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Regional Office for the Eastern Mediterranean
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منظمة الصحة العالمية
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Progress report on

Eradication of poliomyelitis

Contents

1. Introduction

The World Health Assembly resolution WHA41.28 adopted in May 1988 and the Regional Committee for the Eastern Mediterranean resolution EM/RC35/R.14 adopted in the same year established the goal of poliomyelitis eradication. Since then, the implementation of eradication strategies has reduced the number of countries endemic for polio in the Eastern Mediterranean Region from 22 in 1988 to only 2 (Afghanistan and Pakistan) by end 2005.

However, due to unfounded concerns over the safety of the polio vaccine, Nigeria stopped immunization from mid 2003 to mid 2004 and became the source of the spread of polio to many polio-free countries in Africa, including Sudan. From there the virus reached Somalia and Yemen causing large-scale epidemics in 2005.

2. Current situation in the Eastern Mediterranean Region

2.1 Regional progress

As an outcome of the strong political commitment and intensification of polio eradication efforts, the number of cases of polio decreased from an annual estimate of 35 000 in 1988 to just 113 cases in 2003. This decrease continued in endemic countries of the Region, falling to 58 cases in 2004 and 37 in 2005. It is estimated that during this period 300 000 children in the Region were saved from life-long paralysis.

After decades of endemicity and extensive efforts by national authorities, supported by international agencies, Egypt is now free of polio. The last case was in May 2004 and with intensive surveillance, including environmental monitoring, it has been proven that there has been no circulation of wild poliovirus anywhere in Egypt for over a year (last isolate was 13/01/2005).

The reintroduction of the virus in the Region in 2004 resulted in an epidemic in Sudan in 2004 which extended into 2005 with 155 cases, and two epidemics in 2005: one in Yemen resulting in a total of 479 cases; and one in Somalia resulting in a total of over 200 cases as of June 2006.

2.2 Highlights on endemic and re-infected countries

Afghanistan

The polio eradication programme in Afghanistan regained most of its strength in 2004 after the setback suffered as a result of the war that started in 2002.

As a result of the intensification of efforts in 2004 and the implementation of four nationwide and five subnational immunization campaigns, in synchronization with neighbouring Pakistan, the number of cases reported were only four, the lowest number ever reported from Afghanistan.

In 2005, between April and June, four cases of type 3 were reported from adjacent areas in Helmand and Urozgan provinces, where there are considerable security problems and in the last quarter of 2005 three type 1 cases were discovered in the same provinces, and two cases in Kandahar from areas close to Pakistan (Figure 1). They were genetically linked to the viruses circulating in neighbouring districts of Pakistan denoting importation and an immunity gap allowing circulation of imported viruses.

During the first half of 2006, 16 new cases were reported: 15 type 1 and one type 3. these cases were primarily clustered in the southern provinces of Helmand, Kandahar, Urozgan and Zabul, but a case was also reported from the western province of Farah (Figure 1). The recent type 3 case was reported from Helmand province, more than 10 months after the last type 3 case also reported from there.

The response in 2005 was further strengthened with four national immunization days (NIDs), five subnational immunizations days (SNIDs) and mop ups. A high-level mission composed of senior officials of the Ministry of Public Health, WHO, UNICEF and nongovernmental organizations visited affected provinces in July 2005 and held advocacy meetings with provincial and district governors, district health officials and nongovernmental organizations working in the area. Meetings were also

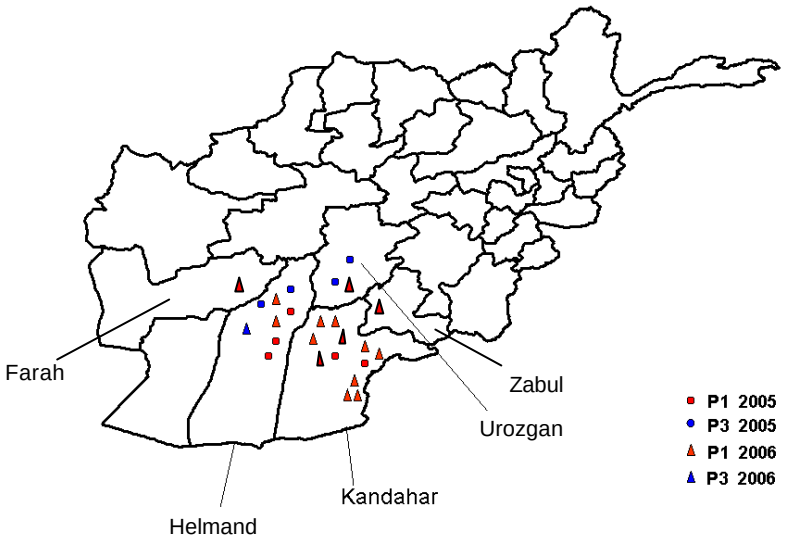

Figure 1. Distribution of wild poliovirus cases by type and province in Afghanistan, 2005–2006

organized with tribal leaders and community elders to ensure their full engagement in accessing all children and reaching them with the vaccine.

