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PROGRESS REPORT ON

ERADICATION OF POLIOMYELITIS

CONTENTS

1. INTRODUCTION

In May 1988, the Forty-first World Health Assembly committed Member States and WHO to the global goal of eradication of poliomyelitis by the year 2000 with the goal of certification by 2005 (WHA41.28). In October of the same year the Regional Committee for the Eastern Mediterranean adopted the target (EM/RC36/R.6) and in the next year adopted the regional plan of action for poliomyelitis eradication. The Regional Committee was kept informed of the progress achieved in 1993, 1994, 1997 and 1999. Regional Committee resolutions over this period have been instrumental in ensuring that Member States maintain and further their efforts in continuing to fully implement all the strategies recommended by WHO for poliomyelitis eradication until the target is achieved. One of the resolutions of the Regional Committee (EM/RC44/R.11) called on Member States to strengthen efforts especially in border areas and to give special attention to prevention of cross-border transmission of polioviruses.

The purpose of this report is to provide the Regional Committee with an update on the status and progress of poliomyelitis eradication in the Region particularly since the last report, which was submitted to the Forty-sixth Session of the Regional Committee (EM/RC46/INF.DOC.4).

2. SUMMARY

The regional programme to eradicate poliomyelitis continued to witness extraordinary progress through the implementation of all the critical eradication strategies in all countries of the Region. The most important developments during 1999 and 2000 include: successful acceleration activities in the countries where poliomyelitis is still endemic; remarkable improvement in surveillance; high quality performance in all activities; gaining access to all children in areas affected by conflict; and the political and financial support achieved through close partnership with many donors. Border-area coordination of immunization activities between neighbouring countries of the Region and also of neighbouring regions was pursued with great success. Efforts were also started in the important field of containment of wild polioviruses and potentially infectious material; this is an essential element in completing the eradication process. A regional plan has been prepared to achieve this goal and was endorsed by the Regional Certification Commission.

The main challenges still facing the programme in the Region include the ongoing wars, the sanctions and political isolation facing some countries, and the potential shortage of oral poliovaccine (OPV) which may adversely affect planned supplementary immunization activities.

3. STATUS OF POLIOMYELITIS TRANSMISSION IN THE REGION

The total number of reported cases of poliomyelitis in the Region during 1999 was 857, which is higher than 1998 due to marked improvement in surveillance and the occurrence of an outbreak in Iraq and an outbreak in Kunduz in Afghanistan. During 1999 indigenous wild

polioviruses were detected from six countries (Afghanistan, Egypt, Iraq, Pakistan, Somalia and Sudan). In addition, the Islamic Republic of Iran reported three cases which were proved to be linked to importation from Afghanistan or Pakistan. Cases were diagnosed on clinical grounds with no virus isolations from Djibouti and the Republic of Yemen. The remaining 14 countries reported zero cases, 11 of them for 3 or more consecutive years. In 2000, indigenous wild polioviruses are still being detected in considerable numbers in Afghanistan, Pakistan, and Sudan and an outbreak occurred in Somalia. A few cases were reported from Egypt and Iraq in the early months of 2000 and no more cases have been reported since then.

In addition to the valuable epidemiolgical information obtained through the genetic characterization of the wild polioviruses isolated from the Region, this service points to the significant progress made in poliomyelitis eradication as evidence of the decreasing genetic diversity of the viruses in the remaining endemic countries.

4. IMPLEMENTATION OF THE BASIC POLIOMYELITIS ERADICATION STRATEGIES IN THE REGION

4.1 High routine immunization coverage

Routine coverage with at least 3 doses of OPV has been maintained at 90% or more in 16 countries of the Region. During 1999 it improved significantly in the Republic of Yemen and continues to show improvement in Pakistan and Sudan. Efforts are continuing to achieve improvement in Afghanistan, Djibouti and Somalia where routine coverage is still very low.

It is to be noted that the infrastructure developed in the context of poliomyelitis eradication has been a great support to routine immunization. In addition, the strategies developed specifically for poliomyelitis eradication in order to gain access to children in areas lacking fixed health services, particularly in areas and countries in conflict including south Sudan, Somalia and Afghanistan, have been translated into sustainable outreach services providing routine immunization services. It is hoped that through support that could be available from GAVI (Global Alliance on Vaccines and Immunization) routine immunization coverage will be increased further.

