
Progress report on eradication of poliomyelitis

Introduction

1. Since the launch of the Global Polio Eradication Initiative Strategic Plan 2010–2012 the global incidence of polio has fallen by more than 50%. On 21 January 2012, WHO's Executive Board, alarmed by the unexpected upsurge of cases in Nigeria, Pakistan and Afghanistan in 2011, recommended that the completion of polio eradication be declared a "programmatically emergency for global public health." The World Health Assembly issued this declaration in May 2012 (resolution WHA65.5). Earlier, in October 2011, an assessment by the Independent Monitoring Board had found immediate need for improvement in these three countries, particularly in the areas of management, accountability, performance and programme monitoring and organizational culture.

2. In response to this emergency situation, the Global Polio Eradication Initiative developed a polio emergency action plan for 2012–2013. The goal of this plan is to reinvigorate the fight to eradicate poliomyelitis through an emergency approach that focuses on developing appropriate leadership, structures, surge capacity and systems at global, national and subnational level to support a transformational change.

Situation in the Eastern Mediterranean Region

3. All countries of the Eastern Mediterranean Region are free from poliomyelitis except the two remaining endemic countries, Pakistan and Afghanistan.

4. In accordance with WHO's Executive Board resolution, declaring the completion of polio eradication a "programmatically emergency for global public health" and to respond aggressively and timely, an emergency approach to polio eradication has been adopted and the emergency standard operating procedures for the Region have been activated. Polio eradication is the foremost priority of the Region and the programme is performing under the direct supervision and guidance of the Regional Director.

Pakistan

5. In 2010 the Government of Pakistan launched a national emergency action plan with the target of interrupting transmission by the end of 2011. However, a series of challenges that occurred during the year, including floods, a dengue fever epidemic and the devolution of health authority to the provinces accompanied by large-scale changes in leadership, resulted in incomplete implementation of the plan and an overall inability to tighten accountability at the campaign delivery level. In 2011, Pakistan reported 198 polio cases. The majority of the polio cases in the country are from Khyber Pakhtunkhwa (KP), Federally Administered Tribal Areas (FATA) and Sindh, where campaign quality is compromised due to security and management issues.

6. In response to the situation, the Government of Pakistan has augmented the national emergency action plan for 2012, initiating remedial measures to address the problems, including consistent government oversight, ownership and accountability at each administrative level. In addition, a National

Coordination and Monitoring Cell was created in the Prime Minister's Office to coordinate and monitor polio eradication activities from the federal level.

7. Recognizing the importance of strong campaign delivery, WHO and UNICEF have prepared a plan to provide the necessary workforce at this level starting with the high-risk union councils. Support to the programme has been increased by all partners. Other ongoing efforts and initiatives of the programme include the adequate and appropriate use of bivalent oral poliovaccine, introduction of short-interval additional doses, the development of comprehensive sub-district plans, introduction of a surge of support staff at the implementation level, improvements in the monitoring system through the use of lot quality assurance sampling and maintaining a very sensitive surveillance system supported by well-functioning regional reference laboratories.

8. The joint efforts of the government, WHO, UNICEF and other partners have had a positive impact on programme performance. As of July 2012, Pakistan has reported 23 polio cases, compared to 60 during the same time period in 2011. The remaining identified "sanctuaries" of poliovirus are Pishin from Quetta block, Gadap Town in Karachi and Khyber agency in FATA. Renewed efforts are under way to increase local ownership of polio eradication efforts. In addition, the eradication programme is refining its communication strategy to meet the emerging challenges in the country. WHO and UNICEF are building up their communication teams to expedite implementation of the required interventions.

9. The challenge is to implement the national emergency action plan fully and consistently in order to achieve the interruption of poliovirus transmission. The programme must scale up efforts to reach unvaccinated children and improve campaign quality in high-risk districts, especially failing districts (Pishin, Gadap), make use of all opportunities to reach children in FATA and neighbouring KP and create demand for vaccination among groups in the highest risk areas, especially Pashtuns.

Afghanistan

10. In Afghanistan, the transmission of indigenous wild poliovirus (WPV) continues, with 80 cases reported in 2011 from 34 districts. Almost 75% of the cases (59) were from the three provinces of Kandahar, Helmand and Farah. The 13 high-risk districts in these three provinces are the most seriously affected by conflict and military operations, which have left large numbers of children inaccessible for both routine vaccination and supplemental campaigns.

11. The polio eradication situation is continuously monitored by a national working group that meets every month and is chaired by the Minister of Public Health. The group monitors the situation and provides guidance on policy and strategic issues. In addition, a consultative group, chaired by Director General of Preventive Medicine, has been formed to focus on the 28 high-risk districts, discussing innovative approaches to improve access and campaign quality in these districts.

12. Afghanistan is currently re-evaluating the operational strategies in the southern region. It has introduced permanent polio vaccination teams in 9 districts, appointed district polio officers in 15 districts and improved routine immunization services in 28 districts, with the involvement of the nongovernmental organizations implementing the basic package of health services. The Ministry of Public Health has constituted a national emergency task force. At the same time, efforts are continuing to sustain good coverage in all accessible areas.

13. In 2012, Afghanistan developed a national emergency action plan. The key points of the plan are improving management and accountability, reducing inaccessibility, increasing community demand and

strengthening routine EPI. On the advice of the Independent Monitoring Board, a review of the national polio eradication programme was recently conducted. The review identified gaps that need to be addressed as soon as possible and recommended that the programme should focus on the district level, building its capacity in all aspects of quality campaign implementation as well as enhancing technical capacity at provincial and national levels to support, monitor and supervise the district level. The review also recommended that all strategies, including communication, should aim at reducing the number of missed children in each campaign, and that management and accountability be emphasized through defining the roles and responsibilities of district and provincial governors. The outcome of the review has been discussed by the Regional Director with the national authorities. WHO is recruiting additional staff at district, province and national level for the timely and efficient implementation of priority actions to achieve poliovirus interruption by mid 2013.