In 2006, supplementary immunization activities have been hampered by security problems, particularly in the southern region, which are behind the apparent immunity gap in the young children in this area that is permitting continued circulation of the virus.

In view of the fact that Pakistan and Afghanistan represent one epidemiological block, efforts for synchronization of supplementary immunization efforts were strengthened and surveillance efforts also witnessed close exchange of information and coordinated efforts.

Pakistan

Pakistan has made great progress towards eradication with clear evidence of decreasing virus diversity and intensity of transmission. The number of confirmed polio cases was halved between 2003 and 2004 (103 versus 53, respectively). In 2005, only 28 cases were reported from 17 districts (Figure 2).

The absence of the usual seasonal peak and the significant decrease in genotypes of circulating virus are two milestones denoting progress in Pakistan. The distribution of cases in 2005 points to two active zones of transmission, namely Dera Ghazi Khan in Punjab, where six cases were reported, and the Peshawar area in North-west Frontier Province. The poliovirus reappeared in Baluchistan after more than a year of apparent cessation of transmission. This is mainly attributed to a significant decrease in the quality of campaigns in 2005 in this province as a result of local conflict with paramedicals related to the identification and recruitment of support staff for the campaign and inadequate and delayed response from national authorities to address the problem.

During the first half of 2006, 11 new cases were reported from Baluchistan, North-west Frontier Province, Sindh and Punjab. Four of these cases were type 3 and were reported from Jafarabad and Quetta in Baluchistan and Lower Dir in North-west Frontier Province and one case from Multan in Punjab.

The strategic measures adopted by the programme since 2004, namely to ensure the engagement of the civil administration, focus on identification of high-risk districts and intensify support to these areas,

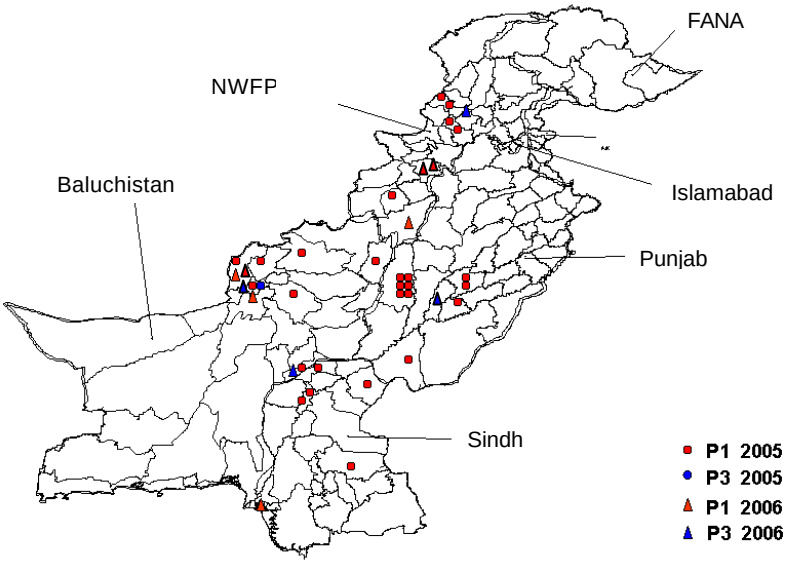

Figure 2. Distribution of wild poliovirus cases by type and province in Pakistan, 2005

as well as the use of monovalent OPV type 1 (mOPV1) have led to substantial improvements in the quality of supplementary immunization activities and in the immunization status of children in Pakistan.

While the general performance of the programme has reached a very good level, the remaining risk areas must be addressed to ensure the achievement of polio eradication. The engagement of the civil administration needs to be sustained and further expanded, particularly in the highest priority areas. The youngest children, particularly those under 1 year of age, are still insufficiently accessed in some high-risk districts and zones due to cultural habits and security problems. Efforts to access these children need to be sustained and broadened to achieve a lasting effect.

Sudan

After more than three years of polio-free status (April 2001–May 2004) Sudan suffered a setback with the importation of the wild poliovirus from Nigeria, resulting in an epidemic of 155 cases that lasted almost one year (May 2004–June 2005) and reached 19 of the 26 states.

Transmission was facilitated by the immunity gap that had developed in the population due to low levels of routine immunization and cessation of supplementary immunization activities for the two years preceding the epidemic. Other factors included the war and population movements across the border and within the country.

Although the response to the reintroduction was immediate through mop-ups in July and August, it was not until late in 2004 that the response became national with NIDs in October and November, followed by seven NIDs and one SNID in 2005 (Figure 3). WHO extended significant technical and financial support, including introduction of new strategies such as defaulter tracing, finger marking and independent monitoring, resulting in improved campaign quality. The campaigns were implemented as part of coordinated supplementary immunization activities across the countries of west and central Africa. As a result of these NIDs, the epidemic has subsided and the last case was reported in June 2005. However, it should be emphasized that the predisposing factors behind the last epidemic persist, namely low routine immunization, population movement and poor accessibility in conflict areas. Thus, there is continuing need to maintain vigilance and avoid the development of immunity gaps in the population.

