
Poliomyelitis

Poliomyelitis eradication

Report by the Director-General

1. The present report provides an update on work towards fully implementing and financing all aspects of the Polio Eradication Strategy 2022–2026, which received support at the Seventy-fifth World Health Assembly.¹

GOAL 1: PERMANENTLY INTERRUPT ALL POLIOVIRUS TRANSMISSION IN ENDEMIC COUNTRIES

2. In 2022, wild poliovirus type 1 continued to be detected in parts of Afghanistan and Pakistan, the last two remaining countries where the virus is endemic. Afghanistan and Pakistan were also affected by co-circulating vaccine-derived poliovirus type 2; however, no cases associated with this strain have been reported from these countries for more than 12 months. The global risk of continuing transmission of wild poliovirus was underscored with the confirmation of cases of poliomyelitis due to wild poliovirus type 1 in the first half of 2022 in Malawi (with onset of paralysis in 2021) and Mozambique; the virus strain was genetically linked to one originating in Pakistan.

3. The global eradication of wild poliovirus type 1 largely depends on progress in the epidemiological block consisting of Pakistan and Afghanistan in the Eastern Mediterranean Region. Both countries have made progress since 2020, as indicated by the declining number of poliomyelitis cases and positive environmental samples, geographically localized transmission, and reduction in the number of transmission chains. Nonetheless, challenges remain in some key areas of the three cross-border epidemiological corridors, namely: the southern corridor comprising the Quetta Block of Pakistan and the southern region of Afghanistan; the northern corridor comprising the central Khyber Pakhtunkhwa province of Pakistan and the eastern region of Afghanistan; and the central corridor comprising the southern Khyber Pakhtunkhwa province of Pakistan and the south-eastern region of Afghanistan. In 2022, the central corridor had multiple reports of wild poliovirus type 1 cases and environmental samples, mainly from the southern Khyber Pakhtunkhwa province.

4. In Afghanistan, one case of poliomyelitis due to wild poliovirus type 1² and two positive environmental samples for wild poliovirus type 1 were reported in 2022.³ No circulating vaccine-derived

¹ See document A75/23 and the summary records of the Seventy-fifth World Health Assembly, Committee B, seventh meeting, section 2 and eighth meeting, section 2.

² Onset of paralysis on 14 January 2022.

³ Date of collection of the most recent positive samples: 20 July 2022.

poliovirus type 2 has been detected in 2022, neither in paralytic cases nor environmental samples. The surveillance for polioviruses is generally sound with a well-functioning acute flaccid paralysis surveillance complemented by environmental surveillance. The southern, south-eastern and the eastern regions of Afghanistan, particularly their respective districts bordering Pakistan, are at high risk for poliovirus transmission given the high proportion of zero-dose children and inconsistent quality of polio vaccination campaigns.

5. Afghanistan has in the past successfully interrupted indigenous transmission of wild poliovirus in the two endemic reservoirs in the southern and eastern regions of the country; however, such efforts have been complicated by the humanitarian crisis, which intensified in August 2021 and continues as at the date of publication of this report. Despite the overall security situation and access for house-to-house vaccination having significantly improved, challenges remain in parts of the southern region amid ongoing concerns regarding the safety of frontline health workers and the continuing operational complications arising from the evolving coronavirus disease (COVID-19) pandemic. Although overall national polio vaccination coverage is high (upwards of 90%), subnational gaps in immunity continue among persistently missed children in reservoir areas.

6. In Pakistan, 15 cases of poliomyelitis due to wild poliovirus type 1¹ and 11 positive environmental samples for wild poliovirus type 1² have been reported in 2022. There had been no instances of wild poliovirus type 1 for more than 12 months in the core reservoir areas of Pakistan until a recent positive environmental sample was detected in the Peshawar district of the Khyber Pakhtunkhwa province in August 2022. An intense outbreak localized to several districts in the southern part of the Khyber Pakhtunkhwa province is continuing. In July and August 2022, positive environmental samples for wild poliovirus type 1 were reported in eight districts outside the southern Khyber Pakhtunkhwa province.

7. The programme operates under the auspices of the national emergency action plan implemented through the national emergency operations centre, with the overarching goal of reducing the number of children not immunized during supplementary immunization activities. The programme focuses on: prioritization of the highest-risk areas with the highest proportion of zero-dose children; strong implementation of strategies to engage communities; and integration with broader public health programmes, in particular to help to strengthen immunization systems. It fully engages federal and provincial leadership to support and oversee programme implementation.

