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## **Progress report on eradication of poliomyelitis**

### **Introduction**

1. The Eastern Mediterranean Region is currently the only region in the world reporting wild poliovirus. In 2015, only two countries, Pakistan and Afghanistan, have reported cases. The world is therefore looking to the Region to provide leadership in the final stages of global polio eradication.
2. Foci of endemic circulation in both Pakistan and Afghanistan continue to delay global polio eradication and to impose the risk of international spread, particularly to countries at risk due to conflict and expanding areas of inaccessibility. The completion of poliovirus eradication in these two endemic countries continues to be jeopardized by lack of safe access to children in conflict-affected areas and inconsistent improvement in the quality and coverage of supplementary immunization activities in key areas. The most recent meeting of the Emergency Committee on Polio Eradication under the International Health Regulations 2005 (IHR) designated both countries as exporters of wild poliovirus and re-iterated recommendations on immunization of travellers to reduce the risk of wild poliovirus spread.
3. The governments of the endemic countries and their partners are making extraordinary efforts to overcome these challenges. After a very difficult year in 2014, with widespread transmission in both countries, the governments and their partners developed robust emergency plans for 2015, the initial implementation of which has resulted in a 65% reduction in the number of cases reported to date in 2015 compared with the same period of 2014. Member States have regularly pledged their commitment to stop poliovirus transmission in the Region and to provide all possible support to Pakistan and Afghanistan, most recently at the World Health Assembly in May 2015.
4. The outbreaks of polio in the Middle East (Syrian Arab Republic and Iraq) and Horn of Africa (Somalia) in 2013–2014 have been successfully controlled, and large multi-country epidemics have been prevented as a result. The date of onset of the most recent case from the Middle East is April 2014 from Iraq and the most recent from the Horn of Africa is August 2014 from Somalia.
5. The polio eradication endgame strategic and legacy plan is on track. A major objective of the endgame plan is the withdrawal of oral polio vaccine (OPV) in a phased manner, starting with type 2-containing OPV. Good progress is being made with the introduction of at least one dose of inactivated poliovirus vaccine (IPV) into routine immunization schedules in the Region, and the target for the switch from trivalent to bivalent oral poliovirus vaccine for all OPV use remains April 2016.
6. The Region has substantially enhanced support to priority countries for polio eradication, with the Regional Director undertaking advocacy missions to infected areas, supporting the role of the Islamic Advisory Group (IAG) in reaching out to religious leaders, technical experts and Islamic institutions across the Region, enhancing cross-border coordination and inter-regional collaboration, convening emergency consultations to align partner support, and providing additional direct financial support to strengthen eradication activities in infected areas.

### **Progress to date**

7. As of 11 June, only 27 polio cases have been reported in 2015 from 2 countries, Pakistan (24) and Afghanistan (3). This represents more than a 70% reduction in the number of polio cases reported

globally compared to the same period of 2014, and a 65% reduction in cases in these two endemic countries. Wild poliovirus type 1 has also been isolated from environmental samples from Pakistan and Afghanistan. Circulating vaccine-derived poliovirus (cVDPV) was only reported from Pakistan in 2014, with isolates also detected in the environment in Karachi in early 2015.

8. Seventeen countries in the Region are currently sustaining polio-free status, and three (Iraq, Somalia and Syrian Arab Republic) are in the final stages of responding to outbreaks. The priority in polio-free countries is to maintain high population immunity, certification standard AFP surveillance and the capability to detect and respond to any importation, and to continue conducting risk assessments and taking measures to reduce risk. There has been no type 3 wild poliovirus (WPV3) detected for almost three years from either acute flaccid paralysis (AFP) cases or environmental surveillance. AFP surveillance certification standard indicators are maintained and certification documentation and containment reports were submitted and reviewed by the Regional Commission for Certification of Poliovirus Eradication in April 2015. Re-infected countries re-submit basic national documentation after one year from the date of onset of the last WPV. All national poliovirus laboratories in the Region, and the reference and specialized laboratories, have been fully accredited.