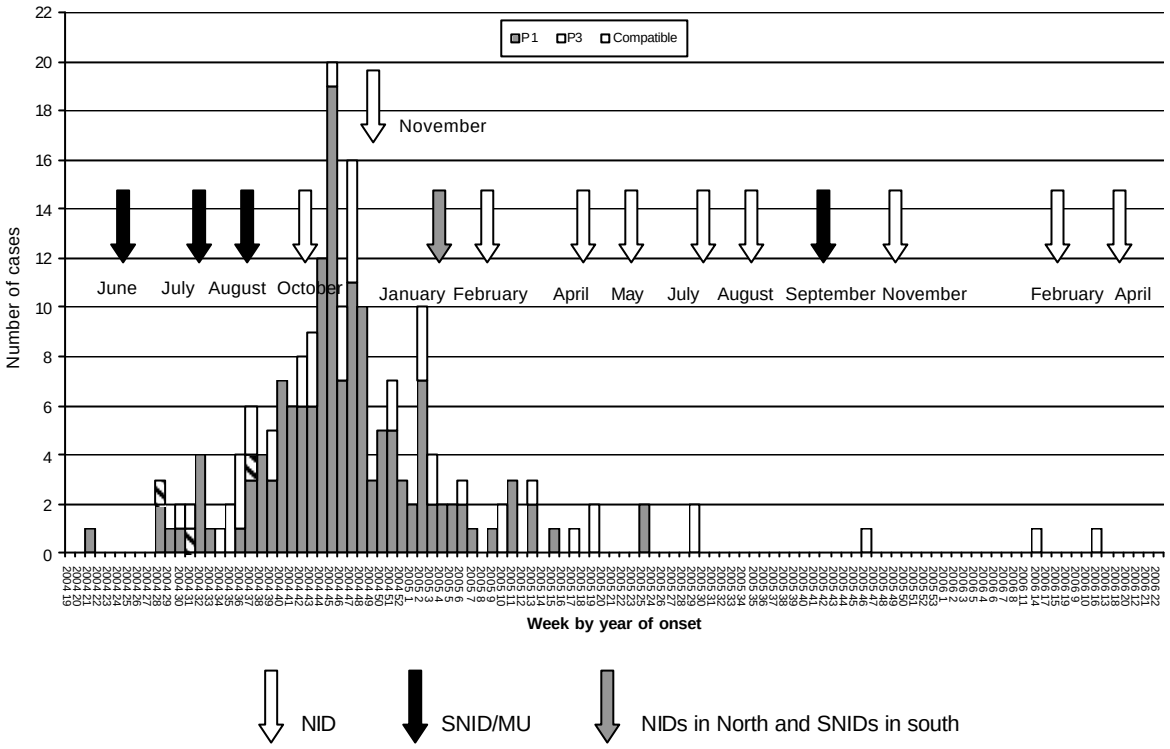

Figure 3. Distribution of wild polio and compatible cases in Sudan by week of onset, supplementary immunization activities response, 2004–2006 (as of 26 June 2006)

Yemen

Before the recent epidemic, wild poliovirus had never been isolated from Yemen and the last clinically confirmed case was reported in 1996. The cessation of NIDs during the past three years, coupled with low routine immunization coverage, led to a significant immunity gap in the population. Also, the weakness in surveillance in the past two year and diversion of attention to other prevailing epidemics resulted in late identification of the poliomyelitis epidemic. With this background of immunity gap and weak surveillance, the introduction of the virus in early 2005 resulted in a massive epidemic, with 478 cases.

In response to notification from the Regional Office in December 2004 emphasizing the need to be alert to possible importations, Yemen planned an NID in February 2005 but implementation was delayed due to shortage of vaccine. The first round was implemented on 11 April, by which time the virus had already spread unnoticed for two months and more than half the cases were already infected.

The confirmation of poliomyelitis in late April 2005 was followed by a rapid national and international response and strong technical support from WHO to ensure implementation of high quality house-to-house campaigns. Six rounds of national immunization days were implemented between May 2005 and January 2006 using the more effective mOPV1 in most of the rounds, and resulting in a rapid decline in the epidemic followed by a few sporadic cases. The last case was reported in February 2006, after almost three months without any cases (Figure 4). Two mop-ups were held in April and may 2006 in response to this last case. The technical advisory group (TAG) for poliomyelitis in Yemen held its second meeting on 20–21 June 2006. It noted the progress in routine immunization and recommended efforts to strengthen surveillance. WHO and other collaborating agencies are currently extending support for the strengthening of routine immunization and of surveillance.