8. A special outbreak response plan that adopts a whole-of-government approach has been rolled out to rapidly interrupt transmission in the southern Khyber Pakhtunkhwa province in 2022. The plan focuses on programmatic shifts in eight critical components and takes into account the local context, with a view to guaranteeing that the reach and quality of vaccination services meet the standards required for achieving poliomyelitis eradication. Meanwhile, efforts have been taken to intensify the rate of immunization around the infected area and other high-risk locations in order to minimize the risk of this localized outbreak affecting the rest of the country. The risk of spread was underscored by detection of the same strain in an environmental sample from Karachi in September 2022. While such reports are not unexpected given the large-scale and frequent population movements between Karachi and the rest of the country, in particular the Khyber Pakhtunkhwa province, urgent response efforts are under way to halt the spread of the outbreak, coordinated by the respective national and provincial emergency operations centres.

¹ Onset of paralysis of the most recent case on 1 August 2022.

² Date of collection of the most recent positive samples: 20 July 2022.

9. Following the devastating floods affecting the country, polio staff on the ground continue to assist emergency relief efforts, including by supporting the establishment of health camps, providing basic clinical services, helping to treat water-borne diseases through the distribution of water purification tablets, and conducting active surveillance for communicable diseases. Alongside these activities, the polio programme is continuing to adapt its operations to ensure that poliomyelitis eradication efforts can continue.

10. A review of surveillance was carried out in Pakistan in two phases, the first in October 2021 and the second in February 2022. The review concluded that a sound and sensitive acute flaccid paralysis surveillance system is in place, complemented by environmental surveillance. However, the review found evidence of continuous and sustained transmission among high-risk and underserved populations in the southern part of the Khyber Pakhtunkhwa province, including groups of seasonal migrants, where the reach of surveillance and vaccination systems seems limited. Targeted surveillance of and the development of tailored vaccination strategies for these populations has begun.

11. In the last nine months, one wild poliovirus type 1 case was reported from Lilongwe in Malawi (with onset of paralysis in 2021) and five from the Tete province of Mozambique. Cases were clustered along the Zambezi River and along transport routes linking the major population centres. Genetic sequencing data suggest a single importation event from Pakistan occurred sometime between the second half of 2019 and early 2020.

12. A subregional, multi-country emergency outbreak response is continuing in south-east Africa across five countries, namely Malawi, Mozambique, the United Republic of Tanzania, Zambia and Zimbabwe. Concerted efforts are being made to: strengthen poliovirus surveillance at the national and subnational levels; conduct awareness activities and train health care providers; and expand environmental surveillance in order to ensure early detection of and response to any future instances of wild poliovirus type 1. At the 72nd session of the Regional Committee for Africa in August 2022, a dedicated event was organized with the ministers of health of the infected and high-risk countries to advocate for the highest level political commitment to halting the wild poliovirus type 1 outbreak by the first quarter of 2023. The continuation of the outbreak for a prolonged period presents a risk of further geographical spread and may jeopardize the wild poliovirus-free certification status of the African Region.

GOAL 2: STOP TRANSMISSION OF CIRCULATING VACCINE-DERIVED POLIOVIRUS AND PREVENT OUTBREAKS IN NON-ENDEMIC COUNTRIES

13. While the Polio Eradication Strategy 2022–2026 provides for the timely detection of viruses and prompt outbreak response, improvements in key parameters need to be strengthened.

14. In the past two years, circulating vaccine-derived poliovirus type 2 cases were reported from 26 countries in three regions. In addition, circulating vaccine-derived poliovirus type 1 and type 3 cases have been reported in Israel, Madagascar, Mozambique and Yemen.

15. In 2021 and early 2022, several factors have led to delays in timely and quality response efforts, including issues with vaccine supply, geographical inaccessibility, insecurity, a decline in routine immunization, the ongoing COVID-19 pandemic, and other public health emergencies. To address these

issues, the Global Polio Eradication Initiative published its updated outbreak response guidelines and terms of reference in early 2022,¹ taking into account recent global developments.

16. To support the achievement of the objectives of the Polio Eradication Strategy 2022–2026, a detailed global surveillance action plan for 2022–2024 has been developed aimed at improving the timeliness of detection of any polioviruses from any source.

17. Special attention is being paid to four clearly defined outbreak areas that, collectively, accounted for almost nine tenths of all circulating vaccine-derived poliovirus type 2 cases in 2022, namely: eastern Democratic Republic of the Congo, northern Nigeria, south-central Somalia and northern Yemen. The intensity of transmission in these areas has been exacerbated by a number of factors, notably: insufficient quality and timeliness of outbreak response; lack of outbreak response with type 2 containing vaccines; and disruption in delivery of essential immunization services resulting in a persistently high proportion and concentration of zero-dose children and communities.

18. High-profile detection of vaccine-derived poliovirus type 2 events in Israel, the United Kingdom of Great Britain and Northern Ireland, and the United States of America continue to be managed appropriately by local public health authorities.

