

## **Poliomyelitis: intensification of the global eradication initiative**

### **Report by the Secretariat**

1. The Executive Board at its 132nd session noted a previous version of this report.<sup>1</sup> The Board provided additional guidance on addressing the short- and long-term risks to attaining the milestones of the new polio eradication and endgame strategic plan 2013–2018, particularly in the areas of: vaccination of travellers; fast-tracking access to affordable inactivated poliovirus vaccination options for all countries; strengthening routine immunization; and legacy planning, including that for the human resource infrastructure currently funded by the Global Polio Eradication Initiative. This guidance has been incorporated into the final plan, which is due to be shared with Member States in April 2013, in advance of the planned roll-out of the new plan at a Global Vaccine Summit scheduled to be held in Abu Dhabi (24 and 25 April 2013). In addition, data have been updated in this version of the report. In May 2014, the Secretariat will report to the Sixty-seventh World Health Assembly on progress in implementing and financing the strategic plan; outcomes of the consultative process on the legacy planning; and action required by the Health Assembly in advance of initiating the phased removal of the type 2 component of the oral poliovirus vaccine from all routine use globally.

2. In 2012, the Sixty-fifth World Health Assembly in resolution WHA65.5 declared the completion of poliovirus eradication a programmatic emergency for global public health and requested the Director-General, *inter alia*, to undertake the development and rapid finalization of a comprehensive polio eradication and endgame strategy to the end of 2018. The present report gives details of progress made, and challenges experienced, in implementing the global and national emergency action plans against poliomyelitis; explains new challenges and risks, particularly in the area of security; summarizes the new six-year polio eradication and endgame strategic plan 2013–2018,<sup>2</sup> including its implications for the 144 Member States using oral poliovirus vaccine; and, outlines the planning process for securing the broader legacy of the Global Polio Eradication Initiative.

### **IMPLEMENTATION OF EMERGENCY ACTION PLANS AGAINST POLIOMYELITIS**

3. The Global Polio Emergency Action Plan 2012–2013 was launched on 24 May 2012, during the Sixty-fifth World Health Assembly, in support of national emergency action plans against poliomyelitis from the three remaining countries in which the disease is endemic, namely: Afghanistan, Nigeria and Pakistan. At the international level, the five core agencies working in partnership for the eradication of poliomyelitis have established the Polio Emergency Steering Committee to manage risks and guide operations. The Committee reports to the agency heads, who

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<sup>1</sup> See the summary record of the Executive Board at its 132nd session, tenth meeting, section 2.

<sup>2</sup> The working draft of the strategic plan, as approved by the Strategic Advisory Group of Experts on immunization, is available at <http://www.polioeradication.org/ResourceLibrary/Strategyandwork.aspx> (accessed 18 March 2013).

constitute the membership of the Polio Oversight Board, which meets on a quarterly basis. Emergency operations centres and/or procedures have been activated across the core partner agencies, and WHO recruited 2500 additional workers to support government efforts against poliomyelitis in areas of Afghanistan, Nigeria and Pakistan affected by the disease or where the outbreak risk was greatest. UNICEF engaged more than 5000 additional community mobilizers in these priority areas. On 27 September 2012, the United Nations Secretary-General hosted a high-level meeting on the poliomyelitis eradication emergency during the sixty-seventh session of the United Nations General Assembly. The aim of the meeting was to reinforce national and international commitment to achieving eradication and mobilizing the necessary financing. It was attended by the Heads of State of the three countries where the disease is endemic, the heads of the partner agencies, donors and other stakeholders.

