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## **Progress report on eradication of poliomyelitis: regional implications of the endgame strategy**

### **Introduction**

1. In May 2012, the Sixty-fifth World Health Assembly in resolution WHA 65.5 declared the completion of poliovirus eradication a programmatic emergency for global public health. The Global Polio Emergency Action Plan 2012–2013 was launched on 24 May 2012 to support national action in the three remaining countries in which the disease is endemic, namely Afghanistan, Nigeria and Pakistan. Emergency operations centres and procedures have been activated across the core partner agencies. The global incidence of polio is now at the lowest level ever globally. However, if eradication fails, 200 000 cases could occur globally every year.
2. In response to the 2012 Health Assembly resolution, the regional polio eradication programme, together with polio eradication partners, moved into emergency operating mode to support more effectively the endemic countries, Pakistan and Afghanistan, as well as other priority countries, particularly in building their technical capacity.
3. The Health Assembly also asked for the development and rapid finalization of a comprehensive polio eradication and endgame strategic plan 2013–18. In January 2013, the WHO Executive Board reviewed and endorsed the draft plan's goals, objectives and timelines. Major elements that distinguish this plan from previous strategic plans include: strategic approaches to end all polio disease (wild and vaccine-related); an urgent emphasis on improving immunization systems in key geographical areas; the introduction of new, affordable inactivated poliovirus vaccine (IPV) options for managing long-term poliovirus risks and potentially accelerating wild poliovirus eradication; risk mitigation strategies to address new threats, particularly insecurity in some endemic areas, and contingency plans should there be a delay in interrupting transmission in such reservoirs; and a concrete timeline to complete the programme.
4. The plan also outlines a legacy planning process to harness the lessons and infrastructure of the global polio eradication initiative to deliver other critical health and development resources and, ultimately, complete the eradication of polio.
5. The appropriate policy, strategies, tools and technical support are being provided to all countries of the Eastern Mediterranean Region to ensure that all countries of the Region are free from poliomyelitis and also to achieve global and regional targets of polio eradication. The strategies to achieve the completion of polio eradication include maintaining high population immunity through routine as well as supplementary immunization, acute flaccid paralysis (AFP) surveillance and laboratory support, preparedness to respond to any importation, focusing on the few remaining reservoirs in Pakistan and Afghanistan, and finally, containment and certification activities.
6. During the 59th Session of the Regional Committee for the Eastern Mediterranean, all countries of the Region pledged to support polio eradication in Pakistan and Afghanistan, politically as well as

financially. An advocacy hub has been established at the Regional Office to support the two endemic countries to resolve issues related to misconceptions about polio vaccination. In some parts of Pakistan and Afghanistan, misguided religious perceptions are hampering safe passage of vaccination teams, and in some areas have even led to an outright ban on vaccination and attacks on staff and polio health workers. To address this challenge, the Regional Office organized a consultation for Islamic scholars, who strongly recommended constituting a forum of Islamic scholars, institutions and technical experts to support polio eradication. A follow-up meeting of Islamic scholars in Pakistan issued a statement strongly condemning the killing of health workers and expressing solidarity for the vaccination of children.

### **Situation in endemic and high-risk countries of the Region**

7. Polio eradication underwent significant developments during the past year. Epidemiologically, wild poliovirus (WPV) transmission is at lowest recorded levels ever, with fewer cases in fewer districts of Afghanistan and Pakistan. No cases due to WPV type 3 have been recorded anywhere since April 2012. However, these achievements are seriously threatened by security challenges that have been reducing access to children in several areas and that have claimed the lives of a considerable number of vaccinators, particularly in Pakistan and Nigeria.

8. Pakistan and Afghanistan are the Region's remaining endemic countries, where polio circulation has never been interrupted. Recently an outbreak of cases due to WPV type 1 was reported from Somalia. Yemen is also at high risk because of low population immunity and high population movement, resulting in the circulation of vaccine-derived polioviruses (cVDPVs). Other countries at increased risk include South Sudan, Syrian Arab Republic and Djibouti.

#### *Pakistan*

9. The Government of Pakistan has augmented the national emergency action plan developed in 2012, initiating remedial measures to address the problems, including consistent government oversight, ownership and accountability at each administrative level. Considerable progress was achieved during 2012, with a total of 58 cases due to WPV (55 WPV type 1, two WPV type 3, and one WPV1/WPV3 mixed infection) reported. Compared with 198 cases (196 WPV1 and two WPV3) in 2011, this represents a 71% decrease. In 2013, as of 9 June, only 14 cases have been detected. No WPV3 cases have been reported since April 2012 in Khyber Agency of the Federally Administered Tribal Areas (FATA) and WPV3 was not detected from environmental samples during 2011–2012.

