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Progress report on eradication of poliomyelitis

Introduction

1. The progress in 2015 and 2016 towards achieving the objectives of the Polio Eradication and Endgame Strategic Plan 2013–2018 has been significant. With endemic poliovirus transmission limited to few discrete zones in Afghanistan and Pakistan, wild poliovirus transmission is at the lowest level in history.

2. The globally synchronized switch from trivalent oral polio vaccine (tOPV) to bivalent oral polio vaccine (bOPV) was implemented successfully; all countries of the Eastern Mediterranean Region stopped using trivalent oral polio vaccine by May 2016.

3. All countries submitted annual updates or progress reports to the Regional Commission on Certification of Poliomyelitis Eradication (RCC) in early 2016. Wild polioviruses type 2 and vaccine-derived polioviruses type 2 (VDPV2) in the laboratories of the countries of the Region were either destroyed or transferred to essential facilities. One vaccine production facility in the Region is considered a polio-essential facility.

4. Polio transition planning has started at the regional level and in the four priority countries with a significant presence of polio assets and infrastructure: Afghanistan, Pakistan, Somalia and Sudan.

5. The emergency committee under the International Health Regulations (IHR) (2005) on the international spread of poliovirus, in its ninth meeting in May 2016 considered that the current epidemiology of wild poliovirus and circulating vaccine-derived polioviruses (cVDPVs) still constitutes a public health emergency of international concern and consequently the temporary recommendations remain in effect for the next three months. Afghanistan and Pakistan remain on the list of states currently exporting wild poliovirus. Somalia remains on the list of states no longer infected by wild poliovirus or cVDPV, but which remain vulnerable to international spread and to the emergence and circulation of VDPV, while Iraq has been removed from this list.

Progress to date

Interruption of wild poliovirus transmission

6. As at 17 July 2016, 19 confirmed polio cases due to type 1 wild poliovirus had been reported globally in 2016, from the two remaining polio endemic countries (Afghanistan and Pakistan), compared to 36 cases reported from both countries during the same period of 2015. On 20 September 2015, the Global Commission for the Certification of Poliomyelitis Eradication declared the global eradication of wild poliovirus type 2. Wild poliovirus type 3 has not been detected globally since November 2012.

Endemic countries

7. Afghanistan and Pakistan are considered as one epidemiological block due extensive population movement and sharing of polioviruses between the two countries. In Afghanistan 6 cases have been reported to date in 2016 compared to 7 cases reported during the same period of 2015, while Pakistan has so far reported 13 cases in 2016 compared to 29 in the same period of 2015.

8. The governments of Afghanistan and Pakistan and their implementing partners have developed robust national emergency action plans including innovative strategies to reach chronically missed children and those living in inaccessible areas. Emergency operation centres have been established at national and subnational levels in both countries to coordinate the efforts of governments and partners and to closely monitor implementation of the national emergency action plans.

9. Inaccessibility and insecurity in some areas of the two endemic countries, which limit access to children, and problems with ensuring high quality and oversight of immunization activities in some key reservoir zones remain significant risks for continued transmission.

Containing wild poliovirus type 1 outbreaks in the Middle East and Horn of Africa

10. The multicounty outbreaks in the Middle East and the Horn of Africa were declared closed in October 2015; the last case of the Middle East outbreak was from Iraq in April 2014 and the last case in the Horn of Africa was from Somalia in August 2014. However, there remains a risk of importation of wild poliovirus as long as there is ongoing circulation in Pakistan and Afghanistan. The risk is compounded by the high population movement between the endemic countries and polio-free countries, the complex emergencies in the Region, which have resulted in large numbers of internally displaced populations and refugees (20 million and 9 million respectively), and disruptions to the provision of basic immunization services in conflict-affected countries.

Environmental surveillance

11. Strong surveillance for acute flaccid paralysis (AFP) remains the gold standard for polio case detection. However, environmental surveillance in Afghanistan, Egypt and Pakistan proved to be invaluable in understanding the current polio epidemiology and in developing response plans. Plans are under way to set up environmental surveillance in countries at risk of importation, according to WHO tier classifications, including in the Syrian Arab Republic, Yemen, Somalia, Sudan, Lebanon, Islamic Republic of Iran, Iraq and Jordan. To serve these countries, environmental surveillance laboratories will be established in the Islamic Republic of Iran, Jordan and Sudan.

