
Polio

Eradication

Report by the Director-General

1. Pursuant to resolution WHA71.16 (2018) this report provides an update on the status of the four objectives of the Polio Eradication and Endgame Strategic Plan 2013–2018 (Endgame Plan).¹ It summarizes programmatic, epidemiological and financial challenges to achieving a lasting polio-free world. The strategies outlined in the Endgame Plan have brought the world to the brink of being polio-free and have set the groundwork for sustaining a polio-free world in perpetuity.

2. Because the circulation of the wild poliovirus has not yet been interrupted, it has become necessary to assess whether the strategies of the Endgame Plan need to be adapted beyond 2018 to lead the world to certification. This development is being done through the development of a strategy covering the period 2019–2023. The strategy will highlight which activities need to be undertaken and what the Global Polio Eradication Initiative needs to do differently to certify the eradication of polio, particularly in the context of recent detections of circulating vaccine-derived poliovirus. Extensive stakeholder engagement will be crucial to the strategy's development. Work began on the strategy in late 2018 and will continue in early 2019. An independent evaluation of eradication strategies in areas that remain endemic, recommended by the Independent Monitoring Board of the Global Polio Eradication Initiative and implemented during the third quarter of 2018, will help to inform development of this extended plan. In respect of certain areas, there exists an urgent need to eradicate wild polioviruses as urgently as possible, both to prevent global re-emergence of such strains, and to enable the rapid cessation of oral polio vaccine use, and thereby prevent long-term risks of outbreaks of circulating vaccine-derived polioviruses (see paragraphs 3–12). In response, the draft strategy will be finalized in early 2019 following a consultative process and will be presented to the Seventy-second World Health Assembly in May 2019. After eradication of polio has been certified, the Post-Certification Strategy, noted by the Seventy-first World Health Assembly in May 2018,² will guide the world on the activities and functions that must be sustained in order to maintain a world free of polio. The Secretariat will continue to report annually to the Health Assembly, through the Executive Board as necessary, on progress until global polio eradication has been certified.

¹ Although the Endgame Plan was formulated to cover the period 2013–2018, a midterm review conducted by the Polio Oversight Board of the Global Polio Eradication Initiative in 2015 formally extended the plan to 2019 (see document EB138/25).

² See the summary records of the Seventy-first World Health Assembly, Committee B, fourth meeting, section 3, fifth meeting, section 1 and sixth meeting, section 3.

GLOBAL POLIO ERADICATION – A DUAL EMERGENCY IN RESPECT OF WILD AND VACCINE-DERIVED POLIOVIRUS IN CERTAIN AREAS

Wild poliovirus transmission

3. Efforts are continuing to eradicate all remaining strains of wild poliovirus. The last reported case of poliomyelitis due to wild poliovirus type 2 was reported in 1999, and wild poliovirus type 2 was officially certified as eradicated in September 2015. Wild poliovirus type 3 has not been detected globally since November 2012, when the last case of poliomyelitis due to this strain was reported in Yobe State, Nigeria. Since that time, all cases of paralytic poliomyelitis due to wild poliovirus have been caused by wild poliovirus type 1, which continues to circulate in three countries in which the disease is endemic: Afghanistan, Nigeria and Pakistan.

4. In Nigeria, no new case of poliomyelitis due to wild poliovirus type 1 has been confirmed since the detection in the State of Borno of cases in August 2016 and the detection of the virus in a healthy child in September 2016. However, as a result of continuing gaps in surveillance in areas at high risk of polio and inaccessible areas, undetected and continued circulation of this strain cannot be ruled out. The Government of Nigeria continues to implement an aggressive outbreak response, conducted in close coordination with neighbouring countries across the Lake Chad subregion, within the context of the broader humanitarian emergency affecting the subregion. Lack of access and inability to conduct high-quality vaccination and surveillance in many areas of Borno State remain the primary challenges. A key objective continues to be preventing the outbreak from spreading to other areas of the subregion. Additional measures are being implemented to increase surveillance sensitivity and to boost immunity levels, including the following: expanding environmental surveillance; testing of healthy individuals (including adults) as they exit inaccessible areas; setting up permanent vaccination posts at key crossing points into inaccessible areas in order to vaccinate children and people in older age groups; and rapidly conducting mop-up immunization campaigns as and when opportunities arise or areas become accessible.

