
Poliomyelitis

Poliomyelitis eradication

Report by the Director-General

1. This report provides an update on: efforts to interrupt remaining wild poliovirus transmission; implementation of outbreak response to circulating vaccine-derived poliovirus type 2 and the introduction of novel oral polio vaccine type 2; the impact of the coronavirus disease (COVID-19) pandemic on the global eradication programme; review of governance of the Global Polio Eradication Initiative and the process for development of a new strategy; and the financing situation at the end of 2020.

POLIOVIRUS TRANSMISSION¹

2. In 2020, wild poliovirus type 1 continues to be detected in parts of Afghanistan and Pakistan. On 25 August 2020, the African Region was certified as free of wild polioviruses by the African Regional Certification Commission, becoming the fifth WHO region to be independently certified as free of all wild polioviruses. Wild polioviruses type 2 and type 3 have been globally certified as eradicated, in 2015 and 2019, respectively. Circulating vaccine-derived poliovirus outbreaks, in particular type 2 outbreaks, continue to affect areas of the African, Eastern Mediterranean and Western Pacific regions.

Afghanistan and Pakistan – cross-border reservoir with co-circulation of wild poliovirus type 1 and circulating vaccine-derived poliovirus type 2

3. Afghanistan is affected by co-circulation of wild poliovirus type 1 and circulating vaccine-derived poliovirus type 2. As at September 2020, 53 cases of wild poliovirus type 1 and 36 environmental samples positive for wild poliovirus type 1 had been reported; and 121 cases of circulating vaccine-derived poliovirus type 2 and 91 environmental samples positive for circulating-vaccine-derived poliovirus type 2. While Afghanistan has in the past successfully interrupted indigenous wild poliovirus transmission in the two endemic reservoirs, the Southern and Eastern regions, its efforts are complicated by geo-political factors including a new government, change in senior ministerial leadership, limited access for vaccination in the Southern Region and a pause in vaccination campaigns related to COVID-19.

4. Wild poliovirus type 1 transmission is endemic in the Southern and Eastern regions, and continues to expand to previously polio-free areas, notably in the north and west of the country. A circulating vaccine-derived poliovirus type 2 outbreak is expanding in the Eastern Region, with virtually no

¹ All epidemiological data as at end-September 2020. Regularly-updated epidemiological data available at: <http://polioeradication.org/polio-today/polio-now/this-week/>, 26 October 2020.

type-2-containing vaccination campaigns in more than six months and a large nationwide accumulation of children susceptible to type 2 poliovirus.

5. In response, the national programme is adapting operational approaches, in order to: stop circulating vaccine-derived poliovirus type 2; stop wild poliovirus type 1 transmission in the Eastern Region and non-endemic areas; and secure greater access in high-risk areas of the Southern Region, or contain wild poliovirus type 1 to existing endemic areas. Efforts are focusing on adapting vaccination campaign approaches to the current situation with regard to COVID-19, including: improving the quality of campaigns; exploring different methodologies to increase access in key areas; comprehensively engaging communities including through increased mass media and social media presence; and integrating immunization and surveillance activities within broader health efforts. The programme will be working with a broader range of public and private sector partners operational on the ground aiming to deliver health services, and establishing integrated service plans to distribute other services to communities during polio campaigns, such as hygiene kits, baby blankets and soap, and implementing multi-antigen campaigns where possible.

6. Pakistan is affected by co-circulation of wild poliovirus type 1 and circulating vaccine-derived poliovirus type 2. As at 3 November 2020, 80 poliomyelitis cases due to wild poliovirus type 1 and 382 wild poliovirus type 1-positive environmental samples had been reported; and 80 cases due to circulating vaccine-derived poliovirus type 2 and 57 circulating-vaccine-derived poliovirus type 2-positive environmental samples.

7. Wild poliovirus type 1 transmission is widespread, with key reservoir areas being southern Khyber Pakhtunkhwa, greater Karachi (Sindh) and greater Quetta (Balochistan); expansion of virus to previously polio-free areas (Punjab and Sindh); and detection of virus across the country. Circulating vaccine-derived poliovirus type 2 continues to expand geographically, notably in Khyber Pakhtunkhwa, with ongoing breakthrough transmission complicated by a large nationwide accumulation of populations susceptible to type 2 poliovirus. The risk of expansion of both strains, particularly of circulating vaccine-derived poliovirus type 2, including potentially internationally, will increase in the coming months due to a build-up of susceptible children resulting from a pause in vaccination campaigns associated with the COVID-19 pandemic (see the “Impact of COVID-19” section below).