19. Despite the challenges associated with the four clearly defined outbreak areas mentioned in paragraph 17, significant progress has been made in stopping the transmission of circulating vaccine-derived polioviruses and overall the circulation of such strains of poliovirus continues to narrow geographically in 2022. However, more needs to be done to continue and build on that success, particularly in order to achieve goal 2 of the Polio Eradication Strategy 2022–2026.

20. To stop transmission of circulating vaccine-derived poliovirus type 2 more effectively and sustainably, the novel oral polio vaccine type 2 continues to be administered through the WHO Emergency Use Listing Procedure, with over 500 million doses administered as at the end of October 2022. To ensure compliance with the Emergency Use Listing requirements, countries must meet a pre-defined set of criteria to be classified as eligible to use novel oral polio vaccine type 2. As at the end of October 2022, 39 countries at high risk of circulating vaccine-derived poliovirus type 2 have met these requirements. Full licensing and pre-qualification of novel oral polio vaccine type 2 remains on track for the end of 2023. Availability of this vaccine to meet country needs is currently sufficient, although close monitoring continues since current estimates indicate supply shortages may occur in the second quarter of 2023. While novel oral polio vaccine type 2 will remain a sole-supplier product through 2023, work is ongoing to procure supply through a second manufacturer as early as 2024.

21. In addition to the continuing introduction of novel oral polio vaccine type 2, high-quality and rapid-response campaigns to any current or newly detected outbreak will be required to achieve goal 2 of the Polio Eradication Strategy 2022–2026. There is no shortage of type 2 vaccines for responses to outbreaks and the Global Polio Eradication Initiative actively follows the advice of the Strategic Advisory Group of Experts on Immunization to respond as quickly as possible to outbreaks with available type 2 vaccines. Success will therefore depend on rapid and high-quality implementation of outbreak response, using whatever type 2 vaccines are available in a given area (rather than delaying a response in favour of a different vaccine whose supply might be limited at that given time).

¹ Standard operating procedures: responding to a poliovirus event or outbreak, version 4.1. Geneva: World Health Organization; 2022 (<https://polioeradication.org/wp-content/uploads/2022/07/Standard-Operating-Procedures-For-Responding-to-a-Poliovirus-Event-Or-Outbreak-20220807-EN-Final.pdf>, accessed 24 November 2022).

Enabling environment

22. In line with the Gender Equality Strategy 2019–2023 of the Global Polio Eradication Initiative and efforts to identify and address gender-related barriers to immunization, the Polio Eradication Strategy 2022–2026 sets clear goals to strengthen gender responsiveness as a key factor to achieving poliomyelitis eradication. The programme’s commitment to gender-responsive programming closely aligns with the Immunization Agenda 2030 and the gender policy of Gavi, the Vaccine Alliance.

23. Cross-programmatic integration has been accelerated by the COVID-19 pandemic, during which the polio programme has worked closely with other health programmes. In places where the polio programme has the largest presence, polio staff have contributed to the COVID-19 pandemic response and immunization recovery efforts, together with the introduction and administration of COVID-19 vaccines. In the African Region, around one third of polio personnel dedicated more than 50% of their time to COVID-19 response and recovery activities during 2021. In the Eastern Mediterranean Region, polio staff have focused on continuing regional COVID-19 surveillance, alongside providing targeted technical support for the COVID-19 vaccine roll-out. In the South-East Asia Region, hundreds of polio and immunization staff in polio transition priority countries have been working in an integrated manner to deliver COVID-19 vaccines and develop relevant guidelines, as well as to strengthen capacity-building and data management.

24. The Global Polio Eradication Initiative continues to align its priorities with key global vaccine and immunization strategies such as the Immunization Agenda 2030 and the strategy of Gavi, the Vaccine Alliance, for 2021–2025 focusing on identifying and reaching zero-dose communities. As noted in the 2021 WHO/UNICEF estimates of national immunization coverage, immunization coverage has declined with significant increases in the number of zero-dose children; 25 million children were under- or unimmunized in 2021, which is 2 million more than in 2020 and 6 million more than in 2019. Known reservoirs of poliovirus in Pakistan and Afghanistan, northern Nigeria, eastern Democratic Republic of the Congo, south-central Somalia, and northern Yemen are all affected by a significant and highly concentrated density of zero-dose children and communities.

PREPARING FOR THE POST-CERTIFICATION WORLD

Containing poliovirus

25. Through resolution WHA71.16 (2018) on poliomyelitis: containment of polioviruses, Member States committed to accelerating progress towards containment certification, signalling a universal intent to achieve the goals set out therein. While progress has been made, it has not been universal nor fast enough. As at 1 December 2022, four Member States have yet to complete their initial inventories for poliovirus type 2 materials,¹ an activity due for completion by July 2016. Twenty-four Member States have reported retaining poliovirus type 2 materials in 64 facilities designated as serving critical functions requiring retention, of which 21 have initiated the certification process for 51 facilities, while the remaining three Member States² have yet to formally appoint a national authority for containment, an activity due for completion by March 2019. This has resulted in a lack of domestic oversight over the continued handling and storage of poliovirus type 2 materials in 11 facilities. Four Member States³ have yet to initiate enrolment of their 11 facilities in the containment certification scheme, while four Member

¹ Brazil, Indonesia, Mexico and United States of America.