9. Technical support to polio endemic, outbreak, and at-risk countries has been accelerated through the recruitment of national and international staff supported by consultants, including short-term Stop Transmission of Polio (STOP) consultants seconded from the United States Centers for Disease Control and Prevention. In addition, teams of experts constituting both regional and country technical advisory groups, extend technical support to the national programmes on strategic directions.

10. The first meeting of the IAG was held in February 2014 in Jeddah. The objective of the IAG is to provide high-level global leadership and guidance for building ownership, solidarity and support for polio eradication across the Muslim *ummah* (community). The meeting outcome was the Jeddah Declaration, which reasserted the compatibility of polio vaccines with Islamic sharia and tenets, strongly condemned the killing of health workers, and approved the IAG plan of action to support polio eradication activities in areas of conflict and vaccination bans (Pakistan and Somalia). An international conference of Muslim scholars was held in Islamabad, Pakistan, which garnered the support of religious figures throughout the country. A meeting of Somali experts and ulema was also held in Khartoum, Sudan, to pave the way for the creation of at least three subregional action groups in three regions of Somalia, along the lines of Pakistan's national IAG in support of immunization services. The global IAG held its second meeting in Cairo on 6 May 2015 under the auspices of Al Azhar Al Sharif. The meeting endorsed a comprehensive action plan for 2015 and 2016, focusing on the priority areas in the endemic countries and countries at risk of polio importation. The IAG members decided to enlarge the scope of work of the IAG to include other priority key health issues.

11. Coordination with other WHO regions, especially the African Region, is continuing. The effective response to Horn of Africa outbreak is an impact of the close and direct coordination between the two regions. The Technical Advisory Group for the Horn of Africa is supported by both regions and provides technical advice and support to the countries of both regions.

### **Situation in polio-endemic countries**

12. As noted by the national technical advisory groups, Pakistan and Afghanistan form a single epidemiological block, and this block is currently the only known polio-infected area in the world. The implementation of the national emergency plans developed for 2015 is already beginning to have an impact, with a 65% reduction in the number of polio cases reported from Pakistan and Afghanistan in the period from January to 11 June 2015 compared to the same period in 2014. The number of inaccessible children in the Federally Administered Tribal areas of Pakistan has been reduced from 300 000 to less than 50 000. However, many challenges remain. Almost 120 000 children are unreached in the southern and eastern regions in Afghanistan due to security challenges and local bans on

immunization, and circulation of wild poliovirus continues in the remaining pockets of inaccessible children in Pakistan. Quality improvement in the delivery of immunization to children has been uneven, with significant numbers of children still being missed in key areas due to inadequate training of vaccinators, inadequate microplans, poor supervision and weak oversight. The emergency plans in both countries have introduced innovative measures in 2015 to address the challenges in accessing children and improving quality, including the recruitment of female community workers, community protected campaigns, permanent polio vaccination teams, vaccination at the transit points, and introduction of IPV in difficult to access and high-risk areas. Due to the long border and extensive population movement between Pakistan and Afghanistan, there is a clear need for well coordinated activities to stop poliovirus transmission in the residual endemic foci in both countries. These strategies will, if fully implemented, have a significant impact on the improvement of quality in 2015.

13. Political commitment at the highest level in both the countries is absolutely necessary and this commitment is growing. The establishment of emergency operation centres has given the governments the opportunity to demonstrate strong leadership and to coordinate more effectively with partners, and this has given new momentum and impetus to the programme.

### **Situation in polio outbreak countries**

14. Somalia reported 5 cases in 2014, all from the Mudug region. All 5 cases occurred in nomadic–pastoralist families. These cases were a continuation of the 2013 outbreak which continued for more than 12 months; the date of onset of the last case in Somalia was 11 August 2014. There have been no polio cases reported in 2015. In line with the Horn of Africa Technical Advisory Group recommendations, a Somalia emergency action plan (October 2014–March 2015) was developed and implemented, focused on reaching nomadic populations. The Horn of Africa Technical Advisory Group continues to oversee and regularly assess the situation of the outbreak.