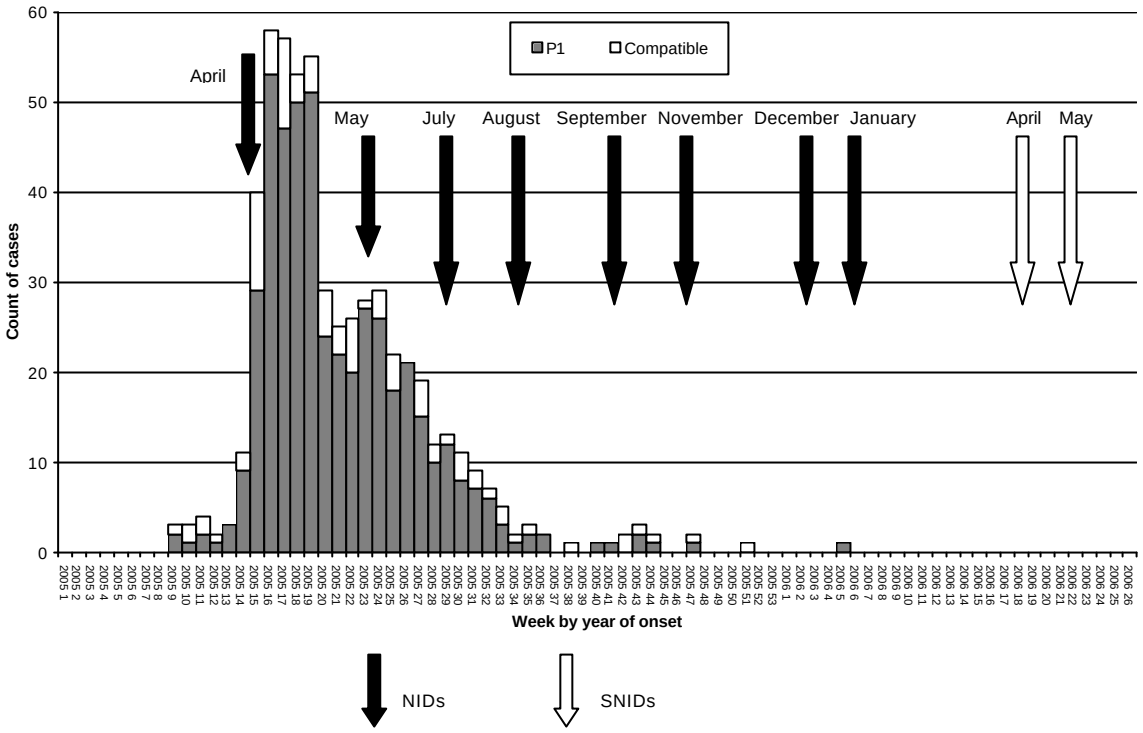

Figure 4. Distribution of wild polio and compatible cases in Yemen by week of onset and supplementary immunizations activities 2005–2006 (as of 26 June 2006)

Somalia

Following the re-introduction of the virus in Sudan and its re-appearance in Ethiopia, extensive efforts were made to address possible importation in Somalia. Two SNIDs were carried out in 2004 and seven rounds of NID in 2005, most of them using mOPV1. Because of the prevailing security situation, particularly in Mogadishu, the immunization coverage during campaigns was not to the required level, so when the virus was introduced from Yemen it spread mostly in Mogadishu.

The epidemic started in July 2005 in Mogadishu and is still ongoing, although at a much lower magnitude (Figure 5). Spillover to the neighbouring regions, particularly Middle and Lower Shabelli, has occurred but remains of a limited nature. A total of 185 cases were identified up to end 2005 and 25 more cases reported up to June 2006. It seems that the epidemic is subsiding as indicated by the decline in reported AFP cases.

The WHO response started before the epidemic and was further strengthened by the fielding of more experts; however, the security restrictions remain a handicap in this regard. Supplementary immunization activities will be continued in 2006 until the epidemic is brought under control.