5. Afghanistan and Pakistan continue to be treated as a single epidemiological block. In 2018, four cases of paralytic poliomyelitis due to wild poliovirus type 1 have been reported in Pakistan (as at end-September 2018), compared with five for the same period in 2017; in Afghanistan, 15 cases have been reported, compared with six for the same period in 2017. In Afghanistan, the reported number of cases has increased compared to the previous year, as a result of persistent pockets of children being missed during supplementary immunization activities in high-risk areas of the Southern and Eastern regions. Both countries continue to coordinate immunization and surveillance activities. Even though independent technical advisory groups underscore the feasibility of rapidly interrupting transmission of the remaining poliovirus strains, realization of that goal depends on reaching all children who have not been vaccinated and identifying and eradicating all remaining transmission reservoirs. In Pakistan, continued high-level commitment to polio eradication on the part of the newly-elected authorities will be vital. Environmental surveillance in both countries confirms the risk of ongoing transmission of the virus to polio-free areas from remaining reservoir areas, which are home to communities that are extremely hard to access. Efforts in both countries are focusing on clearly identifying missed children and determining the reasons why they have been missed, and putting in place operational plans to overcome these challenges. In particular, emphasis continues to be placed on reaching high-risk mobile population groups travelling internally within both countries and across the border. Given the fact that the areas where polioviruses remain, are home to communities that are extremely challenging to access, these populations are often not able to receive the support required to meet their basic health needs. Stronger collaboration between polio and the humanitarian programmes in these areas has the potential to support broader development goals while increasing access to and wider community

acceptance of polio vaccination. Virus transmission is now primarily restricted to two cross-border corridors: the first links eastern Afghanistan with Khyber Pakhtunkhwa and Federally Administered Tribal Areas in Pakistan, and the second links southern Afghanistan (Kandahar and Hilmand) with the Quetta block, Balochistan province, in Pakistan, as well as Karachi (Pakistan). Coordination of the polio eradication programme has continued to improve in 2018 at the national, provincial and regional levels, as well as among the districts bordering the common corridors of transmission, focusing on vaccination of people in high-risk mobile populations and those in populations living along the border.

Circulating vaccine-derived poliovirus transmission

6. As the world approaches successful eradication of wild poliovirus transmission, the circulation of vaccine-derived polioviruses, while not a new phenomenon, continues to take on added significance. Inadequate routine immunization levels coupled with subnational gaps in surveillance in high-risk countries continue to be the main risk factors for the emergence or continuing circulation of vaccine-derived polioviruses. Strengthened efforts must be made to tackle both risk factors. However, the only and surest way to prevent circulation of vaccine-derived polioviruses in the future is to stop oral polio vaccine use rapidly, which can only occur after the successful eradication of wild polioviruses. As such, wild poliovirus eradication now faces a dual emergency. In 2018, outbreaks due to circulating vaccine-derived poliovirus newly emerged or continued in the Democratic Republic of the Congo, the Horn of Africa (where the virus has been detected in Kenya and Somalia), Niger, Nigeria, the Syrian Arab Republic and Papua New Guinea.

7. In the Democratic Republic of the Congo, three different circulating vaccine-derived poliovirus type 2 outbreaks are ongoing. A strain initially detected and reported in June 2017 from Haut-Lomami province spread in late 2017 and early 2018 to Tanganyika and Haut-Katanga provinces, respectively. The same virus was confirmed in Ituri province in June 2018, close to the border with Uganda, significantly increasing the risk of international spread of the virus. Maniema province is affected by a separate outbreak, with two cases confirmed in 2017 and the most recent onset of paralysis was in a patient on 18 April 2017. So far, no new case has been detected in 2018, and there is no evidence that the virus has spread further geographically. The third and most recently detected outbreak was found in Mongala province; vaccine-derived poliovirus type 2 was isolated from a patient with acute flaccid paralysis, with onset of paralysis on 26 April 2018, and from two healthy community contacts. Outbreak response activities conducted to date have not succeeded in stopping these outbreaks; one of them has actually expanded (both in terms of number of cases and geographical extent). A coinciding outbreak of Ebola virus disease is further complicating the response, as national authorities are called on to respond to several public health emergencies simultaneously. In February 2018, the Government declared the polio outbreaks to be a national public health emergency, with the aim of filling operational gaps in the quality of outbreak response. Recognizing the risks associated with these outbreaks, on 26 July 2018 provincial governors adopted the Kinshasa Declaration for the Eradication of Poliomyelitis and the Promotion of Vaccination, in which they committed themselves to ensuring “coordinated action at all levels” in order to urgently improve the quality of outbreak response and stop circulating of these viruses.

8. The Horn of Africa is affected by outbreaks due to circulating vaccine-derived polioviruses, both type 2 and type 3. The circulating vaccine-derived poliovirus type 2 was isolated from cases of acute flaccid paralysis as well as environmental samples in Mogadishu (Somalia) and from environmental samples in Nairobi (Kenya). Genetic sequencing of this strain suggests it had been circulating without detection since 2016, underscoring the dangers of gaps in subnational surveillance. In addition to circulating vaccine-derived poliovirus type 2, circulating vaccine-derived poliovirus type 3 was isolated from acute flaccid paralysis cases and environmental samples in Mogadishu.