10. The augmented national emergency action plan continues to focus on improving programme accountability, management, and oversight at all administrative levels. Coordination has improved through the establishment of polio control rooms at national and provincial levels. Engagement of district chief executives has allowed the involvement of all government sectors to assist vaccination efforts and ensured stringent accountability for performance in polio eradication. In reservoirs, high-risk areas and outbreak areas, short interval additional doses are being used to raise the level of protection as fast as possible. Special strategies are being implemented to identify, track and vaccinate chronically missed children. Other actions include improving monitoring and evaluation and increasing technical support and human resources through the placement of polio staff at the lowest administrative levels.

#### *Afghanistan*

11. In 2012, the Government of Afghanistan developed a national emergency action plan for polio eradication aimed at improving management and accountability, reducing inaccessibility, increasing

community demand and strengthening the routine immunization programme. In line with the plan, WHO, UNICEF and other partners recruited additional staff at district, province and national level for the timely and efficient implementation of priority actions towards the interruption of poliovirus transmission by 2014. In 2012, Afghanistan reported 37 polio cases, as compared to 80 in 2011. Two cases have been reported up to end June 2013, as compared to 11 during the same period in 2012.

12. In 2013, Afghanistan has re-evaluated operational strategies in the southern region and newly infected areas in the eastern and south-eastern regions. It has introduced permanent polio vaccination teams, appointed district EPI management teams in poorly performing districts and focused on improving routine immunization services in 28 districts, with the involvement of the nongovernmental organizations implementing the basic package of health services. The Ministry of Public Health has also constituted an inter-ministerial task force at the national level and a provincial task force for the polio endemic provinces in the southern region. A policy advisory group chaired by the Minister of Public Health reviews the situation on the regular basis and provides guidance to the programme. In addition to these steps being taken to interrupt poliovirus transmission in the endemic areas, efforts are continuing to sustain good immunization coverage in all accessible areas.

13. The WHO Regional Director for the Eastern Mediterranean visited Pakistan and Afghanistan to advocate for sustained political commitment at the highest levels. A management and accountability framework was introduced in the high-risk districts of both countries. Strong cross-border cooperation is being maintained through the regular sharing of information and synchronization of supplementary immunization activities and by organizing meetings of both country teams at least once a year to discuss the operational issues and develop a common approach. Migrant populations are a high-risk group carrying the virus within each country and in the known corridors of transmission between Afghanistan and Pakistan. The outbreak of cVDPV is another challenge for Afghanistan and Pakistan that requires coordination to address.

### *Somalia*

14. In Somalia the inability to reach and vaccinate children (more than 800 000 target children) in inaccessible areas of the south-central zone controlled by anti-government elements resulted in an outbreak due to type 1 poliovirus reported in May 2013. In the last quarter of 2012, as a result of military action, many of the districts in south-central Somalia became accessible. The number of target children in the newly accessed districts is 383 664 (604 558 remain inaccessible). In some districts, accessibility is limited to the district centre.

15. An emergency action plan was developed by WHO and partners to respond to the outbreak and includes intensification of supplementary immunization activities, AFP surveillance and communication activities. An interregional meeting was held to harmonize the vaccination and surveillance activities between Somalia, Kenya and Ethiopia. Yemen, a neighbouring country at high risk, also attended the meeting. The major objective was to coordinate efforts to control the outbreak in the shortest possible time.

### *Yemen*

16. The cVDPV outbreak in Yemen is indicative of the large population immunity gap resulting from chronic low routine immunization coverage and lack of high-quality supplementary immunization activities. In response to the outbreak, Yemen conducted national immunization day campaigns (NIDs) in January and June 2012 and a subnational campaign in November. Oral poliovaccine was also added to a

measles catch-up campaign in 2012. The supplementary immunization activities conducted in 2013 include an NID in January and a campaign for high-risk governorates in June. Another NID is planned for early July. The risk of importation from Somalia is very high due to considerable population movement and the presence of refugee camps.

### *Egypt*

17. In Egypt, a non Sabin-like poliovirus type 1 was isolated from sewage in two sites (Al Haggana and Al Salam) in greater Cairo in samples collected on 2 and 6 December 2012. Genetic sequencing showed the virus is related to one detected in Sindh, Pakistan in September 2012. The Government of Egypt and global polio eradication partners launched an urgent response that included increased frequency of environmental sampling and the introduction of contact sampling. Supplementary immunization activities were conducted in February, March and April 2013.