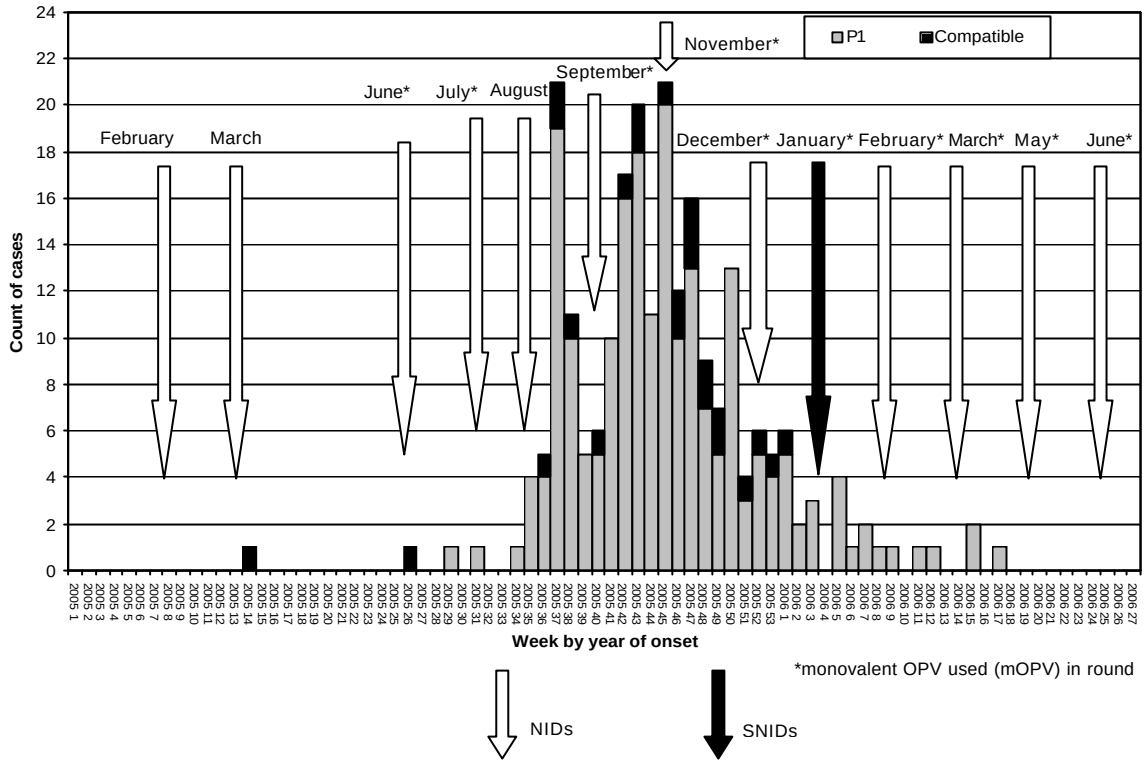

Figure 5. Distribution of wild polio and compatible cases in Somalia by week of onset, supplementary immunization activities response, 2005–2006 (as of 26 June 2006)

3. Implementation of polio eradication strategies

3.1 Strengthening routine immunization

High routine immunization coverage of infants with at least three doses of oral poliovaccine (OPV) is one of the basic strategies of polio eradication. Regional coverage of infants with at least three doses of oral poliovaccine (OPV3) has remained around 80% for the past few years, with coverage levels of less than 80% in Afghanistan, Djibouti, Pakistan, Somalia, Sudan and Yemen—the endemic countries and those in which importations resulted in epidemics.

High routine immunization coverage is crucial for maintaining polio-free status after successful eradication. The epidemics resulting from importation in Somalia, Sudan and Yemen compared with the sporadic cases that followed importations in other countries, like the Islamic Republic of Iran, Saudi Arabia and Syrian Arab Republic, highlight the importance of maintaining high routine coverage.

The regional polio eradication initiative continues to emphasize the need to maintain high routine coverage and has contributed in a number of ways to strengthening routine immunization.

? All poliomyelitis eradication staff are involved in the strengthening of routine immunization and in surveillance of vaccine-preventable diseases.

? A substantial amount of poliomyelitis eradication resources have been utilized for strengthening the physical infrastructure for routine immunization.

? The strategic planning process introduced for poliomyelitis eradication activities, and the lessons learned from it, have been used in other initiatives in support of routine immunization services, such as in the process of application for support from the Global Alliance for Vaccines and Immunization (GAVI).

? Routine immunization has benefited from poliomyelitis eradication efforts in other areas, such as in programme management, improved coordination and enhancement of political awareness and support.

3.2 Supplementary immunization activities

Ensuring that every child under the age of 5 years is immunized against polio is the highest priority in polio eradication. In countries where routine immunization coverage is below desired levels, supplementary immunization activities remain a very important tool for achieving the high levels of immunity in children necessary to achieve and maintain polio-free status.

Intensification of supplementary immunization activities continued in 2004 and 2005 in the remaining endemic countries and to address epidemics as a result of importation. Also, several countries conducted supplementary immunization activities to guard against spread of the virus in the event of an importation (Bahrain, Djibouti, Jordan, Lebanon, Libyan Arab Jamahiriya, Oman, Saudi Arabia and Syrian Arab Republic).

The implementation of supplementary immunization activities continued to be refined and strengthened through adoption of several approaches. These included:

? Identification and mapping of high-risk areas/districts and assuring the best possible performance in them.

? Strengthening planning, monitoring and evaluation through extending significant technical support, including the introduction of campaign control rooms, finger-marking and independent monitoring.

? Introduction of the more potent mOPV1 in Egypt, in Yemen in response to the epidemic, in Somalia to address the possible spread and following importation, and most recently in Pakistan. The superiority of mOPV1 has been shown in studies in tropical countries where one dose of mOPV1 conferred immunity in 81% of those vaccinated, as compared with roughly 30% to 40% of those vaccinated with trivalent OPV. Its superiority was also confirmed by the rapidity with which it has brought the Yemen epidemic under control.