Regional outbreak response activities for both strains are currently being implemented, in line with internationally-agreed guidelines. Somalia, Kenya and Ethiopia have all declared these outbreaks to be national public health emergencies.

9. In Nigeria, two separate outbreaks due to circulating vaccine-derived poliovirus type 2 were confirmed in 2018. In Sokoto State, four genetically-related viruses were isolated from four environmental samples collected between 24 April and 9 May 2018; no associated case of acute flaccid paralysis has been detected, as the virus was isolated only from environmental samples. Separately, the country is affected by a different outbreak in Jigawa State. One acute flaccid paralysis case (onset of paralysis on 15 April 2018) and three environmental samples (collected between 10 January and 20 March 2018) have been positive for this type 2 strain. Outbreak response activities are being implemented, using a mix of vaccine formulations, in order to counter circulating vaccine-derived poliovirus type 2 strains and to prevent potential continuation of circulation of wild poliovirus type 1. In September 2018, confirmation was received of international spread of the circulating vaccine-derived poliovirus type 2 from the epicentre in Jigawa to Niger, and outbreak response activities were immediately launched.

10. In the Syrian Arab Republic, no new case of circulating vaccine-derived poliovirus type 2 had been detected by the end of September 2018, following confirmation of an outbreak in 2017. Outbreak response efforts are continuing, including further intensification of subnational surveillance sensitivity.

11. In Papua New Guinea, a circulating vaccine-derived poliovirus type 1 outbreak was confirmed in June 2018, as the virus was initially isolated from an acute flaccid paralysis case and two healthy community contacts. The Government immediately declared the outbreak as a national public health emergency, and launched a comprehensive emergency outbreak response. Since the initial confirmation of the virus in June, additional cases have been confirmed in other areas, prompting the Government to extend the response to nationwide campaigns.

Public health emergency of international concern

12. The declaration in 2014 of the international spread of wild poliovirus as a public health emergency of international concern and the temporary recommendations promulgated under the International Health Regulations (2005) remain in effect. All countries currently affected by circulation of either wild or vaccine-derived polioviruses have declared such events to be national public health emergencies and are implementing national emergency action plans. The designation of the international spread of poliovirus as a public health emergency of international concern has now been in place for four years (an exceptional use of the declaration of a public health emergency of international concern). In light of this, the Emergency Committee convened under the International Health Regulations (2005) requested the WHO Secretariat at its most recent meeting in August 2018 to review whether alternative approaches or tools could be established to achieve the same outcomes as those called for by the temporary recommendations.¹

¹ See Statement of the Eighteenth IHR Emergency Committee Regarding the International Spread of Poliovirus (<http://www.who.int/news-room/detail/15-08-2018-statement-of-the-eighteenth-ihc-emergency-committee-regarding-the-international-spread-of-poliovirus>, accessed 23 October 2018).

PHASED REMOVAL OF ORAL POLIO VACCINES

13. To eliminate the long-term risks of vaccine-derived polioviruses and vaccine-associated paralytic polio, oral polio vaccines are being removed in a phased manner. The first phase took place with the switch from trivalent to bivalent oral polio vaccine between 17 April and 1 May 2016. Once all remaining foci of wild poliovirus transmission have been eradicated and the world is certified as polio-free, all use of remaining oral polio vaccine will be stopped. Until all use of oral polio vaccine has ceased, Member States are encouraged to minimize the risks and consequences of potential vaccine-derived polioviruses by ensuring high routine immunization coverage, conducting surveillance for any emergence of circulating vaccine-derived poliovirus, and maintaining strong outbreak response capacity.

14. In the lead-up to the switch to bivalent oral polio vaccine, global supply constraints of the inactivated poliovirus vaccine had emerged owing to technical difficulties encountered by manufacturers in scaling up production. As a result, some countries experienced delays in supply. The supply situation has improved in recent months and all countries now have access to supplies for their routine immunization programmes. The global supply situation was further improved thanks to Member States increasingly adopting dose-sparing strategies, such as intradermal administration of fractional-dose inactivated poliovirus vaccine, as recommended by the Strategic Advisory Group of Experts on immunization. Several Member States have already adopted this approach, notably Bangladesh, Cuba, Ecuador, India, Nepal, Sri Lanka, and several additional countries across the Region of the Americas are in the process of doing so. Gavi, the Vaccine Alliance, in June 2018 made a commitment to additional support for inactivated polio vaccine in priority countries until 2021. The Global Polio Eradication Initiative and its partners are continuing to explore new approaches for inactivated poliovirus vaccine in order to ensure an affordable and sustainable supply following certification, for instance, through the use of vaccine manufactured from Sabin strains of poliovirus or non-infectious materials such as virus-like particles.

