Somalia conducted two pairs of NIDs and four SNID rounds in the densely populated areas with persistent virus circulation. The routine OPV3 coverage in 2002 was 40% which is the lowest in the Eastern Mediterranean Region. This indicates the importance of timely NIDs to raise the level of immunity in the community.

The AFP surveillance system was developed in the northeast and northwest regions in April 1998 and extended to central and south Somalia during 1999. The system enabled the discovery of the outbreak of poliomyelitis that occurred in Mogadishu in 2000. The laboratory of KEMRI, Kenya extends the necessary laboratory support to Somalia AFP surveillance.

Although a lot has been achieved towards polio eradication in Somalia, a lot more needs to be done to successfully achieve the goal of polio eradication. The infrastructure created for the polio eradication programme must be sustained. Four rounds of NIDs must be conducted annually for at least 2003 and 2004 in order to interrupt virus transmission and increase the population immunity, especially with the low routine immunization coverage. Also, surveillance must continue to be given a greater priority to ensure that any circulation of wild poliovirus is rapidly identified and to appropriately target immunization efforts. Somalia being part of the Horn of Africa, where the ongoing large population movements across open borders pose a particular challenge to polio eradication, makes it necessary to coordinate and synchronize different activities, particularly with Ethiopia. Efforts in this direction are continuing.

Sudan

Due to its size and borders with nine countries, Sudan is of special strategic importance for the regional and global polio eradication efforts.

Significant progress towards polio eradication has been achieved in Sudan. The last case of polio was detected in April 2001 in a non-government-controlled area of the south-central part of the country. No cases were reported from the north during 2001 or from the whole country during 2002.

In northern Sudan annual NIDs have been conducted since 1994 (except in 1995). Polio eradication activities have been intensified and strengthened since the end of 1999 with the development of a comprehensive national plan and overall national commitment to the eradication goal. The latter has

been underscored by presidential decrees highlighting national support for polio eradication, highly visible participation of the President in opening ceremonies of NIDs and commitment of resources in most states and localities for activities during the immunization campaigns. With the intensification of activities, WHO, UNICEF and the global coalition of partners provided enormous technical, material and financial support to the eradication effort.

The national and international commitment has enabled intensification and rapid expansion of the programme in Sudan during the past 2 years. To meet the needs of the final stages of polio eradication, the intensification of the programme has involved recruitment of a large number of national staff and international experts and mobilization of enormous logistical resources. The move to a house-to-house vaccination strategy, improved micro-planning at locality level, and better supervision and training have led to a substantial increase in the quality of supplementary immunization campaigns and AFP surveillance in Sudan. The impressive increase in the number of children vaccinated during NIDs and achievement of certification standard AFP surveillance are evidence of this improvement.The routine OPV3 coverage in 2002 was 64%.

AFP surveillance started in Sudan in 1996. Virological classification of cases has been adopted since 2001. Sudan has maintained a non-polio AFP rate below the age of 15 years above 1/100 000 since 2000, and the rate for adequate stool collection for 2002 was 90%. The national polio laboratory in Khartoum is one of the regional network laboratories and process all samples coming from northern Sudan. Phase one of laboratory containment of wild poliovirus is about to start. The national documentation for certification of poliomyelitis eradication will be reviewed by the RCC in 2003.

South Sudan has been in a state of complex emergency for several decades. Ongoing conflict, geographic and climatic barriers and lack of social and economic infrastructure has posed enormous challenges to the polio eradication endeavour. Polio eradication activities were initiated in south Sudan in late 1997 with the first NIDs conducted in early 1998. Since then, repeated NIDs and SNIDs have been implemented annually and AFP surveillance initiated and expanded throughout most of the area. The necessary laboratory support for examination of stool samples of AFP cases in south Sudan is provided through the KEMRI laboratory, Kenya. The programme has undergone rapid expansion and intensification since late 1999. This expansion has involved recruitment of hundreds of additional staff and enhancement of logistics and administrative capacity. Recent developments are encouraging. For the first time, the 2002 Fall rounds of NIDs were comprehensive and the number of children reached was almost double the number reached in 2001. It should be noted that polio eradication has improved health systems in south Sudan. The initiative has provided the first access to health services for children in areas of conflict through “days of tranquility” negotiated to provide immunizations.

Despite remarkable progress, numerous challenges still face the polio eradication initiative in Sudan. These include the need to sustain national commitment at its peak, reach all children in the war-affected areas and high-density towns and sustain certification standard surveillance and the implementation of coordinated immunization and surveillance activities all over Sudan. It also includes a significant funding gap, lack of infrastructure and difficulties in accessing all children, especially in the south.