² China, Romania, and Viet Nam.

³ China, Romania, Serbia and Viet Nam.

States¹ have yet to complete their application process for certificates of participation for their eight facilities, as required by the end of 2019. Furthermore, 6 Member States² have yet to share their plans in respect of facility applications for interim certificates of containment in the scheme, a measure previously recommended by the Global Commission for the Certification of the Eradication of Poliomyelitis to be completed by the end of 2022 at the latest.

26. In June 2022, the Global Polio Eradication Initiative published a dedicated global containment strategy³ as well as an associated action plan,⁴ workplan, and monitoring and evaluation framework for 2022–2024. The third edition of 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 was also revised in 2022, with the fourth edition⁵ coming into force in July 2022 following its endorsement by the Containment Advisory Group. Reviews of the corresponding containment certification scheme and the guidance relating to minimizing risks for facilities collecting, handling or storing materials potentially infectious for polioviruses are similarly under way.

Cessation of oral polio vaccine and certification

27. Following the successful eradication of wild polioviruses globally, the use of all remaining oral polio vaccine by routine immunization programmes will end in order to eliminate the risk of vaccine-derived polioviruses.

28. On 28–29 June 2022, the Global Commission for the Certification of the Eradication of Poliomyelitis met to review the global criteria set for poliovirus certification. Recognizing the programme advancements in genomic analysis and the widespread use of environmental surveillance in many countries, the Commission concluded that the traditional approach to eradication certification of requiring evidence of three years without detection of polioviruses from any source may no longer be justifiable to verify the absence of wild poliovirus transmission. Instead, the Commission recommended the adoption of a more flexible approach to certification, whereby traditional surveillance indicators are considered in a broader geopolitical, area-specific context. At the same time, the Commission initiated its evaluation of concrete criteria for the eventual validation of absence of vaccine-derived polioviruses, including the necessary timelines that might be needed without detection of circulating vaccine-derived poliovirus from any source, following the global cessation of use of oral polio vaccines from routine immunization programmes.

FINANCING AND GLOBAL COMMITMENT TO POLIOMYELITIS ERADICATION

29. The global political will to eradicate poliomyelitis remains strong, as demonstrated by the high-level commitments to poliomyelitis eradication made during the World Health Assembly, the

¹ Australia, France, Iran and Pakistan.

² Australia, China, Iran, Romania, Serbia and Viet Nam.

³ Global Polio Eradication Initiative. Strategy for Global Poliovirus Containment. Geneva: World Health Organization; 2022 (<https://polioeradication.org/wp-content/uploads/2022/07/Strategy-Global-Poliovirus-Containment.pdf>, accessed 17 August 2022).

⁴ Global Polio Eradication Initiative. Global Poliovirus Containment Action Plan 2022–2024. Geneva: World Health Organization; 2022 (<https://polioeradication.org/wp-content/uploads/2022/07/GPCAP-2022-2024.pdf>, accessed 17 August 2022).

⁵ WHO Global Action Plan for Poliovirus Containment, Fourth edition (unedited version), Geneva: World Health Organization; 2022 (<https://polioeradication.org/wp-content/uploads/2022/07/WHO-Global-Action-Plan-for-Poliovirus-Containment-GAPIV.pdf>, accessed 17 August 2022).

Rotary International Convention, the G7 Leaders meeting, the Commonwealth Heads of Government meeting, the G20 Development and Health Ministers meeting, and at the global pledging moment held at the World Health Summit in Berlin, Germany. At this event, held on 18 October 2022¹ and co-hosted by the Government of Germany, global leaders pledged US\$ 2.6 billion in funding towards the Polio Eradication Strategy 2022–2026, an important first step in securing the full US\$ 4.8 billion needed to ensure the successful implementation of the Strategy.

30. Increased domestic financing, however, will be key to making this the final and successful phase of poliomyelitis eradication.

ACTION BY THE EXECUTIVE BOARD

31. The Executive Board is invited to note the report and provide guidance on the following questions.

(a) What steps should be taken to ensure that the financial resources required to fully implement the Polio Eradication Strategy 2022–2026 are mobilized?

(b) What measures should be adopted to ensure that all remaining zero-dose children in affected and high-risk areas have access to the oral polio vaccine?

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¹ Global leaders commit US\$ 2.6 billion at the World Health Summit to end polio. Available at: <https://polioeradication.org/news-post/global-leaders-commit-usd-2-6-billion-at-world-health-summit-to-end-polio/> (accessed 24 November 2022).