4.2 National immunization days and other supplementary immunization activities

National immunization days (NIDs) or sub-NIDs were conducted by all countries except Cyprus. All endemic countries and those on the verge of interrupting transmission intensified their supplementary immunization activities. Afghanistan, Egypt and Iraq conducted more than one NID in 1999. Egypt conducted two NIDs (each of them 2 rounds) to interrupt transmission after the appearance of a few cases. Iraq conducted an extra NID in response to the epidemic that began in May 1999, and Afghanistan was successful in reaching almost all districts in the second NID. Pakistan and Sudan conducted sub-NIDs in high-risk and border areas.

The quality of NIDs/SNIDs improved significantly through ensuring a multisectoral approach, social mobilization, micro-planning and supervision, and most importantly through adoption and implementation of house-to-house delivery, particularly in high-risk areas.

Another important feature of the NIDs/SNIDs was the coordination between neighbouring countries which aims also at stopping cross-border transmission. This coordination within the Region, e.g. between countries of the Gulf Cooperation Council and those of the Maghrebian Union, and also between WHO Regions, as in the MECACAR (Middle East, Caucasus, Central Asian Republics) operation, Horn of Africa and countries of SAARC (the South Asian Association for Regional Cooperation).

4.3 Surveillance

Surveillance is the critical tool for identifying the remaining chains of transmission of the wild polioviruses and in directing response in the form of supplementary immunization. It is also the primary tool for certification of eradication.

Surveillance for acute flaccid paralysis (AFP) continued to improve all over the Region. In 1999 the AFP rate exceeded 1 per 100 000 children under 15 years: 1.15 as compared to 0.88 in 1998. Only two countries, Djibouti and Sudan, had rates less than 0.5 per 100 000 and all other countries have rates above or very near the optimal.

AFP surveillance is covering practically all areas in each country apart from a few areas in Afghanistan and Somalia. Efforts are continuing in order to ensure full and effective surveillance coverage all over the Region. WHO support in this regard included the recruitment of national surveillance officers and the provision of technical and logistical support, particularly communication and transport, and ensuring adequate laboratory support.

The laboratory network continued its substantial progress and all the laboratories in the network are accredited except for two laboratories which are provisionally accredited. Apart from the delay in transport of samples from the field to the laboratories (50% were received within 72 hours of collection), all the indicators of good laboratory and surveillance performance have been or have almost been achieved (70% of AFP cases had adequate stool specimens, 95% of specimens were received in good condition, 82% had results reported within 28 days and 9.5% had non-polio entero-viruses isolated). WHO efforts to strengthen laboratory services continued through training and provision of supplies and equipment. Efforts are also made to address the delay in transport of samples by facilitating the use of courier services.

It is gratifying to note that weekly reporting of surveillance data including laboratory results in continuing in an excellent manner. The weekly *Polio fax* is regularly issued by the Regional Office and immediately communicated by fax and e-mail to all responsible officers in ministries of health and to more than 200 institutions and persons in the Region and around the world.

5. CERTIFICATION OF POLIOMYELITIS ERADICATION

The regional activities for certification of poliomyelitis eradication are gaining momentum. The Regional Certification Commission reviewed reports from nine countries and found eight of them to meet certification standards. The Commission will continue to review reports of other countries that are currently poliomyelitis-free. It has also approved the format of an annual report which is expected from all countries whose reports were found to be satisfactory, until regional certification is achieved.

6. CONTAINMENT OF POLIOVIRUSES

One of the important issues related to poliomyelitis eradication, particularly in the post-eradication era, is the containment of wild poliovirus stocks that may be present in the diagnostic laboratories and also materials that may contain the wild virus. These will become the only possible source of polioviruses after cessation of human transmission. To prevent the possibility of an inadvertent escape of the wild virus from a laboratory, a regional plan has been prepared, as part of a global plan, for containment.

The first phase of the plan requires that each country makes a national inventory of laboratories that handle or store poliovirus isolates of potentially infectious materials and ensures that appropriate bio-safety requirements are met. The second phase, to be implemented one year after the detection of the last case due to natural infection with the wild poliovirus, requires all laboratories to destroy the remaining stocks or place them in a maximum containment laboratory where essential scientific work can continue. The third phase of the containment will be implemented after global cessation of OPV immunization and will require destruction of OPV stocks.