8. The national programme is re-organizing to urgently address the circulation of both virus strains, as a key component of the broader health and economic COVID-19 recovery process. The objectives through the end of 2020 are to stop the circulation of vaccine-derived poliovirus type 2 through multiple, high-quality large-scale vaccination campaigns without exacerbating the situation with COVID-19; maintain control of wild poliovirus type 1 through campaigns targeting core reservoir areas and outbreak response; and complete the transformation of the programme to successfully interrupt the circulation of wild poliovirus type 1 in 2021.

Increasing public health emergency associated with circulating vaccine-derived poliovirus type 2

9. In 2019, an emergency associated with circulating vaccine-derived poliovirus type 2 emerged, which continues to expand in 2020. As at November 2020, 619 cases of circulating vaccine-derived poliovirus type 2 and 272 circulating-vaccine-derived poliovirus type 2-positive environmental samples were reported from 22 countries globally, primarily in Africa, but also including Pakistan and Afghanistan (see the previous section) and the Philippines.

10. In Africa, several outbreaks of genetically-distinct circulating vaccine-derived poliovirus type 2 continue to spread across different countries within the region, notably in: west Africa (as an outbreak originating in Nigeria continues to expand both into west Africa and parts of central Africa); in central Africa (notably Angola and the Democratic Republic of the Congo); and, in the Horn of Africa (notably Ethiopia and Somalia). In Asia, in addition to Afghanistan and Pakistan, the Philippines continue to conduct outbreak response to a strain which emerged in 2019 and which had subsequently spread to Malaysia.

11. In all instances, the continued spread of existing outbreaks as well as the emergence of new type 2 circulating vaccine-derived polioviruses point to gaps in routine immunization coverage in addition to insufficient quality of outbreak response with monovalent oral polio vaccine type 2. The risk of further spread of such strains, or emergence of new strains, is magnified by an ever-increasing gap in global mucosal-immunity to type 2 poliovirus and dropping immunization rates related to COVID-19.

12. In 2019 and early 2020, the Global Polio Eradication Initiative developed the Strategy for the response to type 2 circulating vaccine-derived poliovirus 2020–2021¹ to more effectively address the evolving circulating vaccine-derived poliovirus type 2 epidemiology. In decision EB146(11) (2020), the Executive Board noted the main elements of this strategy, and urged Member States to mobilize domestic financial resources to contribute to outbreak response efforts.

13. This decision emphasized the importance of accelerating the assessment and roll-out of a novel oral polio vaccine type 2, through the WHO Emergency Use Listing procedure, and called on Member States to expedite national processes to enable the importation and use of this vaccine. In order to support Member States to implement this decision, the Global Polio Eradication Initiative has established a novel oral polio vaccine type 2 working group to coordinate all aspects of the vaccine roll-out in a safe, effective and expedited manner. Under the leadership of the WHO pre-qualification team, the Emergency Use Listing recommendation, based on data from key clinical studies in adults, children and infants, was issued on 13 November 2020.² In parallel, WHO regional offices are supporting Member States at high risk of type 2 circulating vaccine-derived poliovirus to prepare for possible use of novel oral polio vaccine type 2. To guide the roll-out of this vaccine, the Strategic Advisory Group of Experts on immunization (SAGE) endorsed the framework for initial-use criteria under the Emergency Use Listing in principle, at its meeting³ in early 2020, pending issuance of the emergency use recommendation. Novel oral polio vaccine type 2 production remains on track, with close to 200 million doses scheduled to be available before the end of 2020. The vaccine is expected to be used on a large scale for outbreak response before the end of the year, and represents a further tool available to countries' eradication efforts, alongside monovalent oral polio vaccine type 2, bivalent oral polio vaccine, trivalent oral polio vaccine and inactivated polio vaccine. Different vaccine combinations will be recommended for different settings, based on the prevailing and area-specific epidemiology, to enable the most effective and rapid response. A framework to govern the use of the various type 2 containing vaccines was discussed and in principle endorsed by SAGE in October 2020.

¹ Strategy for the response to type 2 circulating vaccine-derived poliovirus 2020–2021, available at: <http://polioeradication.org/wp-content/uploads/2020/04/Strategy-for-the-response-to-type-2-circulating-Vaccine-Derived-Poliiovirus-20200406.pdf>, accessed 26 October 2020.

² First ever vaccine listed under WHO emergency use. Available at: <https://www.who.int/news/item/13-11-2020-first-ever-vaccine-listed-under-who-emergency-use>, accessed 17 November 2020.

³ Weekly epidemiological record, 29 May 2020. Meeting of the Strategic Advisory Group of Experts on Immunization, 29 March –1 April 2020: conclusions and recommendations. Available at <https://apps.who.int/iris/bitstream/handle/10665/332218/WER9522-eng-fre.pdf?ua=1&ua=1>, accessed 17 November 2020.

