

Poliomyelitis

Report by the Secretariat

1. Strong progress continues to be made since the Health Assembly called for the worldwide eradication of poliomyelitis in 1988.¹ At the time, poliomyelitis was endemic in more than 125 countries around the world and more than 350 000 children a year were paralysed for life by poliovirus. Today, transmission of wild poliovirus is at its lowest levels ever, with endemic transmission occurring in parts of only three countries – (in order of burden of disease) Pakistan, Afghanistan and Nigeria. By 28 September, 26 cases of polio had been reported worldwide. Only one wild serotype (poliovirus type 1) continues to be detected; wild poliovirus type 2 was officially declared eradicated in 2015 and no case of paralytic poliomyelitis due to wild poliovirus type 3 has been detected anywhere since November 2012. More than 16 million people are walking today who otherwise would have been paralysed. An estimated 1.5 million childhood deaths have been prevented through the systematic administration of vitamin A during polio immunization activities. The world stands on the brink of an historic global public health success.

2. The progress has been made possible by the global network of support and engagement of stakeholders, first and foremost by Member States. More than 20 million volunteers administer polio vaccines and other life-saving medicines to more than 400 million children worldwide every year. To date, the global effort to eradicate polio has saved more than US\$ 27 000 million, and the global eradication of poliovirus will result in savings of an additional US\$ 20 000–25 000 million, funds which can be applied to the delivery of other life-saving health interventions.

3. The risks and consequences of failure, by contrast, are significant: an epidemic-prone disease, polio will spread again beyond its current borders, and, within 10 years, upwards of 200 000 new cases will again be reported around the world, every year. This progress is, moreover, fragile; this was underscored in August 2016 with the confirmation of three new cases of paralytic poliomyelitis due to wild poliovirus type 1 in Borno State, north-eastern Nigeria, the first reported in the country and the African Region since July 2014. These risks underscore the urgent need for the rapid and sustainable achievement of a polio-free world, recalling resolution WHA68.3 (2015), in which the Health Assembly urged Member States to fully finance and implement the Polio Eradication and Endgame Strategic Plan 2013–2018.

4. The declaration in 2014 of international spread of wild poliovirus as a Public Health Emergency of International Concern and the Temporary Recommendations promulgated under the International

¹ Resolution WHA41.28, Global eradication of poliomyelitis by the year 2000 (<http://www.who.int/ihr/polioresolution4128en.pdf>, accessed 13 October 2016).

Health Regulations (2005) remain in effect. National polio emergency action plans continue to be implemented in all countries affected by circulation of either wild poliovirus or vaccine-derived polioviruses, and all countries currently affected by circulation of either type of virus have declared such events to be national public health emergencies.

5. Between 17 April and 1 May 2016, all 155 countries and territories that were still using trivalent oral polio vaccine successfully switched its use to the bivalent oral polio vaccine through a globally-synchronized replacement. It was the first step in the phased removal of oral polio vaccines, which will culminate with the cessation of use of all oral polio vaccines following global certification of eradication of all wild poliovirus types. Since the declaration of eradication of wild poliovirus type 2 in September 2015, Member States are completing efforts to identify facilities holding type 2 polioviruses (wild, vaccine-derived or Sabin), destroy unneeded materials or appropriately contain needed materials in poliovirus-essential facilities.

6. In 2016, acceleration of transition planning is continuing (see paragraphs 19–22) in order to ensure that the functions and assets of the Global Polio Eradication Initiative continue to benefit broader public health efforts even after the successful eradication of the disease.

7. The partners of the Global Polio Eradication Initiative continue to engage closely with all Member States and the broader international development community in efforts to secure rapidly the additional US\$ 1500 million¹ required to achieve a lasting polio-free world.

INTERRUPTION OF POLIOVIRUS TRANSMISSION

8. As at 28 September 2016, 26 cases of paralytic poliomyelitis due to wild poliovirus had been reported globally with onset of paralysis in the year 2016, compared to 74 in 2015. All the cases were reported from Pakistan, Afghanistan and Nigeria and were caused by wild poliovirus type 1. By the same date, three cases due to circulating vaccine-derived poliovirus of type 1 had been reported from Lao People's Democratic Republic (all from January 2016), compared to 32 cases due to circulating vaccine-derived polioviruses from seven countries in 2015. Two circulating vaccine-derived polioviruses type 2 have been detected in Borno State, Nigeria, in 2016 so far (see paragraph 13).