The regional plan has been endorsed by the Regional Certification Commission which has recognized the need for political commitment to implement the containment plan, particularly as it involves many sectors and research institutions outside the ministries of health that handle or store potentially infectious materials.

7. STOPPING IMMUNIZATION

The ultimate benefit from poliomyelitis eradication will only be gained after cessation of immunization, including substantial savings. WHO held a global consultation on this subject at which a research agenda was defined to address the potential for continued circulation of the vaccine-derived virus after cessation of immunization, the persistent shedding of the vaccine virus among immuno-deficient persons, and the need for new or different vaccines in the post-eradication era. The results of these studies will be analysed and a strategy will be developed for stopping immunization in the post-eradication era.

8. PARTNERSHIP SUPPORT AND ADVOCACY

The impressive progress towards poliomyelitis eradication in the Region is the result of extraordinary efforts on the part of national authorities and the support provided by a consortium of partners spearheaded by WHO, UNICEF, the Centers for Disease Control and Prevention (CDC), Rotary International, the United Nations Foundation and many others.

The largest share of human and financial resources for the eradication efforts in the Region have been committed by the Member States. The Regional Office continued to play its coordination role and provided continued technical and operational support to all national efforts for poliomyelitis eradication. At the same time, the Regional Office further strengthened its partnership with international agencies and governments supporting poliomyelitis eradication, particularly Rotary International, CDC, the United Nations Foundation, the Governments of Canada and the United Kingdom, the Health Ministers' Council for Gulf Cooperation Council States and many others. Through this coordination and the preparation of well documented plans of action it has been possible to secure all the resources required for the year 2000 in support of countries where the virus is still circulating. Of these resources, nearly US$ 23 million were channelled through WHO. In addition, the Regional Office is playing a key role in facilitating bilateral support to countries and in raising funds for the purchase of vaccines through UNICEF to several countries. It is to be noted with appreciation that the Health Ministers' Council for Gulf Cooperation Council States has agreed to provide US$ 1.5 million in support of poliomyelitis eradication in the Region. It is hoped that other contributions from regional agencies and organizations will follow.

In order to strengthen technical capacity, there are now 19 WHO professional staff working on poliomyelitis eradication in the Region. In addition over 50 short-term consultants are serving in priority countries that have not yet achieved interruption of poliovirus transmission. Moreover, nearly 200 nationals were recruited to support poliomyelitis eradication activities, particularly in countries where the ministry of health structure is either very weak or nonexistent.

A number of advocacy efforts were made on behalf of poliomyelitis eradication. Heads of States and Prime Ministers continued to demonstrate national commitment to poliomyelitis eradication, inaugurating NIDS in many countries. The Secretary-General of the United Nations has played a critical role in achieving days of tranquillity in war-affected countries to ensure implementation of NIDs. The Regional Director convened a multi-agency mission in Pakistan, the main reservoir of poliomyelitis in the Region, during which successful efforts were made with all Governors and senior government officials to promote immunization in general and poliomyelitis eradication in particular. Other advocacy efforts were made through continuous contact with national authorities during meetings of WHO Governing Bodies and in other forums.

9. CHALLENGES AND PRIORITIES

In spite of the significant developments and achievements in poliomyelitis eradication in the Region, many obstacles remain that must be overcome, in order to achieve the target in a timely manner. One of the main constraints facing some countries of the Region relates to the ongoing wars and the impact of sanctions and political isolation. These countries and areas pose a unique challenge to the eradication efforts as free access to all populations with respect to immunization and surveillance is limited. Another constraint is the inadequacy of routine immunization and surveillance activities in some countries, particularly among high-risk groups in densely populated areas or mobile populations, refugees or displaced persons. Shortage of OPV was another challenge that faced eradication acceleration efforts in 1999. The uncertainties with regard to delivery of vaccines for planned NIDs adversely affected planned activities and resulted in cancellation of some rounds and postponements of others. The problem is not solved yet and is expected to continue to affect planned supplementary immunization activities throughout 2000. There are regional capabilities for production of OPV available, particularly in the Razi Institute of the Islamic Republic of Iran. If this capability had been exploited in line with the regional initiative for self-reliance in the production of vaccine launched by the Regional Office in the early 1990s, it would have been possible to produce OPV in quantities that would cover some of the shortfalls in the global market.