IMPACT OF COVID-19

14. The COVID-19 pandemic has significantly disrupted the efforts to combat vaccine-preventable diseases, including poliomyelitis, compromising health systems and limiting access to vital treatments and immunizations around the world. In order to protect communities and staff, the Global Polio Eradication Initiative recommended in March 2020 that countries temporarily pause house-to-house polio vaccination campaigns and make the polio programme workers and resources available to fight COVID-19. While necessary to save lives, the suspension of planned polio campaigns (>60) in more than 30 countries, coupled with COVID-19-related disruptions to routine immunization, has already resulted in increased transmission of poliovirus.

15. This is of particular concern in Afghanistan and Pakistan, affected by outbreaks of both wild and vaccine-derived polioviruses, where, in the absence of immunization campaigns, modelling predicts that the circulation of polio will increase exponentially during the high transmission season. It is also expected that other countries affected by outbreaks of vaccine-derived polioviruses will see increases in transmission. As an example, current risk assessment and modelling indicate that there is risk of up to a 200% increase in the number of districts with cases due to circulating vaccine-derived poliovirus in the African Region by end 2020, if high-quality outbreak response activities are not resumed. Left unchecked, this increased transmission would pose an increasingly high risk of international spread of poliovirus and potential multi-country outbreaks. In June 2020, the Emergency Committee on the international spread of poliovirus of the International Health Regulations (2005) – assessing that the risk of international spread of polioviruses remains a public health emergency of international concern – concluded that the “current situation is extraordinary, with clear ongoing and increasing risk of international spread and ongoing need for coordinated international response.”¹

16. As at November 2020, polio vaccination campaigns had resumed in 23 countries: Afghanistan, Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d’Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, Guinea, Malaysia, Mali, Niger, Nigeria, Pakistan, the Philippines, Somalia, South Sudan, Sudan, Togo and Yemen. In all instances, decisions around the resumption of polio vaccination activities were made by the national authorities, utilizing the Global Polio Eradication Initiative’s strategic guidance on decision-making, and in close collaboration with immunization and other health programmes. The decisions were taken after careful analyses to ensure that the benefits of carrying out the activity outweighed the risks of COVID-19 transmission among frontline workers and communities. In countries that have successfully resumed activities, the programme has developed strategies and is providing resources such as masks and hand sanitizer to keep frontline health workers protected while in the field while ensuring that campaign elements meet physical distancing requirements. Moreover, the programme is reviewing and adjusting its social mobilization strategies to effectively engage communities towards implementing high-quality campaigns. The programme is also working with countries and the broader public health community to explore options for combining delivery of the polio vaccine with other vaccines and health services, depending on immediate community needs, availability of resources and operational and logistical considerations.

17. Significant and widespread disruptions to immunization and other public health initiatives caused by the COVID-19 pandemic and its associated risks have highlighted the urgent need for more coordinated and integrated approaches. The Global Polio Eradication Initiative has been collaborating with WHO and UNICEF immunization programmes, in a multi-partner initiative to develop an interim

¹ Statement of the 25th Polio IHR Emergency Committee, June 2020. Available at: <http://polioeradication.org/wp-content/uploads/2020/07/25th-polio-EC-IHR-statement-20200706.pdf>, accessed 26 October 2020.

Programme of Work for Integrated Actions which outlines key activities, strategies and changes in approach required to meet the current, unprecedented COVID-19 related challenges facing countries. The work of the interim Programme of Work will also feed into the Global Polio Eradication Initiative's strategy revision and management review, both of which are ongoing (see the "Governance and Financing" section below).

18. Anywhere that polio resources are available, the polio programme is continuing to lend critical support to protect communities from COVID-19. Building on decades of experience stopping polio outbreaks, polio workers and resources are playing an important role in the fight against COVID-19. Staff are working to educate the public and combat the spread of misinformation. Globally, the polio surveillance network is being utilized for COVID-19 case detection, contact tracing, laboratory testing and data management. Polio data management systems and front-line staff in many countries are helping to accelerate COVID-19 detection and response. Reportedly, numerous polio workers have been infected with severe acute respiratory syndrome coronavirus 2 (SARS COV-2) while performing their duties, and two workers in Somalia died of COVID-19.

19. Given the significant disruption caused by COVID-19 to immunization services, including for polio eradication, on 6 November 2020 WHO and UNICEF issued a joint emergency call to action for measles and polio outbreak response and prevention,¹ to protect children by vaccination. The call is for countries to invest in their immunization services to urgently raise immunity levels and for the international community to ensure rapid operationalization of the emergency funds needed to implement polio and measles outbreak prevention and response strategies.