Countries with continued endemic transmission of wild poliovirus: Pakistan, Afghanistan and Nigeria

9. Afghanistan and Pakistan continue to be treated as a single epidemiological block. As at 28 September 2016, 14 cases of paralytic poliomyelitis had been reported in Pakistan, compared to 54 in total in 2015 (and 32 compared to the same period in 2015). In Afghanistan, nine cases were reported, compared to 20 in total in 2015 (and 12 compared to the same period in 2015). The two countries demonstrated strong progress over the past six months, and technical advisory groups, reviewing latest epidemiology at mid-2016 following the “low season” of poliovirus transmission, concluded that rapid interruption of transmission of wild poliovirus was feasible in both countries. Realization of that goal will, however, depend on reaching all missed children, filling chronic gaps in strategy implementation and being able to vaccinate children in infected areas that have been difficult to access owing to insecurity. The remaining reservoirs of wild poliovirus are the Nangarhar-Khyber-

¹ For most up-to-date budget and financial information, see <http://polioeradication.org/financing/> (accessed 13 October 2016).

Peshawar and Quetta-Greater Kandahar corridors, both linking the two countries. These areas are now the focus of attention for more and better-quality activities.

10. In Pakistan, the number of reported cases of poliomyelitis continues to decline. A national emergency action plan for the disease is being overseen directly by the office of the Prime Minister. Emergency Operations Centres at federal and provincial levels ensure almost real-time monitoring of activities, implementation of corrective action and increased accountability and ownership at all levels. Most importantly, the national plan focuses on identifying chronically missed children and the reasons why they are missed and on implementing area-specific approaches to overcome these challenges. As a result, innovative community-based strategies are being implemented, operational weaknesses of the programme are increasingly being corrected, and access in previously inaccessible areas continuously improved. High vaccination coverage rates are observed in the Peshawar-Khyber corridor and the Quetta block but gaps in vaccine coverage remain in Karachi and northern Sindh with evidence of continued transmission.

11. In Afghanistan, polio eradication is at the top of Afghanistan's health agenda. In 2015 and 2016, the Government scaled up its efforts to accelerate polio eradication nationally amid multiple complex challenges, including increasing conflict and insecurity in many parts of the country. The National Emergency Action Plan continues to serve as the guiding document for its polio eradication activities. Several new developments have taken place during the low season for polio transmission to accelerate progress towards stopping transmission. Emergency Operation Centres were established at the national and regional levels with the aim to intensify, guide and coordinate efforts of all partners for implementing the National Emergency Action Plan under one roof. Most areas of Afghanistan are polio-free, but wild poliovirus continues to circulate in localized geographical areas in the Eastern and Southern Regions of the country. To date in 2016, the country has reported a total of nine cases in just five districts; it is important to highlight that four of these cases are from one small geographical area (Sheegal district, Kunar province), which has remained inaccessible for vaccination activities since 2012.

12. In Nigeria, three new cases due to wild poliovirus type 1 were confirmed in August 2016 from two districts of Borno State, the first reported from the country since July 2014. Genetic sequencing of the isolated viruses indicate they are most closely linked to a wild poliovirus type 1 last detected in Borno State in 2011. With the lack of access in many areas and the inability to conduct high-quality vaccination and surveillance in vital areas of the State, this strain has likely circulated undetected in this inaccessible population since that time. The Government of Nigeria immediately launched an aggressive outbreak response according to revised international outbreak response protocols, with five rounds of large-scale supplementary immunization activities to deliver additional doses of bivalent oral polio vaccine at short intervals, with additional activities planned using fractional-dose inactivated polio vaccine. The Government declared the outbreak to be a national public health emergency. At the same time, additional measures are being implemented to increase the sensitivity of subnational surveillance. The response is part of a broader regional outbreak response, coordinated with neighbouring countries, in particular in the Lake Chad subregion, including northern Cameroon, parts of Central African Republic, Chad and southern Niger. At the sixty-sixth session of the Regional Committee for Africa (Addis Ababa, 19–23 August 2016), health ministers declared the polio outbreak to be a regional public health emergency for countries in the Lake Chad subregion. Detection of these cases underscores the risk posed by low-level undetected transmission and the urgent need to strengthen subnational surveillance everywhere. The Global Polio Eradication Initiative has reviewed and revised supplementary immunization activity plans to meet the supply requirements of bivalent oral polio vaccine associated with this outbreak response, while ensuring that other high-risk countries are able to maintain high levels of population immunity.