Sustaining national commitment to continued implementation of all the strategies for poliomyelitis eradication, even as the disease disappears, is critical to success. Some countries are considering stopping supplementary immunization despite the fact that their surveillance sensitivity remains below certification standards, or they neighbour on highly endemic areas, or they are exposed to importation which they are not yet prepared to address effectively. Experience from other regions has clearly demonstrated that such action may jeopardize progress towards poliomyelitis eradication.

The financial support required for the regional plan for eradication through 2005 must be met in order to ensure that the acceleration plan is not delayed. It is very much hoped that contributions from within the Region will be forthcoming, particularly as these have so far been below expectation. The Regional Committee has emphasized this issue in the past (EM/RC44/R.11) and it is hoped that it will be more effectively pursued in future.

10. PRIORITY ACTIONS FOR 2000–2001

a) **Acceleration of eradication efforts** all over the Region and particularly in countries where the virus is still circulating and those suffering from wars, internal conflicts and political isolation. This will include:

- improving routine immunization coverage;
- ensuring high quality NIDs and introduction of house-to-house immunization at least in high-risk areas;

- rigorous implementation of AFP surveillance ensuring comprehensive coverage and appropriate laboratory support;
- ensuring that sufficient human and financial resources are available to accelerate eradication activities.

b) Priority actions according to status of progress towards poliomyelitis eradication

Group 1. Endemic countries

This group includes countries with virologic and/or epidemiological evidence of endemic transmission or insufficient evidence to rule out circulation: Afghanistan, Djibouti, Iraq, Pakistan, Somalia and Sudan.

The priorities in these countries are to:

- carry out intensified NIDs and mopping-up operations; 2 rounds of NIDs each year (2 doses each or if possible 3) should be conducted;
- develop and implement plans of action to achieve the high quality needed to interrupt poliomyelitis transmission (both in surveillance and in supplementary immunization); and
- strengthen routine EPI activities.

Group 2. Recently endemic countries

This group includes countries where no poliomyelitis was detected for a year or more in the presence of adequate surveillance, and those that may be at high risk of sustained transmission of imported virus (due to geographic proximity to an endemic country or low routine coverage or inadequate surveillance): Egypt, Islamic Republic of Iran, Jordan and Republic of Yemen.

The priorities in these countries are to:

- maintain at least one annual NID or SNID each year in high-risk areas including areas bordering with endemic countries; and
- ensure reaching certification standard for surveillance.

Group 3. Countries with no poliomyelitis cases for a number of years but whose surveillance systems are not to the standard that would make the Regional Certification Commission convinced of the absence of wild virus circulation: Lebanon, Libyan Arab Jamahiriya, Morocco, Qatar and United Arab Emirates.

The priorities in these countries are to :

- boost surveillance activities to certification standard;

- maintain high routine immunization coverage;
- have a national plan to address importation; and
- conduct annual NID or SNID in any area where routine immunization coverage decreases and in the face of importation.

Group 4. Countries with virologic and epidemiological evidence of having eliminated wild poliovirus circulation and whose programmes have reached certification standards. These countries may be at low risk of indigenous transmission of imported virus due to high routine immunization coverage and maintenance of certification standard surveillance: Bahrain, Cyprus, Kuwait, Oman, Palestine, Saudi Arabia, Syrian Arab Republic and Tunisia.

The priorities in these countries are to:

- maintain high routine immunization coverage;
- maintain certification standard surveillance;
- have a national plan to address any importation;
- conduct targeted supplementary immunization activities in areas or for population groups with low coverage or weak surveillance or in the face of importation.

c) **Ensure implementation of the first phase of the regional plan for containment of polioviruses;** i.e. each country makes a national inventory of all laboratories that handle or store wild poliovirus isolates or potentially infectious materials and ensures that they are destroyed or kept under conditions of appropriate bio-safety.

d) **Continue the certification activities** including enhancement of the roles of National Certification Committees (NCCs) and the role of the Regional Certification Commission in reviewing initial reports and annual progress reports from NCCs and in assessing progress made in the implementation of the regional plan for containment of polioviruses.