POLIOVIRUS CONTAINMENT

20. The overarching goal of poliovirus containment is to reduce the risk of re-introduction of poliovirus and disease into the community. This is accomplished by monitoring the types and amounts of polioviruses held in countries through the annual review of certification inventories and providing technical guidance on the implementation of GAPIII² (*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*) in designated poliovirus essential facilities.

21. In accordance with resolution WHA68.3 (2015), countries should continue to intensify activities for containment of type 2 polioviruses. In 2020, 25 countries have 73 facilities (laboratories, vaccine manufacturers, research facilities) retaining type 2 poliovirus. Fifteen facilities in five countries have not yet entered into the Global Poliovirus Containment Certification Scheme, the deadline for which was December 2019. In addition, with the certification of global eradication of wild poliovirus type 3, samples containing wild poliovirus type 3 should now be handled under containment conditions or destroyed. It is anticipated that the number of poliovirus essential facilities will increase as wild poliovirus types 3 and 1 are certified as globally eradicated, and thus required to be handled under containment conditions.

¹ Emergency call to action for measles and polio outbreak response and prevention. Available at <http://polioeradication.org/funding-appeal/>, accessed 6 November 2020.

² 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. Available at <http://apps.who.int/iris/handle/10665/208872>, accessed 26 October 2020.

22. The programme is updating its containment guidance, including GAPIII, to ensure a coordinated evolution of global guidance for containment as the programme also pivots to respond to evolving certification criteria, ongoing outbreaks and the COVID-19 pandemic.

23. All type 2 poliovirus essential facilities are located in polio-free countries. Since the start of 2020, breach or release incidents have been reported from facilities in three countries. The consequences, namely the risk of spread, associated with a potential breach are magnified by an ever-increasing global gap in mucosal immunity to type 2 poliovirus and decreasing immunization rates due to COVID-19. All countries, irrespective of poliovirus-affected status, should: ensure that poliovirus containment measures are fully implemented; reduce the number of poliovirus essential facilities to an absolute minimum; and abandon use of wild poliovirus in favour of alternative, genetically-stabilized attenuated strains where possible.

GOVERNANCE AND FINANCING

24. In December 2019, in response to the evolving situation and needs and at the request of donors, the Global Polio Eradication Initiative launched a governance review process to evaluate how to improve the partnership's operations and structures at the leadership level (Polio Oversight Board, Finance and Accountability Committee and Strategy Committee). The review gathered feedback from stakeholders and donors via a series of surveys, workshops, interviews and consultations conducted over a six-month period. The findings¹ were published in July 2020 and outline key issues with recommendations aimed at strengthening the programme's governance.

25. In 2020, the Global Polio Eradication Initiative launched a revision of the new strategy for polio eradication. Based on best practices and lessons learned, partners and stakeholders are collectively identifying remaining obstacles to polio eradication, in order to inform the revised strategy and incorporate optimal approaches to overcoming those obstacles. Intensive engagement with partners and stakeholders is envisaged through to the end of 2020, with finalization of the strategy anticipated by the first quarter of 2021 and the submission of its major elements to the Seventy-fourth World Health Assembly in May 2021.

26. While overall support to the Global Polio Eradication Initiative remains high, notably by long-standing sovereign donors and Rotary International, the Initiative faces a precarious financing situation which could significantly impact global eradication efforts. Current financial constraints may force a prioritization of available resources, which could lead to a scale-back of presence in countries in which poliomyelitis is not endemic. At the same time, the programme is adapting its approaches to the COVID-19 pandemic. Several factors are expected to contribute to increased needs for financial resources: (1) as polio vaccination campaigns resume, additional investments are needed to protect health workers and communities during the campaigns; (2) the drop in essential immunization services and pause in campaigns in 2020 may give rise to increased cases and costs to respond; (3) this latter factor may also lead to a delay in eradication itself. The programme is undertaking careful risk analysis of the evolving epidemiology, and is ensuring that the response is conducted in the safest and most efficient manner possible, including through multi-antigen activities when appropriate. Member States are encouraged to strengthen routine immunization with bivalent oral polio vaccine and inactivated polio

¹ Global Polio Eradication Initiative Governance Review. Final Report, July 2020. Available at: <http://polioeradication.org/wp-content/uploads/2020/07/GPEI-Governance-Review-Final-Report-July-2020.pdf>, accessed 26 October 2020.

vaccine, and to mobilize domestic finances in response to outbreaks of circulating vaccine-derived polioviruses in line with decision EB146(11).

ACTION BY THE EXECUTIVE BOARD

27. The Executive Board is invited to note the report and focus its deliberations on remaining operational challenges to reaching every child, roll-out of novel oral polio vaccine type 2 and ways to mitigate risks posed by a precarious financial situation.

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