Circulating vaccine-derived poliovirus

13. In late 2015 and early 2016, Member States affected by outbreaks of circulating vaccine-derived polioviruses type 2 intensified their responses to ensure that circulation of these viruses was stopped before the globally-synchronized switch from trivalent oral polio vaccine to bivalent oral polio vaccine in early 2016 (see paragraph 5). In 2016, no case of poliomyelitis due to circulating vaccine-derived poliovirus type 2 was reported. Only one country, Lao People's Democratic Republic, was affected by a circulating vaccine-derived poliovirus outbreak (type 1) and no case has been reported from that country since 11 January 2016. However, gaps in the quality of subnational surveillance persist in key areas where previously circulation of vaccine-derived polioviruses had been confirmed, including parts of Guinea. In Nigeria, two circulating vaccine-derived polioviruses type 2 were detected in Borno State, in an environmental sample (collected in March 2016) and stool specimens (collected in August 2016) from a healthy contact of one of the cases of polio due to wild poliovirus type 1 (see paragraph 12), during strengthened surveillance activities in the area. Genetic sequencing of both the vaccine-derived viruses indicate they have been circulating for almost four years in the area and were last detected in northern Nigeria in November 2014. With the lack of access in many areas and the inability to conduct high-quality vaccination and surveillance in key areas of Borno State, the strains have likely circulated undetected in this inaccessible population. Multi-country response plans, including the improving of surveillance quality at the subnational level such as the pivotal Lake Chad region of Chad, continue to be implemented. The Government of Nigeria responded fully and immediately, in line with new protocols established for the detection of vaccine-derived poliovirus type 2 in the period following the switch from use of trivalent oral polio vaccine. The Director-General authorized the release of monovalent oral polio vaccine type 2 from the global stockpile at the request of the Government for use in the response.

14. The Global Polio Eradication Initiative is actively monitoring the presence of vaccine-derived poliovirus type 2, from any source. Detection of such strains in the first 6 to 12 months after the switch from trivalent oral polio vaccine to bivalent oral polio vaccine is expected, given that children who had previously received trivalent oral polio vaccine will continue to excrete the type 2 strain originally contained in the trivalent vaccine for a limited period of time. Each detection of type 2 virus from any source results in the immediate activation at global, regional and country levels of a newly-established incident management system, with the aim of conducting a thorough risk assessment associated with the isolated strain and implementing, if appropriate and necessary, an outbreak response, including the accessing of the global stockpile of monovalent oral polio vaccine type 2. Monovalent oral polio vaccine type 2 was released from the global stockpile for implementation of response activities in Cameroon (Lake Chad region), Chad, Niger, Nigeria and Pakistan. In India, fractional-dose inactivated polio vaccination was used in response to the detection of a vaccine-derived poliovirus type 2 in the environment. New evidence indicates that monovalent oral polio vaccine type 2 is more efficacious than previously assumed. This new evidence was shared with the Strategic Advisory Group of Experts on immunization at its recent meeting (Geneva, 18–20 October 2016), with a proposal to revise global outbreak response protocols, necessitating fewer rounds of supplementary immunization activities.¹

¹ The report of the meeting will be made available on the WHO website at <http://www.who.int/immunization/policy/sage/en/>.

Public Health Emergency of International Concern – minimizing the risk of international spread of poliovirus

15. Episodes of international spread of poliovirus continued in 2016 with both Afghanistan and Pakistan exporting virus across their shared border. Minimizing the risk and consequences of new international spread of polioviruses requires: full implementation of the eradication strategies in the remaining infected areas; comprehensive application of the Temporary Recommendations issued by the Director-General under the International Health Regulations (2005); and heightened surveillance and outbreak response preparedness plans by all Member States in order to facilitate a rapid response to new cases of detection of poliovirus. During its teleconference (11 August 2016), the Emergency Committee under the International Health Regulations (2005) regarding the international spread of poliovirus recommended extending the Temporary Recommendations for a further three months.¹