6.2 Polio-free countries

Bahrain

Bahrain reported the last virologically confirmed polio case in December 1993. Routine immunization against polio has been mandatory since 1956. The routine OPV3 coverage in 2002 was 98%. National immunization days were carried out on a regular basis each year from 1995 to 2000 in coordination with other member countries of the Gulf Cooperation Council (GCC). AFP surveillance started in Bahrain in 1990. Virological classification of cases has been adopted since 1994. In 2002, the rate of non-polio AFP below the age of 15 years was 1.46/100 000, and the rate for adequate stool collection was 67%. Bahrain does not have a national polio laboratory and is served by the regional reference laboratory of Kuwait. Phase one of laboratory containment of wild poliovirus has been completed. The National Certification Committee (NCC) has submitted national documentation to the Regional Certification Commission (RCC). The National Documentation for Certification covering the period to the end of 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

Cyprus

Cyprus reported the last polio case in July 1995, the year AFP surveillance was introduced. The routine OPV3 coverage in 2002 was 98%. Virological classification of cases has been adopted since 1995. Since 2001 the rate of non-polio AFP below the age of 15 years has exceeded 1/100 000. Cyprus does not have a national polio laboratory and is served by the regional reference laboratory of Egypt. Phase one of laboratory containment of wild poliovirus is in progress. The National Committee (NCC) has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission (RCC). The Certification Document covering the period until end 2000 was accepted by the RCC. The NCC also submitted a comprehensive annual update for 2001 and 2002.

Djibouti

The last clinically confirmed case was reported in 1999. It was the only AFP case that was reported in 1999 and was confirmed as polio on clinical grounds due to late reporting with inadequate stool sample and presence of residual paralysis. Routine immunization against polio is mandatory. The routine OPV3 coverage in 2002 was 62%. National immunization days have been carried out since 1997. During 2002 three rounds of house-to-house multi-antigen campaigns were conducted, in addition to two rounds of SNIDs. AFP surveillance started in 1999. Virological classification of cases has been adopted since 2000. Djibouti does not have a national polio laboratory and is served by the KEMRI laboratory, Kenya. Phase one of laboratory containment of wild poliovirus is in progress. The national documentation for certification of poliomyelitis eradication will be reviewed by the RCC in 2003.

Islamic Republic of Iran

The last virologically confirmed indigenous polio case was reported in 1997. During the period 1998–2000, 10 more cases were reported. All the viruses isolated from these cases were found to be genetically closely related to the viruses from Afghanistan/Pakistan. Routine immunization against polio has been mandatory since 1984. The routine OPV3 coverage in 2002 was 100%. Highly organized and well implemented NIDs were held in 1994–1998. Since 1999 mop-ups and cross-border activities have been carried out every year. The Islamic Republic of Iran started national surveillance and reporting of AFP on a regular basis in 1991. Virological classification was introduced in 1995. It has maintained a non-polio AFP rate of more than 1/100 000 below 15 years since 1995, and a rate for adequate stool collection of more than 80% since 2001. The Tehran University of Medical Sciences hosts the national polio laboratory, which is accredited as part of the regional polio laboratory network. Phase one of laboratory containment of wild poliovirus is in progress. The laboratory survey has been completed but the inventory is being compiled. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The documentation for certification was accepted in the ninth meeting in October 2002.

Iraq

The last virologically confirmed indigenous polio case was reported in January 2000. Routine immunization against polio has been mandatory since 1985. The routine OPV3 coverage in 2002 was 82%. NIDs have been held each year since 1995. Iraq started national surveillance and reporting of AFP on a regular basis in 1997. Since then it has maintained a rate of non-polio AFP of more than 1/100 000 below 15 years,

and a rate for adequate stool collection of more than 80% since 1999. Virological classification was introduced in 2000. The national polio laboratory is accredited as part of the regional laboratory network. Phase one of laboratory containment of wild poliovirus is in progress. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The documentation for certification was accepted in the ninth meeting in October 2001.