3.3 Surveillance for acute flaccid paralysis

Surveillance for acute flaccid paralysis (AFP) is one of the main strategies and the driving tool for polio eradication activities. It is currently well established in all countries of the Region, even in those affected by war and in areas with rudimentary health infrastructure. The polio eradication surveillance structure has been used for the surveillance of other diseases targeted by the Expanded Programme on Immunization, and in some countries it is also used for investigation and response to other communicable diseases and emergencies.

In 2005, the required level of sensitivity of AFP surveillance (non-polio AFP rate of 1 per 100 000 population under 15 years) has been maintained in all countries of the Region except Djibouti, which has only a small number of expected AFP cases. The regional non-polio AFP rate in 2005 was 3.64/100 000 population under 15. The second quality indicator for surveillance, namely percentage of AFP cases with adequate stool collection, was maintained above the global target of 80% both at the regional level (90%) and in individual countries, except in Bahrain, Djibouti, Lebanon, Morocco and Yemen.

In Egypt, AFP surveillance is supplemented with environmental surveillance, in which sewage samples are collected and tested periodically from 33 sites throughout the country with the aim of increasing the sensitivity for detection of any circulating wild poliovirus.

To ensure that certification-standard surveillance is maintained until certification, surveillance reviews are conducted periodically. During the last two years surveillance reviews were carried out in 13 countries (Afghanistan, Egypt, Lebanon, Libyan Arab Jamahiriya, Pakistan, Syrian Arab Republic, Tunisia, Djibouti, Islamic Republic of Iran, Morocco, Saudi Arabia, Sudan and Yemen). In addition to

highlighting issues that need immediate corrective action to maintain the sensitivity and quality required for timely detection of any circulating poliovirus, including importations, the surveillance reviews have in general confirmed the sensitivity and the reliability of the system. The programme continues to be refined, such as through introducing new concepts (e.g. hot cases) and setting clear criteria for the collection of stool samples from contacts.

AFP surveillance in the Region is supported by a regional laboratory network of 12 laboratories. The performance of the regional poliovirus laboratory network continued to be of a high standard, as reflected by the accreditation of all laboratories. The national laboratory in Oman was recently accredited to perform intratypic differentiation (ITD) testing and support the regional network in this function, in addition to serving as a national laboratory. The regional reference laboratory in the National Institute of Health, Pakistan, acquired the capability to carry out genomic sequencing for isolated polioviruses, an activity that previously could only be performed by the Global Specialized Laboratories. These developments represent a significant support to the regional polio eradication initiative.

The workload of the network laboratories is increasing as a result of the continued developments in surveillance in countries of the Region and due to the epidemics. Up to June 2006, the regional network tested over 17 000 stool samples from AFP cases, as well as more than 4000 samples from contacts and 983 from environmental surveillance.

All laboratory performance indicators were well above the set target, except transportation of samples within 3 days, which remained below 70%, mainly because of the time taken for shipment from countries with no national laboratories to other countries for testing. Results of virological investigation of 99% of AFP cases were reported within 28 days, 99% of ITD results for polioviruses were sent within 14 days, 96% of ITD results were reported within 60 days from the date of onset of paralysis, and non-polio enteroviruses were isolated from 19% of stool samples.

All isolated viruses are subjected to molecular testing. The genetic sequencing of polioviruses is routinely used to identify epidemiological links between isolates and to identify the source of the importation in the Region. Genetic sequencing data suggest that wild poliovirus transmission in Afghanistan and Pakistan is increasingly localized, and a marked decreased in the genetic diversity of viruses is observed.

At this stage of polio eradication, sustaining the performance of the laboratory network at a very high standard is a priority, and efforts are being made to maintain and further enhance the capacity of laboratories to meet the needs of the regional polio eradication programme. This is being achieved by human resource development, through refresher training, exchange of latest information by electronic media and an annual meeting of laboratory directors. The Regional Office continues to advocate for the utilization of the facilities and expertise of the polio laboratory network in other disease surveillance programmes.

4. Preparedness for poliovirus importation

The risk of importation will continue as long as wild poliovirus is circulating anywhere in the world.

Over the years, several importations have occurred in countries of the Region. The outcome depended on the level of population immunity. In countries with high levels of population immunity, such as the Islamic Republic of Iran and Saudi Arabia, no secondary spread or evidence of re-established circulation occurred. In contrast, importations into Sudan in 2004 and Yemen and Somalia in 2005 resulted in explosive epidemics as a result of immunity gaps, particularly among young children.

Recognizing the importance of this issue, the Regional Office updated the regional guidelines taking into account the recommendations of the Advisory Committee on Polio Eradication. The Regional Certification Commission (RCC) endorsed the amendments and reaffirmed that national plans for preparedness for an effective response to wild poliovirus importation should be one of the prerequisites for certification and included in the documentation requested by the RCC.