4. In each of the three countries mentioned above, the Head of State or Government has appointed a focal point to oversee the national effort to eradicate poliomyelitis and has engaged other sectors of government and public administration to support implementation of the national emergency action plan. In addition, in Nigeria and Pakistan, respectively, a Presidential task force and a Prime Ministerial task force have been established to assess progress and ensure the accountability of local authorities. In Nigeria, a national emergency operations centre has been established in Abuja with a subnational centre in Kano state in order to further enhance operations planning, oversight and accountability. New performance monitoring systems have been put in place (i) to track whether supplementary immunization activities using oral poliovirus vaccine were reaching the vaccination coverage thresholds required to interrupt transmission and (ii) to guide rapid corrective action. In Nigeria, the proportion of very-high-risk local government areas in which the vaccine coverage reached the estimated target threshold of 80% for stopping poliovirus transmission in that setting increased from 10% in February 2012 to 70% in February 2013. In Pakistan, the proportion of highest-risk districts achieving the estimated target threshold of 95% in that setting increased from 59% in January 2012 to a peak of 74% in October; increasing insecurity in late 2012 compromised the capability to collect similar monitoring data through January 2013. In the 11 districts in southern Afghanistan at highest risk for persistent transmission of poliovirus, the number of children inaccessible during the oral poliovirus vaccine campaigns declined from more than 80 000 at the end of 2011 to some 15 000 by December 2012.

5. As a result of this emergency eradication effort, as at 14 February 2013 the numbers of both cases of poliomyelitis and countries experiencing cases were at their lowest-ever recorded levels. Globally, 222 cases had been reported in 2012, a 66% decline compared with 2011. Five countries reported cases in 2012 compared with 16 in 2011. In three of the countries with endemic or re-established transmission of wild poliovirus – Chad, Pakistan and Afghanistan – case numbers declined 96%, 70% and 53%, respectively, relative to 2011. In Nigeria, case numbers increased by 95% compared with the same period in 2011, but by late 2012 had stabilized as programme performance improved significantly in the historically worst-performing areas. In the fifth country, Niger, one case occurred in late 2012, linked to a wild poliovirus originating in northern Nigeria. In Egypt, wild poliovirus imported from Pakistan was detected in sewage samples collected in December 2012 in two areas of greater Cairo; no case of paralytic poliomyelitis was reported. Of the two remaining serotypes of wild poliovirus (types 1 and 3), only 22 cases due to type 3 were reported – 19 in Nigeria and 3 in Pakistan. The three cases in Pakistan were all detected in the same district, with the most recent having onset on 18 April 2012.

6. Although substantial improvements were achieved in the quality and coverage of supplementary immunization activities in infected areas in 2012, insecurity emerged as a more significant risk to the completion of wild poliovirus eradication. In December 2012, attacks in Khyber Pakhtunkhwa and Karachi, Pakistan resulted in the murder of nine polio vaccinators. In February 2013, attacks on two health centres in Kano state, Nigeria, resulted in the deaths of 10 people who had worked on polio

eradication activities. These events compromised the vaccine coverage achieved in subsequent supplementary immunization activities in some areas. A multi-pronged approach was initiated to address this risk. In some areas operations were restructured to lower the profile of polio campaigns; provincial/state security coordination mechanisms were established; and district-specific risk assessments were introduced to guide operations. At all levels broad-based initiatives were taken to mobilize stronger societal support for polio eradication, particularly among Muslim populations and Islamic leaders and institutions. As these new measures are implemented, there is continued work to build on recent progress in filling gaps in programme management capacity and meeting other long-standing operational challenges.

## **POLIO ERADICATION AND ENDGAME STRATEGIC PLAN 2013–2018**

7. Between June 2012 and February 2013 WHO coordinated the development of a comprehensive polio eradication and endgame strategic plan 2013–2018, in consultation with countries affected by poliomyelitis, stakeholders, donors, vaccine manufacturers, regulatory agencies and a number of national and international advisory bodies for the eradication of poliomyelitis and routine immunization against the disease. In December 2012, the Strategic Advisory Group of Experts on immunization endorsed the four major objectives of the strategic plan and the associated milestones, namely:

- (1) poliovirus detection and interruption of transmission, the working target being to stop all wild poliovirus transmission by end-2014;
- (2) strengthening of routine immunization programmes and withdrawal of oral polio vaccine, the primary target being the withdrawal of the type 2 component of oral polio vaccine in all routine immunization programmes by mid-2016;
- (3) containment and certification, the primary target being the certification of all six WHO regions as having eradicated all wild polioviruses by end-2018;
- (4) legacy planning, the initial target being to have a legacy strategy in place by end-2015.