Jordan

Jordan reported the last virologically confirmed polio case in March 1992 with a probable origin of virus from Pakistan. The last indigenous case was in 1988. Routine immunization against polio has been mandatory since 1979. The routine OPV3 coverage in 2002 was 95%. National immunization days were carried out each year from 1995 to 2001. In 2002, only high-risk areas were covered in SNIDs. National AFP surveillance started in 1993 and Jordan shifted to virological classification in 1995. Non-polio AFP rate below 15 years has been maintained above 1/100 000 since 1995, with a rate for adequate stool collection of more than 80% since 1999. The national polio laboratory was accredited as part of the regional polio laboratory network from 1997 to 2000 and has been provisionally accredited since 2001. Phase one of laboratory containment of wild poliovirus is in progress. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The certification document covering the period to 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

Kuwait

Kuwait reported the last virologically confirmed polio case in December 1983. Routine immunization against polio has been mandatory since 1980. The routine OPV3 coverage in 2002 was 98%. Supplementary immunization activities have been carried out on a regular basis. NIDs were carried out each year from 1995 to 2000 in coordination with other member countries of the GCC. National AFP reporting started in 1994. During 2002 the rate of non-polio AFP below the age of 15 years was 1.2/100 000 and the rate of adequate stool collection was 75%. The viral division of the public health laboratory serves as a regional reference laboratory and was fully accredited for 1997–2001 and provisionally accredited for 2002. Phase one of laboratory containment of wild poliovirus is in progress. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period until 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001and 2002.

Lebanon

The last virologically confirmed indigenous polio case was reported in June 1994. Routine immunization against polio has been mandatory since 1968. The routine OPV3 coverage in 2002 was 92%. NIDs were held in 1995–2000. Lebanon started national surveillance and reporting of AFP on a regular basis since 1994. Virological classification was introduced in 1995. Lebanon has maintained a rate of non-polio AFP of more than 1/100 000 below 15 years since 1999. The rate for adequate stool collection for 2002 was 81%. Lebanon does not have a national polio laboratory and is served by the regional reference laboratory of Egypt. Phase one of laboratory containment of wild poliovirus has been completed. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period until end 2001 was accepted by the RCC. The NCC has also submitted an update for 2002.

Libyan Arab Jamahiriya

The Libyan Arab Jamahiriya reported the last confirmed polio case in 1991. Routine immunization against polio is mandatory. The routine OPV3 coverage in 2002 was 95%. National immunization days have been carried out on regular yearly basis mostly in coordination with other countries of the Arab Maghreb Union since 1995. AFP surveillance started in 1997. During 2002 the rate of non-polio AFP below the age of 15 years was 1.32/100 000 and the rate of adequate stool collection was 89%. The Libyan Arab Jamahiriya does not have a national polio laboratory and is served by the regional reference laboratory of Tunisia. Phase one of laboratory containment of wild poliovirus is about to start. The national documentation for certification of poliomyelitis eradication will be reviewed by the RCC in 2003.

Morocco

No wild poliovirus was ever isolated in Morocco. The last clinically confirmed case was in November 1988. Routine immunization against polio has been mandatory since 1987. The routine OPV3 coverage in 2002 was 95%. NIDs have been held regularly since 1995 in coordination with other Arab Maghreb Union countries. Morocco started national reporting of AFP in 1994. Virological classification was introduced in 2000. Morocco has maintained a rate of non-polio AFP of more than 1/100 000 below 15 years since 2001, and a rate for adequate stool collection of more than 80% since 2001. The laboratory of National Institute of Health serves as a national polio laboratory that is fully accredited as part of the regional polio laboratory network. Phase one of laboratory containment of wild poliovirus is in progress. The laboratory survey has been completed but the inventory is being compiled. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period until end 2001 was accepted by the RCC. The NCC has also submitted an annual update for 2002.

Oman

Oman reported the last virologically confirmed polio case in December 1993, with probable relation of the virus to the Indian strains. Routine immunization against polio is mandatory. The routine OPV3 coverage in 2002 was 100%. Supplementary immunization activities have been carried out on a regular basis. NIDs were carried out each year from 1995 to 1999 in coordination with other member countries of the GCC. The National AFP reporting started in Oman in 1990 and shifted to the virological classification in 1996. The rate of non-polio AFP below the age of 15 years was 2.02/100 000 for 2002. The rate for adequate stool collection was 88%. The national polio laboratory is fully accredited as part of the regional polio laboratory network. Phase one of laboratory containment of wild poliovirus has been completed. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period to the end of 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

Palestine

The last reported case of polio among Palestinian children was in 1992. Routine immunization against polio is mandatory. The routine OPV3 coverage in 2002 was 97%. National immunization days were carried out on a regular yearly basis from 1995 to 1999. During 2002 the rate of non-polio AFP below the age of 15 years has decreased to 0.62/100 000 and the rate of adequate stool collection was 88%. Wild poliovirus type 1 closely related to the strains isolated from Egypt was isolated from sewage collected from Gaza in February and August 2002. Activities for laboratory containment of wild poliovirus are not implemented yet. The national documentation for certification of poliomyelitis eradication has not been submitted yet and is expected in 2003.