15. In the Middle East, in 2014, 3 polio cases were reported, one from Syrian Arab Republic and 2 from Iraq, in continuation of the outbreak which began in Syrian Arab Republic in October 2013. The date of onset of the last case was 7 April 2014 from Iraq. The Emergency Committee under the IHR has now removed both Syrian Arab Republic and Iraq from the list of infected states.

16. The strong working relationship among all the polio partners has been a critical factor in responding to these outbreaks. Coordination between the regional offices for Africa and the Eastern Mediterranean, and with the regional offices of UNICEF, has been extremely constructive. Preventive vaccination campaigns were conducted in countries at particular risk, including Djibouti, Egypt, Jordan, Lebanon, Palestine, Sudan and Yemen, with special focus on refugees, migrants and internally displaced persons. This was crucial in preventing further virus spread.

### **Surveillance for acute flaccid paralysis**

17. In view of the presence of endemic foci of poliovirus circulation in parts of Pakistan and Afghanistan, ongoing conflicts in several countries in the Region resulting in expanding inaccessibility and deteriorating immunization coverage, and the extensive population movement between the endemic countries and other Member States, the risk of polio importation remains high. Surveillance improvement plans are being developed and training conducted to enhance the capacity of Member States to detect and respond to any importation of wild poliovirus. Polio-free countries are encouraged to conduct simulation exercises to field test the appropriateness of their preparedness and response plans. New standard operating procedures for outbreak response have been developed and shared.

18. Key AFP surveillance indicators (i.e. non-polio AFP rate and percentage of adequate stools) at the national level are reaching international certification standards in most countries of the Region. In 2014, all countries maintained the expected non-polio AFP rate of 2 per 100 000 children under the

age of 15 years in 2014 except Djibouti, Morocco, Palestine and Tunisia, and the percentage of AFP cases with adequate stool collection was above the target of 80% except in Djibouti, Lebanon and Morocco. In 2015 to date there has been further improvement, and all countries have achieved the target non-polio AFP rate except Morocco and Tunisia. The percentage of AFP cases with adequate stool collection is above the target of 80% except in Bahrain, Djibouti, Morocco and Tunisia. Subnational data analysis has highlighted gaps in the performance indicators, which are more significant for the countries that have been polio-free for many years. All countries provide AFP surveillance data to the Regional Office weekly. The data are analysed and published in the Polio Fax report that is shared on a weekly basis with ministries of health, partners and donors.

19. Every six months an assessment of the risk of wild poliovirus outbreak following importation is carried out for the countries of the Region. This assessment has allowed interventions with countries to reduce surveillance and immunization risks. The regional polio team will continue to conduct these risk assessments and share the data with Member States. Environmental surveillance has proved to be very useful tool and there are plans for expansion in 2015 and 2016.

20. All regional poliovirus network laboratories are fully accredited and passed proficiency testing (PT) panels of virus isolation and intratypic differentiation (ITD). The laboratory performance indicators are maintained at certification standards. The workload of the network laboratories is very high. In 2014, the laboratories processed 30 883 specimens from AFP cases, 6984 from contacts and 870 environmental surveillance samples. Overall, 94% of specimens had culture results within 14 days, 95% had ITD results within seven days of virus culture positive referral and 97% of final laboratory testing results were provided within 45 days of paralysis onset. The real-time polymerase chain reaction (rRT-PCR) method for rapid characterization of polioviruses was implemented in seven of 12 network laboratories, and two new national poliovirus laboratories were trained in rRT-PCR for the implementation of ITD methods. The Pakistan laboratory continued to provide nucleotide sequencing results of WPV in a timely manner to both Pakistan and Afghanistan polio eradication programmes. The Egypt laboratory has supported the reporting of WPV importation into Egypt by testing environmental samples and also supports testing of AFP cases from Iraq, Syrian Arab Republic and Yemen. Funds have been secured to establish a poliovirus sequencing laboratory at VACSERA Egypt.