### *Occupied Palestinian territory*

18. WPV1 was recently isolated from a sewage sample collected from Tulkarem in the West Bank. No human case has been reported. This is the first report from the West Bank, although WPV1 has been isolated from sewage samples collected from many sites in Israel since February 2013. Genetic sequencing and epidemiological investigations have established that the virus reported from Israel is genetically linked to WPV1 found in Pakistan in mid 2012 and to WPV1 detected in sewage samples in Cairo, Egypt in December 2012. To date, no polio cases have been reported in Israel. Nucleotide sequencing of the West Bank isolate is awaited.

## **Implementation of regional polio eradication strategies**

19. Key AFP surveillance indicators (i.e. non-polio AFP rate and percentage of adequate stools) at the national level are reaching international certification standard across the Region. However, subnational data analysis has highlighted gaps in indicators, which are more significant for the countries that have been polio-free for many years. All the countries of the Region except Morocco have maintained the expected non-polio AFP rate per 100 000 children under the age of 15 years. The percentage of AFP cases with adequate stool collection is above the target of 80% except in Djibouti, Lebanon and Tunisia.

20. All countries provide AFP surveillance data to the Regional Office on a weekly basis. The data are analysed and published in the PolioFax report, which is distributed weekly to countries, partners and donors and is available on the Regional Office website.

21. The Regional Office is providing technical support to Member States, arranging adequate financial resources to carry out all the important activities at the country level, organizing the appropriate forums to discuss country-specific issues and providing advice on ongoing strategies and approaches, laboratory network support and accreditation, intercountry and interregional coordination, coordination with partners and national governments, containment and certification and necessary logistic support.

22. A risk assessment model was used to assess the risk of outbreak following wild poliovirus importation and mitigating measures were conducted in response. The regional polio eradication programme continued efforts in 2012 to increase cooperation with countries in other WHO regions, particularly for the Horn of Africa.

23. Supplementary immunization activities continue to play an important role in the Region to ensure that all children less than 5 years of age are vaccinated against polio. Ten polio-free countries with risk of

importation (Djibouti, Egypt, Iraq, Islamic Republic of Iran, Jordan, Libya, Saudi Arabia, Sudan, South Sudan, Syrian Arab Republic) conducted supplementary immunization activities in 2012 with a focus on areas with high-risk populations and low routine immunization coverage. Other vaccination opportunities, such as measles campaigns and Child Health Days, are also used to deliver additional doses of oral poliovaccine in order to boost population immunity.

24. All regional poliovirus network laboratories are fully accredited. During 2012, the network laboratories processed nearly 27 000 specimens from AFP cases, contacts, healthy children and others. Laboratory performance is being maintained at certification standard. The real-time polymerase chain reaction (PCR) method for rapid characterization of polioviruses is being performed in 7 of 12 network laboratories.

### **Challenges and future directions**

25. Interrupting poliovirus transmission in Afghanistan and Pakistan is the major challenge in the Region and globally, followed by stopping the Somalia outbreak as soon as possible. In the polio-free countries of the Region, the priority is to maintain high population immunity, certification standard AFP surveillance and the capability to detect any importation.

26. Stopping polio transmission in the remaining reservoirs is a key component of the new polio eradication and endgame strategy 2013–2018, which was endorsed by the Health Assembly in May. The plan presents a roadmap for the eradication of WPV and elimination of risk of VDPVs. This includes the universal introduction of IPV into the routine immunization programme, strengthening immunization systems and the phased removal of oral poliovirus vaccine, beginning with a switch from trivalent to bivalent oral poliovirus vaccine.

27. Strong commitment is needed by all Member States and WHO, as well as other global polio eradication initiative partners who are committed to providing Member States with the assistance required to ensure implementation of these strategies.

28. A regional action plan is being developed and will be shared with all Member States. Full implementation of the new strategic plan will secure a lasting polio-free world for future generations. Progress in the implementation of aspects of the plan will be evaluated closely by stakeholders and donors; the leadership of Member States will be critical to ensure its success.

29. WHO will continue conducting risk assessments and sharing the results with Member States while at the same time encouraging them to conduct subnational risk assessments and to take corrective measures. Optimizing collaboration between the polio eradication programme and national immunization programmes to improve routine immunization coverage is crucial to sustain the gains made in countries. Strong coordination and collaboration with other WHO offices, particularly for the Horn of Africa, will be critical to prevent importations and maintain polio-free status.