The Regional Technical Advisory Group recommended in its last meeting in June 2005 that each country should aim to limit the spread of any importation by identifying immunity gaps in their child populations, both nationally and among specific groups. Any such gap should be eliminated through specific targeted immunization activities, including campaigns focused on susceptible population groups, either locally or nationally, until uniform high coverage has been achieved.

5. End-game issues

5.1 Laboratory containment of wild poliovirus and potential infectious material

Fourteen countries of the Region (Bahrain, Djibouti, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic and United Arab Emirates) have completed phase 1 of the laboratory survey and inventory of laboratory containment of wild polioviruses. Egypt and Tunisia are in the final stage of completing phase 1 of containment activities. Palestine has nominated the national containment coordinator, and despite the prevailing situation, has initiated implementation of phase I containment activities. Sudan completed phase 1 of containment activities, but due to an importation of wild polioviruses in 2004, has been asked to repeat the containment activities. The remaining poliovirus endemic countries (Afghanistan, Pakistan) and the reinfected Yemen and Somalia have not yet started containment activities.

As of end 2005, over 19 000 laboratories have been surveyed and only 6 laboratories have been identified as storing wild poliovirus material. Most of these belong to the regional network of polio laboratories.

Countries of the Region which have completed phase 1 of containment activities have been asked to document the quality of this phase. As of end 2005, eight countries (Bahrain, Islamic Republic of Iran, Jordan, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia) have submitted the draft report for review by WHO. The remaining countries are expected to submit reports soon.

5.2 Certification of poliomyelitis eradication

The RCC continued to review documentation from countries of the Region who have been polio-free for three or more years. In 2005, basic national documentation from 17 countries (Bahrain, Djibouti, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen) was accepted by the RCC. The national certification committees of these countries continue to prepare and submit annual updates to the RCC. As transmission has been re-established following the importation of wild poliovirus into Sudan and Yemen, the RCC decided to request the national certification committees in these two countries to resubmit their national documentation once they have been free of polio again for at least a year. The RCC reviewed national documentation from Palestine in 2005 and accepted the documentation in its meeting of 4 April 2006.

In order to facilitate the eventual timely submission of national documentation from Afghanistan, Egypt, Pakistan and Somalia and to periodically review the current status of the polio eradication initiative in these countries, the RCC has also been reviewing preliminary national documents from these countries.

As a step towards preparation for regional certification, the RCC decided to solicit final national documents for regional certification from countries that have been polio-free for five years or more and have completed phase 1 of laboratory containment. Seven countries have already submitted final documents. Other countries satisfying these criteria are being requested to submit final national documentation. These countries will, however, continue to submit abridged annual updates until regional certification has occurred.

6. Technical and financial support to countries

Technical support to the regional polio eradication programme is provided through almost 100 international experts and over 900 nationals recruited by WHO and concentrated mainly in priority countries. Those staff also support other programmes and, in some countries such as in Somalia and parts of Sudan, they are the principal form of health infrastructure currently operating. In addition, technical support in the form of expert teams was provided to Somalia, Sudan and Yemen to help improve the implementation of house-to-house supplementary immunization activities. Similar local arrangements are being made in Afghanistan and Pakistan.

In addition to this continued support, the Regional Technical Advisory Group and national technical advisory groups continued to review the epidemiological situation and planned activities, and advise on the strategic directions of the programmes. The groups concluded that poliovirus transmission in endemic countries has reached the lowest level ever recorded and that to reach cessation of transmission, the highest priority for the programmes must be to implement excellent quality house-to-house campaigns. The technical advisory groups expressed their satisfaction with the efforts made in reinfected countries to contain the epidemics.

Significant resources for the eradication efforts are being provided by the Member States, particularly with respect to routine immunization. In addition, significant external financial resources were secured to support activities necessary to achieve the target, particularly with respect to the provision of vaccines and operational expenses needed to intensify supplementary immunization, continue surveillance activities and ensure the availability of the technical support required.

The estimated external resource requirements, according to the strategic plan for 2004 and 2005, were in the order of US$ 118 million; these included US$ 37 million for vaccine, US$ 49 million for operational expenses, US$ 11 million for surveillance and laboratory and US$ 21 million for national and international staff. In view of the developments with respect to the epidemics in Somalia, Sudan and Yemen, the requirements increased by US$ 30 million. Funds for vaccines and some operational costs are administered through UNICEF; the remainder are administered through WHO. During 2004–2005, more than US$ 115 million of external support were secured by WHO to support operational expenses, surveillance and staff. The main contributors to these funds were the UK Department for International Development (DFID), Rotary International, Governments of the United States of American and Canada, European Community, United Nations Foundation, Bill and Melinda Gates Foundation, Governments of Russia, France, Germany, Saudi Arabia, Untied Arab Emirates, Qatar and Oman, and the Arab Gulf Programme for United Nations Development Organizations (AGFUND). The relative proportion paid by various contributors is shown in (Figure 6).