Withdrawal of the type 2 component in oral polio vaccine

12. On 20 October 2015, the Strategic Advisory Group of Experts on Immunization (SAGE) reviewed the situation of type 2 VDPV epidemiology and progress towards global readiness for the coordinated, phased removal of oral polio vaccine and confirmed that the withdrawal of type 2 oral polio vaccine should occur between 17 April and 1 May 2016, through the globally synchronized switch from tOPV to bOPV (type 1 and 3) in all countries currently using tOPV.

13. All countries of the Region have successfully implemented the switch.

Global vaccine supply

14. One problem that has arisen during the period of the switch relates to a global shortage of inactivated polio vaccine (IPV) due to major manufacturing problems for those manufacturers supplying vaccine through UNICEF. At its meeting in March 2016, the SAGE noted the reduced quantities of IPV production but after a thorough review of risks, advised to continue with switch. The SAGE recommended prioritizing higher risk tier 1 and tier 2 countries for IPV supplies, and maintaining a stock of IPV vaccine and monovalent OPV 2 (mOPV2) for post-switch response to polio type 2 outbreaks. Djibouti, Egypt, Islamic Republic of Iran, Morocco and Sudan are affected by the supply shortage of IPV.

15. A stockpile of mOPV2 has been established in order to facilitate outbreak response, should it be needed. The World Health Assembly in resolution WHA68.3 (2015) endorsed an approach to

management and release of the stockpile and urged Member States to establish procedures to authorize the importing and use of mOPV2 from the global stockpile after its release has been authorized by the Director-General in the event of an emergency.

Vaccine-derived polioviruses

16. After the successful switch from tOPV to bOPV during the period 17 April–1 May, isolation of type 2 poliovirus (Sabin, vaccine-derived or wild) from any source will be considered a notifiable event under the IHR (2005), and will require thorough investigation and response if needed. The last cVDPV type 2 reported from the Region was in February 2015 from Pakistan; since then no circulating type 2 virus has been detected. Ambiguous VDPVs (aVDPVs) were reported from Egypt, Iraq and Pakistan in 2015 and from the Syrian Arab Republic in 2016, while VDPVs isolated from immunodeficient individuals (iVDPVs) were reported from the Islamic Republic of Iran, Iraq, Oman and Palestine in 2015 and from Egypt and Iraq in 2016.

17. The risk of emergence of VDPVs in conflict-affected countries of the Region remains due to deteriorating routine immunization services in affected areas. WHO has developed protocols to address isolation of VDPV in the post-switch period and technical staff from all the countries of the Region have been trained on the new protocol.

Containment

18. In 2015 and first quarter of 2016, there was significant progress on efforts to contain poliovirus type 2, in line with the WHO Global Action Plan (GAP III) to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of OPV use. As of 24 May 2016, 21 countries of the Region reported they had no wild poliovirus type 2 or VDPV2. Only Razi Institute in the Islamic Republic of Iran, which has been designated a polio-essential facility and is the only polio vaccine-producing facility in the Region, retained poliovirus type 2 materials. All countries that destroyed VDPV2 materials documented their destruction processes. Pakistan did not destroy VDPV2 materials but rather transferred its materials to the National Institute for Biological Standards and Controls in the United Kingdom for research purposes. A dashboard has been developed to monitor the progress of the GAPIII phase I containment activities.

Certification of polio eradication

19. Annual reports for polio eradication certification are prepared by national certification committees and are submitted to the RCC Secretariat for compilation, technical review and correction. The Secretariat then submits documents for final review and discussion to the RCC. The RCC reviews the reports at its annual meeting with Chairs of national certification committees and EPI managers and either accepts or rejects the reports. Basic national documentation for certification has been accepted from 19 countries (Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Tunisia, United Arab Emirates and Yemen).

20. Final national documentation for certification has been accepted from 17 countries which have been polio-free for 5 years or more and completed phase I laboratory containment (Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates and Yemen). Regular updates are submitted by all countries that have submitted national documentation.

21. Annual progress reports are received from countries with endemic circulation, Afghanistan and Pakistan, to monitor status and progress. The Syrian Arab Republic, which was re-infected during

2013 and 2014, submitted its basic national documentation for certification in April 2016. After review, the RCC decided that the documentation should be resubmitted in March 2017.

Transition planning

22. In 2015, acceleration of transition planning continued. Transition planning should serve three purposes: 1) ensuring that those functions needed to maintain a polio-free world after eradication (immunization, surveillance, outbreak preparedness and response, containment and certification) are integrated into national public health programmes; 2) ensuring that the knowledge generated and lessons learnt from polio eradication activities are shared with other health initiatives; and 3) where feasible and appropriate, assuring the transfer of capabilities, assets and processes in order to support other health priorities.