### **Supplementary immunization activities**

21. Supplementary immunization activities are the key strategy to rapidly build population immunity. Polio-free countries with a risk of importation (Djibouti, Egypt, Islamic Republic of Iran, Jordan, Lebanon, Palestine, Yemen, Libya, Saudi Arabia and Sudan) conducted supplementary immunization activities in areas with high-risk populations in an effort to boost and maintain population immunity of high-risk groups. Other vaccination opportunities, such as measles campaigns, are used to deliver additional doses of OPV to help boost population immunity.

22. Iraq, Somalia and Syrian Arab Republic are continuing to conduct a series of vaccination campaigns in the later phase of their outbreak control responses. Afghanistan and Pakistan continue to implement an extensive supplementary immunization strategy as recommended by their respective national technical advisory groups. Mop-up activities are implemented in response to the isolation of WPV in newly-infected areas. Both countries have taken maximum advantage of bivalent oral polio vaccine (bOPV) and used IPV in selected areas.

23. Finger-marking of vaccinated children is being used to verify the vaccination coverage. Independent monitors are employed to observe and assess the outcome of campaigns, and their findings help to pinpoint problems which are subsequently addressed by the responsible authorities. All countries report campaign data to the Regional Office to allow analysis of programme performance. In Afghanistan, Pakistan, and now in Iraq, some high-risk districts are also conducting lot quality assurance sampling as a method to further assess campaign quality.

### **Polio eradication endgame strategic and legacy plan**

24. Despite significant investments, routine immunization coverage remains suboptimal at the national level, and with large gaps at subnational level, in high-risk countries. Under the global polio eradication endgame plan, WHO is supporting the introduction of at least one dose of IPV in 2015 and preparations for the switch from trivalent oral polio vaccine (tOPV) to bOPV in 2016. In priority countries (Afghanistan, Pakistan and Somalia), plans are being implemented to achieve the optimal use of Global Polio Eradication Initiative assets to improve and sustain routine immunization. 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.

### **Improving the quality of life of polio victims**

25. The polio eradication programme continues to provide polio-affected children in Pakistan with physical as well as social rehabilitation services. These services include physiotherapy, provision of orthotics and other corrective devices and facilitating schooling, thereby helping polio survivors become independent and productive members of the community.

### **Challenges and actions**

26. Stopping transmission of poliovirus in the few remaining endemic foci in Afghanistan and Pakistan is a serious challenge that must be overcome in order to achieve global polio eradication. In Afghanistan and Pakistan, achieving access to all children and high quality immunization campaigns is vital to success. Operational challenges and low quality immunization activities in key reservoir areas in both countries must be addressed through tight monitoring and stronger partnerships, coordinated through emergency operating centres at national and subnational levels.

27. The status of the outbreaks in the Middle East and Horn of Africa are assessed at regular intervals through formal reviews of the impact of the activities planned and conducted, and necessary recommendations to further reduce risks are made by the review teams. With both outbreaks in the final stages of control, the next phase plans will have a strong focus on re-building routine immunization services.

28. In the polio-free countries of the Region, the priority is to maintain high population immunity, certification-standard AFP surveillance, and to develop robust polio importation preparedness plans. Bahrain and Oman have field tested their preparedness plans through simulation exercises and other countries of the Region are urged to do so. The regional team will continue conducting risk assessments to share with Member States and encourage them to conduct subnational risk assessments and take corrective measures.

29. Optimizing the synergy between the polio eradication initiative and the Expanded Programme on Immunization (EPI) to improve routine coverage and strengthen basic immunization systems is critical to sustain the gains made. Strengthened coordination with other WHO regional offices and ensuring the availability of required financial resources continues to be a priority.