7. Regional commitment for polio eradication

Political support for polio eradication is at a very high level in the Region. National authorities, in both endemic and polio-free countries, are committed to implementing all the polio eradication strategies. The Regional Committee for the Eastern Mediterranean has been in the forefront of polio eradication efforts since 1988. The continued interest and regular review of the situation by the Regional Committee and the progressive guidance reflected in Regional Committee resolutions has been the driving force towards achieving this goal in the Eastern Mediterranean Region.

In January 2004, a ministerial meeting was held in Geneva for all remaining endemic countries, at the end of which countries and representatives of main partners signed the Geneva Declaration for the Eradication of Poliomyelitis, committing themselves and their countries to necessary actions to stop viral transmission by the end of 2004. The endemic countries met again in early 2005 in the ministerial meetings held in Geneva as a follow-up to the meeting in January 2004. Ministers of health and their delegations presented the progress made in their countries and the planned activities, and reaffirmed national commitment to achieving the target in 2005.

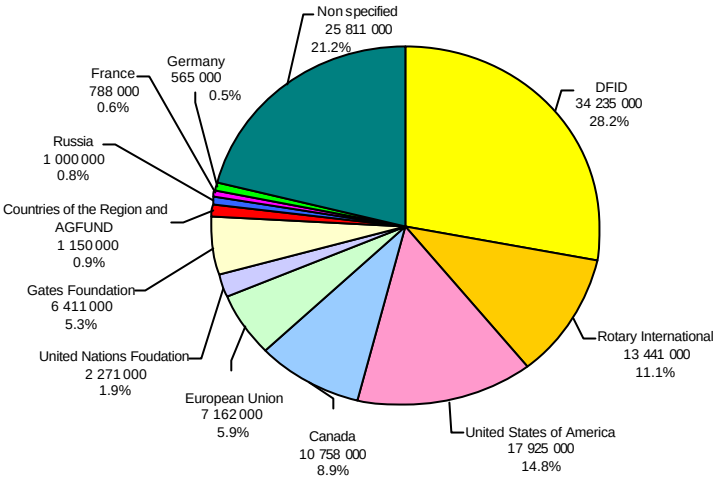

Figure 6. Major contributors to WHO supported activities in the Eastern Mediterranean Region (2004–2005)

Advocacy efforts for polio eradication in the Region are continuing. The Regional Director paid visits to endemic countries and recently re-infected countries and met with Heads of State, Prime Ministers, Ministers of Health and other senior national officials, who assured him of their continuing commitment to eradication efforts.

The issue of polio eradication was also discussed during the 2004 and 2005 meetings of the Organization of the Islamic Conference (OIC), whose 52 members include the remaining endemic countries in the Region. During the meetings, polio-endemic member countries reaffirmed their commitment to the eradication efforts, and other OIC countries were called upon to support the global polio eradication initiative.

Other advocacy efforts for the eradication initiative include the dissemination of information about the global, regional and country situations through periodic publishing of the PolioFax and updates on the situation in endemic and recently re-infected countries as well as the provision of technical and financial support to Member States in their efforts to eradicate the disease or maintain their polio-free status.

8. Challenges and future directions

1. The top priority for the regional polio eradication programme is to interrupt poliovirus transmission in Afghanistan and Pakistan, the remaining endemic countries, as soon as possible. Supplementary immunization will continue in 2006 with efforts to achieve the best possible quality to reach all targeted children despite security and other challenges. It is crucial to sustain the political commitment at all levels in these countries to ensure that this commitment is translated into accountability and better performance at grass-roots level.
2. It is of equal importance to stop transmission in Somalia and Yemen, and to support them and Sudan to regain their polio-free status, and to ensure maximum coordination with neighbouring countries to avoid gap areas at the borders, particularly with countries with known population movement into and through Djibouti, Somalia and Sudan.
3. It is also important to avoid large immunity gaps among children under 5, especially in countries that are recently polio-free and those with suboptimal routine immunization coverage. In addition

to efforts targeted to improve routine immunization activities in these countries, supplementary immunization activities should be planned to cover at least high risk and low coverage areas as long as the virus is circulating in or around the Region.

4. It is crucial to maintain certification standard surveillance in all countries of the Region until global certification is achieved. Sensitive, high-quality surveillance also allows early detection and hence timely response to any possible importation. Surveillance data will continue to be closely monitored and surveillance reviews will be implemented in both endemic and polio-free countries.

5. As the goal of poliomyelitis eradication approaches, certification and post-certification activities are becoming more important. It is therefore essential to complete the "survey and inventory" phase of laboratory containment of wild poliovirus in all countries and start preparations for eventual cessation of OPV use.

6. The financial resources required to implement the regional plan for eradication through 2008 must be made available in order to maintain the technical and operational support required to implement high quality eradication activities. Efforts to raise funds from the main donors are continuing. Mobilization of resources from within the Region is also a priority, and in this regard the recent contribution of the Government of Saudi Arabia of an initial 10 million Saudi riyals is a most welcome development.