PHASED REMOVAL OF ORAL POLIO VACCINES

16. The successful switch from trivalent to bivalent oral polio vaccine (see paragraph 5) was a milestone; it was the largest-ever withdrawal of one vaccine and associated introduction of another. By end-September 2016, all but one Member State had submitted reports, independently verifying full national removal of trivalent oral polio vaccine from service delivery points and the switch to bivalent oral polio vaccine. This achievement is a tribute to the extraordinary commitment, leadership and engagement of all Member States. Cessation of oral polio vaccine use is necessary to eliminate the very rare long-term risks of vaccine-derived polioviruses associated with its use, and is a key strategy of the Polio Endgame Plan, which had been endorsed by the Strategic Advisory Group of Experts on immunization and the Health Assembly.

17. To prepare for the switch to bivalent oral polio vaccine, all countries had committed themselves to introduce at least one dose of inactivated polio vaccine into their routine immunization programmes. The level of commitment to meet this goal has been exceptional. At its meeting on 12–14 April 2016, the Strategic Advisory Group of Experts on immunization noted both the reduction in supplies of inactivated polio vaccine, due to technical difficulties that manufacturers have encountered in scaling up production, and the expectation that the global vaccine supply will remain fragile through 2017.² Available supply of this vaccine continues to be prioritized to areas at highest risk of circulation of vaccine-derived poliovirus type 2, to countries which remain affected by endemic wild poliovirus transmission, and for a global reserve for outbreak response. Every effort is being made to ensure that remaining low-risk countries receive inactivated polio vaccine supplies by the end of 2017. The Global Polio Eradication Initiative is exploring with WHO's regional offices and Member States the feasibility of instituting dose-sparing strategies, such as using intradermal administration of fractional-dose inactivated poliovirus vaccine. Member States, notably India and Sri Lanka, are starting to adopt fractional-dose schedules in their immunization programmes in order to ensure that sufficient quantities of inactivated polio vaccine are available for continued vaccination of the full birth cohort.

¹ Available at <http://www.who.int/mediacentre/news/statements/2016/10th-ihc-emergency/en/> (accessed 13 October 2016).

² Meeting of the Strategic Advisory Group of Experts on immunization, April 2016 – conclusions and recommendations. Weekly epidemiological record, 2016, 21:266-284 (<http://www.who.int/wer/2016/wer9121.pdf?ua=1>, accessed 13 October 2016).

CONTAINMENT

18. Efforts to contain poliovirus type 2 have progressed in 2016, following the publication 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 (GAPIII).¹ As at 6 October 2016, 176 countries and territories reported that they no longer had wild or vaccine-derived poliovirus type 2, 18 reported that they did, and 11 were completing reports. So far, 20 countries have designated 55 poliovirus-essential facilities to retain type 2 polioviruses, but some of them still have to nominate the national authority for containment that will be responsible to certify that these facilities meet the containment requirements described in GAPIII. In support of Member States' efforts to complete Phase I of GAPIII, the Secretariat is developing guidance to help facilities to identify samples that are highly, moderately or not likely to be contaminated with Sabin 2 strain or Sabin 2 strain-like viruses, recommending their destruction or safe and secure handling. In support of the implementation of Phase II, the Secretariat has raised awareness about containment and strengthened national capacity by training staff of national authorities for containment and poliovirus-essential facilities about implementation of the global action plan and certification. With the publication of the GAPIII Containment Certification Scheme² aiming at helping national authorities for containment to certify facilities as meeting the containment requirements in GAPIII, in consultation with the Global Certification Commission, training will be offered to auditors in charge of auditing poliovirus-essential facilities. With this support, concerned Member States are expected to complete Phase I rapidly and progress to Phase II of the global action plan, formally engaging concerned facilities in the certification process.

TRANSITION (LEGACY) PLANNING

19. Polio transition planning (previously referred to as legacy planning) has intensified in 2016. Transition planning has three aims: first, to ensure that those functions essential to maintaining a polio-free world after eradication are mainstreamed into continuing public health programmes; second, to ensure that the lessons learned from polio eradication activities are shared with other health initiatives; and third, where feasible and appropriate, to plan the transfer of capabilities, assets and processes in order to support other health priorities. It also seeks to minimize the risks and maximize the opportunities that the eradication of polio creates.