23. The priority countries of the Region for transition planning are Afghanistan, Pakistan, Somalia and Sudan, where there are significant polio assets and infrastructure. However, transition planning is not restricted to the four priority countries. Other Member States, particularly those affected by the 2013–2014 polio outbreak, are encouraged to document lessons learnt from the successful outbreak response in reaching inaccessible communities to benefit other key public health interventions.

24. Polio transition planning needs to occur primarily at national level. The leadership of Member States is crucial to this process. If polio transition planning is well-executed, investments in polio eradication will benefit other development goals in the long term. Human resources, facilities and processes funded through the Global Polio Eradication Initiative are substantially involved in the delivery of non-polio functions, particularly in the areas of immunization, surveillance and emergency response. A successful transition planning process will ensure that these essential functions are sustained after polio eradication funding ceases.

Islamic Advisory Group

25. The Islamic Advisory Group for Polio Eradication (IAG) was constituted under the leadership of Al Azhar Al Sharif (Cairo) and the International Islamic Fiqh Academy (Jeddah) in collaboration with the Organization of Islamic Cooperation (OIC) and the Islamic Development Bank. 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 global Muslim community. The Group is technically supported by WHO and UNICEF. It has held two meetings; the first was in Jeddah, Saudi Arabia, in February 2014, and the second in Cairo, Egypt, in May 2015. In the meetings the IAG reaffirmed its support for global polio eradication efforts, confirming that polio vaccination fully conforms to Islamic principles and religious rulings.

26. Pakistan, Afghanistan and Somalia are identified priority countries for IAG activities. The national Islamic advisory group in Pakistan is making progress in addressing misinformation and rumours surrounding polio vaccination through integrating the religious support at the lowest administrative level (union council) with the implementation of the national emergency action plan. As a result there has been significant reduction in refusals. The IAG workplan for 2015–2016 was focused on capacity-building of the IAG secretariat, effective coordination of the IAG executive committee, development and finalization of a comprehensive regional communication strategy and action plan, partnership-building with key Islamic universities, approaching nongovernmental organizations registered with OIC, and conducting advocacy with the Gulf Cooperation Council (GCC), Arab League and OIC Member States. The third IAG meeting will take place in 2016 in Jeddah. As part of transition planning of the Region, the IAG workplan for 2016–2017 will additionally focus on reproductive and child health and immunization overall.

Immediate regional priorities for polio eradication in 2016 and 2017

27. The key priorities for the Region in 2016 are: stopping wild poliovirus transmission in Afghanistan and Pakistan; maintaining high levels of immunity and where possible improving immunization services in outbreak and conflict-affected countries (Iraq, Libya, Somalia, Syrian Arab Republic and Yemen); ensuring the highest possible quality of surveillance for acute flaccid paralysis; and enhancing preparedness and response plans in all countries of the Region to ensure early detection and appropriate response to any event or outbreak of wild poliovirus or cVDPV.

28. In 2016 the WHO Secretariat supported Afghanistan and Pakistan in developing robust national polio eradication action plans. Five countries of the Region have also been supported in conducting polio outbreak simulation exercises to test the appropriateness of national preparedness and response plans, and update them where necessary. It is planned that these simulation exercises will be conducted in 11 more countries of the Region by the end of April 2017.

29. Polio teams and surge human resources in the Middle East and Horn of Africa are continuing their support to sustaining high population immunity and sensitive surveillance systems as well as improving routine immunization.

30. In 2016 the Polio Oversight Board endorsed a revised financial scenario that takes account of the delay in achieving interruption of wild poliovirus transmission, resulting in the need for an additional year of intense polio eradication activities. The scenario foresees an increase in budgetary requirements between 2016 and 2019 of US$ 1500 million, bringing the total budget estimates for the period to US$ 3.86 billion. The annual funding requirement for the Region is US$ 376 399 000.

Next steps

31. Member States are urged to undertake the following actions to address the key priorities for the Region.

- Support Afghanistan and Pakistan in implementing their national emergency action plans.
- Facilitate the implementation of the temporary recommendations of the emergency committee on polio eradication under IHR (2005) by requesting proof of polio vaccination before issuing visas for travellers from endemic countries.
- Maintain a high level of immunization coverage of high-risk groups through enhancing routine immunization and, if necessary, conducting targeted supplementary immunization activities.
- Complete the implementation of phase II of GAP III for containment of poliovirus type 2.
- Ensure the highest possible quality of AFP surveillance and immediately notify any polio type 2 isolate (Sabin, vaccine-derived or wild) under IHR (2005).
- Conduct simulation exercises to test and, if necessary, update polio outbreak preparedness and response plans.