Qatar

Qatar reported the last polio case in September 1990. Routine immunization against polio has been mandatory since 1980. The routine OPV3 coverage in 2002 was 96%. National immunization days were carried out on a regular basis from 1995 to 2000 in coordination with other member countries of the GCC. AFP surveillance started in Qatar in 1994. Virological classification of cases has been adopted since 1994. During 2002, the rate of non-polio AFP below the age of 15 years was 3.48/100 000 and the rate of adequate stool collection was 80%. Qatar does not have a national polio laboratory and is served by the regional reference laboratory of Kuwait. Phase one of laboratory containment of wild poliovirus has been completed. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The National Certification Document covering the period until end 2000 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2001 and 2002.

Saudi Arabia

The last virologically confirmed polio case due to indigenous virus was reported in October 1995. A case was reported in January 1998 and proved to be due to a virus closely related to the prevailing strains

in Afghanistan/Pakistan. Routine immunization against polio has been mandatory since 1979. The routine OPV3 coverage in 2002 was 95%. NIDs were held regularly from 1995 to 2000 in coordination with other member countries of the GCC. SNIDs have been held since 2001. Saudi Arabia started national reporting of AFP in 1989 and shifted to the virological classification in 1996. The rate of non-polio AFP below 15 years has exceeded 1/100 000 since 1994. The rate for adequate stool collection has been more than 80% since 1996. The national polio laboratory, Riyadh is accredited as part of the regional polio laboratory network. Phase one of laboratory containment of wild poliovirus is in progress. The laboratory survey has been completed and the inventory is being compiled. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period to the end of 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

Syrian Arab Republic

The last virologically confirmed indigenous case was reported in March 1995. A virologically confirmed polio case was reported on November 1999. Genomic sequencing of the isolated virus showed close links to the viruses circulating in India. Consequently, it was considered an importation. Routine immunization against polio has been mandatory since 1964. The routine OPV3 coverage in 2002 was 99%. NIDs were held on a regular yearly basis from 1993 to 2000. Cross-border mopping-up on the borders with Iraq and Turkey and SNIDs in high-risk areas have been held since 1996. National reporting of AFP started in 1993 and the country shifted to the virological classification in 1995. The rate of non-polio AFP below 15 years has exceeded 1/100 000 since 1996 and a rate of more than 80% for adequate stool collection has been maintained since 1995. The public health laboratory, Damascus is part of the regional polio laboratory network. Phase one of laboratory containment of wild poliovirus is in progress. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period to the end of 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

Tunisia

The last virologically confirmed indigenous polio case was reported in April 1992. Routine immunization against polio has been mandatory since 1963. The routine OPV3 coverage in 2002 was 96%. NIDs were held from 1995 to 1997 and SNIDs have been held since 1998 in coordination with other countries of the Arab Maghreb Union. Tunisia started national surveillance and reporting of AFP on a regular basis in 1991 and shifted to virological classification in 1996. Tunisia has maintained a rate of non-polio AFP below 15 years of more than 1/100 000 since 1995, and a rate of more than 80% for adequate stool collection since 1999. The Institut Pasteur of Tunis, Tunisia has been accredited as a regional reference laboratory since 1997. Phase one of containment of laboratory wild poliovirus stocks is in progress. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period up to the end of 1999 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2000, 2001 and 2002.