CONTAINMENT OF POLIOVIRUSES

15. Efforts to contain poliovirus type 2 were implemented progressively in 2016 and 2017 and intensified in 2018, guided by the WHO global action plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use (GAPIII).¹ WHO has published guidance to minimize risks for facilities collecting, handling or storing materials potentially infectious for polioviruses, so as to assist facilities in assessing the risk of materials potentially infectious for poliovirus in their possession and to implement appropriate risk reduction consistent with GAPIII. The Seventy-first World Health Assembly in May 2018 adopted resolution WHA71.16, urging Member States to intensify efforts to accelerate the progress of poliovirus containment certification as outlined in national requirements as well as in the WHO Global Action Plan. The resolution includes recommended actions for all Member States and actions specifically for Member States planning to retain poliovirus for critical functions in poliovirus-essential facilities, as well as requests to the Director-General. Member States are urged to complete inventories for type 2 polioviruses and destroy unneeded type 2 materials, and to begin inventories for types 1 and 3 materials in accordance with WHO's guidance; to reduce to a minimum the number of facilities designated for the retention of polioviruses and appoint, as soon as possible and no later than

¹ WHO global action plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use: GAPIII. Geneva: World Health Organization; 2015 (<http://apps.who.int/iris/handle/10665/208872>, accessed 3 October 2018).

the end of 2018, a competent national authority for containment; and to request facilities planning to retain poliovirus type 2 to engage formally in the GAPIII Containment Certification Scheme by the end of 2019. The Global Commission for the Certification of the Eradication of Poliomyelitis, responsible for global oversight of containment, has countersigned a first certificate of participation in the Containment Certification Scheme, confirming the intent of a vaccine manufacturer based in Sweden to be certified for the implementation of GAPIII. Similar engagement steps are expected from all other designated poliovirus-essential facilities. The Containment Advisory Group, which was established to address technical issues related to GAPIII, has recommended some amendments to the requirements that have been published and should be read in conjunction with the core document of GAPIII. The Secretariat continues to support the strengthening of technical capacities of national authorities for containment by training auditors in the implementation of GAPIII and the Containment Certification Scheme.

16. As at August 2018, all countries and territories that reported that they no longer hold wild or vaccine-derived poliovirus type 2 are updating their inventories following the guidance of the Health Assembly. In total, 81 poliovirus-essential facilities have been officially designated by the governments of 29 countries to retain type 2 poliovirus materials. Inventorying materials containing type 2 polioviruses will have to be repeated, after interruption of transmission, in all countries that were affected by outbreaks of circulating vaccine-derived poliovirus type 2. Of the 29 countries planning to retain type 2 polioviruses, 20 have made significant progress with the establishment of national authorities for containment and are preparing to certify their designated poliovirus-essential facilities against the implementation of the containment requirements described in GAPIII.

17. Recognizing that poliovirus transmission levels are currently at the lowest point in history and the feasibility of eradication in the short-term is a realistic expectation, all parties need urgently to intensify containment activities. The Health Assembly's call in resolution WHA71.16 (2018) to accelerate implementation of poliovirus containment has received strong commitment from all Member States, so that the certification of poliovirus eradication can be achieved and sustained.

FINANCING THE GLOBAL POLIO ERADICATION INITIATIVE

18. Thanks to the generous continuing support of the international development community, including Member States (both those where the poliovirus remains endemic and those that are donors to the Global Polio Eradication Initiative), multilateral and bilateral organizations, development banks, foundations and Rotary International, the budget for planned activities for 2017 was fully financed. At the Rotary International Convention in 2017 (Atlanta, Georgia, United States of America, 10–14 June 2017), numerous public- and private-sector partners from around the world joined Rotary International in announcing historic pledges of new funds, which continue to be fulfilled. Throughout 2018, leaders of the G7, Commonwealth and G20 countries at their respective summits pledged their continued support to the effort. Member States are strongly encouraged to fulfil their pledges and commitments as rapidly as possible and continue to make their best efforts to provide flexibility in their allocations so as to ensure uninterrupted programme operations. In order to ensure transparency and cost-effectiveness, the Global Polio Eradication Initiative continually assesses its financial resource requirements, in the face of evolving programmatic and epidemiological developments. Most recently, the Polio Oversight Board adopted new financial scenarios at its meeting in September 2018.¹ The key to achieving and sustaining a world free of both wild and vaccine-derived polioviruses will be the full and rapid mobilization of these financial requirements.

¹ Summary available at www.polioeradication.org/financing/ (accessed 3 October 2018).

ACTION BY THE EXECUTIVE BOARD

19. The Board is invited to note the report. In particular, the Board may wish to focus its deliberations on the importance of ensuring that the strategy covering the period 2019–2023 is fully financed and implemented at all levels, in order to achieve certification of a world free of all polioviruses on a lasting basis.

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