8. The new strategic plan introduces a number of major developments in planning for the eradication of poliomyelitis. First, the plan outlines a concrete six-year timeline and approach for the completion of the Global Polio Eradication Initiative, including the elimination of all paralytic poliomyelitis whether due to wild, vaccine-derived or Sabin-strain polioviruses. Secondly, in order to achieve global containment and certification, the geographical focus of the strategic plan, which is currently on poliomyelitis-affected and high-risk countries, is expanded to include the 144 countries that use the trivalent oral poliovirus vaccine in national routine immunization programmes, and ultimately all countries. Thirdly, very high priority is given to raising routine immunization coverage rates by systematically applying the existing infrastructure and human resources of the global effort to eradicate poliomyelitis to this goal in the context of the Global Vaccine Action Plan and in collaboration with the GAVI Alliance. Finally, policy on routine vaccination against poliomyelitis is updated with the recommendation of the Strategic Advisory Group of Experts on immunization that all countries should introduce at least one dose of inactivated poliovirus vaccine. This policy is designed to mitigate the risks of poliovirus reintroduction or re-emergence following the withdrawal of the type 2 component of the oral poliovirus vaccine globally, and reduce the potential consequences of those risks. The draft global action plan to minimize poliovirus facility-associated risk after eradication of wild polioviruses and cessation of routine oral poliovirus vaccine use will be revised and finalized by mid-2014. The revision will align the implementation of containment activities with the timelines for phased withdrawal of oral poliovirus vaccines in the new strategic plan.

9. In order to achieve the first objective of the new strategic plan, by early 2013 Afghanistan, Nigeria and Pakistan had revised their national emergency action plans, incorporating the innovations, best practices and lessons learnt in 2012 so as to address long-standing challenges to programme operations and societal acceptance in some of the remaining infected areas. The areas covered by these improvements include programme oversight, monitoring and accountability, detailed planning for supplementary and routine immunization activities, data management, and accessing and engaging underserved and mobile populations. New tactics address the increasingly important risks associated with operating in insecure environments. Partner agencies will continue to support national emergency action plans by fully implementing and sustaining the necessary surge in technical support; assisting with the implementation of direct payment mechanisms; enhancing the development and application of processes for assessing in real-time the preparedness for supplementary immunization activities and the performance of those activities; dealing with gaps in surveillance sensitivity; introducing new initiatives and capacity to enhance societal acceptance; and refining plans for operations in insecure areas. An intensive schedule of supplementary immunization activities will continue to be implemented across the 30 countries assessed to be at highest risk of importation of poliovirus and outbreaks of poliomyelitis in the period 2013–2014.

10. The importance of withdrawing the type 2 component of oral poliovirus vaccine as soon as possible from routine immunization programmes globally was reinforced by the detection in 2012 of five outbreaks of poliomyelitis due to circulating type 2 vaccine-derived polioviruses. The outbreaks left 65 children paralysed in the following seven countries: Afghanistan, Chad, Democratic Republic of the Congo, Kenya, Nigeria, Pakistan and Somalia. Two of these outbreaks, in Nigeria and Somalia, involve the continuing transmission of a type 2 virus for a period exceeding 36 months. Interrupting the outbreak in central southern Somalia continues to be complicated by the ban on mass vaccination campaigns in areas controlled by Al-Shabaab militants.