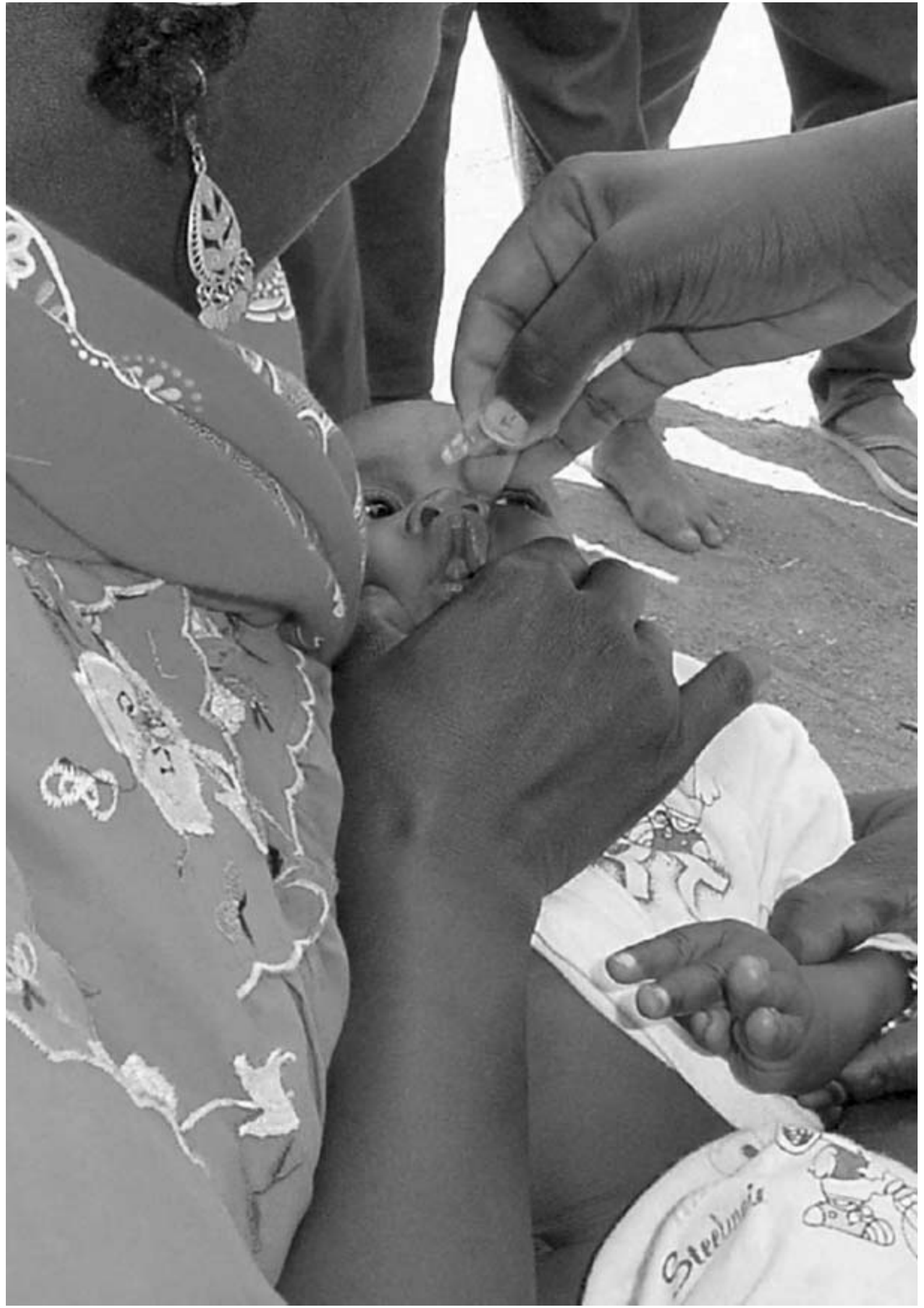
United Arab Emirates

The last virologically confirmed polio case was reported in April 1992. Routine immunization against polio has been mandatory since 1981. The routine OPV3 coverage in 2002 was 94%. National immunization days have been carried out on a regular basis each year from 1995 to 1999 in coordination with other member countries of the GCC. AFP surveillance started in 1998. Virological classification of cases was adopted in 1998. The rate of non-polio AFP below the age of 15 years was 1.05/100 000 in 2002. The rate of adequate stool collection was 70%. The United Arab Emirates does not have a national polio laboratory and is served by the regional reference laboratory of Kuwait. Phase one of laboratory containment of wild poliovirus has been completed. The National Certification Committee has submitted national documentation for certification of poliomyelitis eradication to the Regional Certification Commission. The national documentation for certification covering the period to the end of 2000 was accepted by the RCC. The NCC also submitted comprehensive annual updates for 2001 and 2002.

Republic of Yemen

No wild poliovirus was ever isolated in the Republic of Yemen. The last clinically confirmed case was in 1999. Routine immunization against polio has been mandatory since 1979. The routine OPV3 coverage in 2002 was 69%. NIDs have been held yearly from 1996 to 2002. The country started national surveillance and reporting of AFP on a regular basis in August 1998. Virological classification was introduced in 2000. It has maintained a rate of non-polio AFP of more than 1/100 000 below 15 years since 2000. The current rate for adequate stool collection is 83%. The Republic of Yemen does not have a national polio laboratory and is served by the laboratory of Oman. Phase one of laboratory containment of wild poliovirus is about to start. A provisional certification document was discussed by the RCC in June 2002. The certification documentation is expected to be finalized and resubmitted to the RCC in 2003.

Polio eradication is within our reach
responsibility of ensuring that the fu
in our Region will live in a polio-free
child will ever again face the suffering
by polio.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