20. In April 2016, the Global Polio Eradication Initiative published detailed budgets for 2016–2019,³ showing the decreased expenditure from 2017 for each country, region and activity. These budgets provided an impetus to the transition planning process at the country level, which is intended to be driven by countries, in line with their national health goals and priorities. WHO and other partners in the Initiative are providing technical assistance to Member States in this process. The 16 countries that have the greatest polio-funded infrastructure are in the process of drawing up their transition plans. As a result of the detection of wild poliovirus type 1 in Nigeria, transition planning may not happen at the same speed in other countries of the Lake Chad subregion; however, the

¹ Document WHO/POLIO/15.05 (http://polioeradication.org/wp-content/uploads/2016/09/GAPIII_2014.pdf, accessed 13 October 2016).

² The GAPIII Containment Certification Scheme replaces and supersedes Annex 4 of GAPIII.

³ Document WHO/POLIO/2016.03 http://polioeradication.org/wp-content/uploads/2016/07/FRR2013-2019_April2016_EN_A4.pdf (accessed 13 October 2016).

momentum should not be interrupted and planning should continue in the other countries, in close cooperation with other relevant stakeholders, including donors.

21. In tandem, WHO and other partners in the Global Polio Eradication Initiative have launched a process to develop their agency-specific transition plans for polio-funded assets at the regional and global levels. In 2016, a new Transition Independent Monitoring Board has also been established to monitor and guide independently both the country and global aspects of transition planning, reporting on progress and engagement. As noted by the Health Assembly in 2014,¹ WHO is liable for significant indemnity costs for the contracts that are terminated because of programme closure, owing to the high number of staff and non-staff contracts financed from polio-specific funds, in particular in the African Region. In 2016, the number of fixed contracts has been considerably reduced compared to 2013, a cut which, together with advanced planning, will provide the Secretariat with increased flexibility to reduce the level of terminal indemnities at the end of the programme.²

22. The Secretariat is drafting a cross-organizational position paper to specify how it proposes to manage the risks and opportunities of the eradication of polio for the Secretariat and its support to Member States. Major areas to be addressed include: managing the risks to country offices and programmes which currently heavily rely on polio assets and infrastructure; the need to ensure that polio essential functions are maintained; and managing the transition of polio-funded staff with their appropriate treatment.

FINANCE AND MANAGEMENT OF THE GLOBAL POLIO ERADICATION INITIATIVE

23. Thanks to the generous continuing support of the international development community, including Member States, multilateral organizations, development banks, foundations and Rotary International, the budget for planned activities for 2016 was fully secured. Funds available in-country were used to implement the outbreak response in Nigeria, and a separate appeal³ was issued for the Lake Chad subregional outbreak response. Efforts are under way to mobilize the additional US\$ 1500 million⁴ to implement fully the Polio Eradication and Endgame Strategic Plan 2013–2018 and secure a lasting polio-free world by 2019. In addition to the significant humanitarian benefits associated with polio eradication, the drive is also associated with substantial economic benefits. A polio-free world will reap savings of a total of more than US\$ 50 000 million (with US\$ 27 000 million already saved), funds that can be used to address other pressing public health and development needs. Critical to achieving a lasting polio-free world is the rapid mobilization of the additional funds needed. The Global Polio Eradication Initiative published an investment case⁵ for polio eradication, clearly summarizing the economic and humanitarian rationale for continued investment in the Initiative.

¹ See documents A67/47 and WHA67/2014/REC/3, summary record of Committee B, second meeting, section 4.

² For details, see the annex to document A67/47, Human resources: annual report (http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_47-en.pdf, accessed 13 October 2016).

³ Available at http://polioeradication.org/wp-content/uploads/2016/09/20160906_AppealNigeria.pdf (accessed 13 October 2016).

⁴ For most up-to-date budget and financial information, please visit <http://polioeradication.org/financing/> (accessed 13 October 2016).

⁵ The investment case is available at <http://polioeradication.org/ResourceLibrary.aspx> (accessed 13 October 2016), but the text is being revised to reflect the responses to the outbreaks in Nigeria and the Lake Chad subregion.

ACTION BY THE EXECUTIVE BOARD

24. The Board is invited to note the report and to encourage Member States to ensure full implementation of resolution WHA68.3 (2015).

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