11. In order to enhance the affordability and availability of inactivated poliovirus vaccine – a prerequisite for the eventual withdrawal of the type 2 component of the oral poliovirus vaccine – WHO and its partners have undertaken an intensive series of discussions with vaccine manufacturers and regulatory agencies. In response, one manufacturer of inactivated poliovirus vaccine has announced a substantial cut in the price of its existing product, reducing it to US\$ 1.15 per dose. Achieving a price substantially below US\$ 1 per dose in the near term will require the use of fractional dosing through either intradermal delivery of one fifth of a full dose of inactivated poliovirus vaccine or intramuscular administration of a product containing an adjuvant. Three manufacturers have agreed to pursue licensure for intradermal delivery of their inactivated poliovirus vaccine for use in emergency situations, and in one case for routine immunization, with a target price US\$ 0.50 per dose and a development timeline of 24–36 months. Two manufacturers have agreed to develop an inactivated poliovirus vaccine containing an adjuvant, with a target price of between US\$ 0.50 and US\$ 0.75 per dose and a timeline of 36–48 months, contingent in one case upon substantial external support. A third manufacturer is considering the fast-track development of a similar product. Although two manufacturers are planning to develop a low-dose inactivated poliovirus vaccine as part of their respective hexavalent products, neither product will be available during the period of the new strategic plan. WHO continues to support the transfer to developing countries of new production technology for inactivated poliovirus vaccine using Sabin-strain polioviruses. It is expected that such Sabin-strain inactivated poliovirus vaccines will be available during the period of the new strategic plan; however, additional development work is needed to finalize timelines and expected pricing. In parallel to these and other development efforts, and as recommended by the Scientific Advisory Group of Experts on immunization, WHO, UNICEF, the GAVI Alliance and the Bill & Melinda Gates Foundation are establishing a supply and funding strategy for timely introduction of inactivated poliovirus vaccine using existing full-dose products for a transition period if needed.

12. Legacy planning for the Global Polio Eradication Initiative will have three main goals:

(1) to mainstream into existing public health programmes the poliomyelitis-related work on routine immunization activities, disease surveillance and response, and stockpiling and containment;

(2) to ensure that the knowledge and lessons learnt by the programme in identifying and reaching marginalized children and populations with basic health interventions will inform other public health programmes; and

(3) to transfer the relevant capacities, processes and assets that the programme has created, for the benefit of other health priorities, as the Global Polio Eradication Initiative comes to completion, and eventually closure.

13. In 2013, a consultation process on legacy planning will begin with stakeholders, donors, other health initiatives and implementing partners in order to provide input for a discussion paper for Member States to review at regional committees. The outcomes of this consultative process will be brought to the Health Assembly for consideration in 2014, through the regional committees. An independent evaluation of the human resource infrastructure funded by the Global Polio Eradication Initiative will be undertaken to inform long-term planning.<sup>1</sup>

14. The budget for the polio eradication and endgame strategic plan 2013–2018 is US\$ 5525 million, with costs peaking at US\$ 1054 million in 2013 then declining annually to US\$ 760 million in 2018. The greatest expenditure concerns supplementary and other immunization activities, including the introduction of inactivated poliovirus vaccine (47% of the total budget), followed by core functions and infrastructure (36%), surveillance and outbreak response capacity (16%) and containment and certification activities (1%). Maintaining the current annual levels of international contributions and national expenditures on poliomyelitis eradication would secure about US\$ 3100 million of the overall budget. A cross-agency resource mobilization task force has been established to develop and implement a financing plan to maintain current financing and tackle the residual financing gap. The most urgent priority is to close the financing shortfall for eradication activities through to the end of 2013. As at 14 February 2013 the gap was US\$ 660 million, against which firm prospects totalled about US\$ 520 million.

## **ACTION BY THE HEALTH ASSEMBLY**

15. The Health Assembly is invited to note the report.

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<sup>1</sup> See the summary record of the Executive Board at its 132nd session, fifteenth meeting, section 1.