14. The remaining challenges to the programme are ensuring oversight and accountability at all levels, providing a surge of human resources, developing a clear communication plan to increase demand for immunization, further improving accessibility and strengthening routine immunization.

15. Coordination between the polio eradication programmes of Pakistan and Afghanistan is exemplary. Vaccination of children crossing borders together with enhancing surveillance sensitivity are the key steps being taken to respond to the situation.

Yemen

16. Yemen has been polio-free since February 2006, when the last case of polio from the large 2005 outbreak was reported. Yemen has consistently met certification standards for acute flaccid paralysis (AFP) surveillance indicators at the national level. However, during the second half of 2011 an outbreak resulting from circulating vaccine-derived polioviruses (cVDPVs), type 2, was identified in Yemen. The outbreak is indicative of the large population immunity gap which has resulted from chronic low routine immunization coverage and lack of high-quality supplementary immunization activities. The increasing trend in percentage of zero-dose AFP cases, from 7% in 2008 to 17% in 2011, reflects the large pool of susceptible children which created the conditions for the outbreak. In response to the outbreak, Yemen conducted two NIDs, in November 2011 and January 2012, and has two NIDs planned for April and May 2012. Oral poliovaccine was also added to a measles catch-up campaign in eight governorates in March 2012. If an importation of wild poliovirus were to occur, Yemen is at high risk of a large and sustained outbreak.

Sudan

17. The last reported case of polio in Sudan following the outbreak that started in 2008 was in March 2009. During and after the outbreak, Sudan increased the number of supplementary immunization activities and strengthened gaps in both the routine immunization programme and supplementary immunization coverage, particularly in high-risk states and sub-populations. Sudan has met all certification-standard AFP surveillance indicators at the national level; subnational AFP surveillance gaps have been aggressively targeted for improvement. A rapid AFP surveillance was conducted in April 2011 in four high-risk states and a full field review was conducted in January 2012. Both reviews concluded that the AFP surveillance system was performing well and that any circulation of poliovirus would be detected in a timely manner by the system. In 2011, Sudan conducted four national immunization day campaigns (NIDs), three subnational campaigns in high-risk states and regions and added oral poliovaccine to measles catch-up campaigns. Sudan remains at high risk for importation of wild poliovirus from neighbouring Chad because of long, shared borders with free movement of populations.

South Sudan

18. In July 2011, South Sudan became an independent nation. The last reported case of polio in South Sudan was in June 2009. Since 2010, South Sudan has met all certification-standard AFP surveillance indicators at the national level. A full AFP field surveillance review was conducted in April 2011. The review highlighted concerns about accessibility and programme performance; approximately 30% of the country is inaccessible for programme staff due to conflict, lack of infrastructure and seasonal weather conditions. South Sudan systematically collects three contact specimens for each AFP case and has instituted a sampling protocol for non-reporting (i.e. “silent”) areas to increase surveillance sensitivity.

19. In 2011, South Sudan conducted four NIDs and added oral poliovaccine to measles and other vaccination campaigns. However, coverage remains below expectations of the Global Strategic Plan (fewer than 10% missed children in each supplementary immunization activity) at subnational levels. Because of large pockets of inaccessible and under-vaccinated children, the risk of undetected, low-level circulation of poliovirus remains high. Moreover, South Sudan remains at high risk for importation of wild poliovirus from neighbouring Central African Republic and Chad via Sudan because of long, shared borders with free population movement.

Somalia

20. Somalia has been polio-free since 2007 and continues to meet the AFP surveillance certification standards at national and subnational levels. The major challenge in Somalia is reaching all children with oral poliovaccine. Since 2010, over 800 000 (40% of the national total) children under 5 years of age were inaccessible due to refusal of the anti-government elements, which are in control of south/central Somalia, to allow mass vaccination activities (i.e. NIDs and child health days). As a result, a significant population immunity gap is developing in these zones; the central and south zones are also where vaccine-derived polioviruses (VDPVs) have been repeatedly identified since 2009. In 2011, there were also huge population displacements both within Somalia and across international borders, primarily with Kenya, Ethiopia and Djibouti, as a result of the famine in Somalia and the refusal of anti-government elements to allow humanitarian services. The Somalia programme implemented supplementary immunization activities among populations of internally displaced persons in accessible areas and additional subnational immunization campaigns during the last half of 2011. Somalia remains at high risk of a wild poliovirus outbreak due to the large pool of inaccessible and unvaccinated children if an importation were to occur.

Implementation of polio eradication strategies

Routine immunization

21. Improving routine immunization services and coverage continues to be a cornerstone strategy for polio eradication. Despite significant resources and investment, routine immunization coverage remains sub-optimal at the national level with large gaps at subnational levels in the high-risk countries of the Region. At least 25% of polio field staff time is contributed to immunization system strengthening. This includes surveillance support to the vaccine-preventable diseases (measles, maternal and neonatal tetanus), implementing the “reach every district” approach (e.g. district micro-planning) and assessing cold chain facilities. The vaccination status of AFP cases is used to identify areas of sub-optimal performance of routine immunization programmes.

Supplementary immunization activities

22. Because of large gaps in population immunity due to weak routine immunization programmes, supplementary immunization activities continue to play an important role in the Region to ensure that all children under 5 years of age are vaccinated against polio. Eleven polio-free countries in the Region (Djibouti, Egypt, Iraq, Islamic Republic of Iran, Jordan, Saudi Arabia, Somalia, South Sudan, Sudan, Syrian Arab Republic and Yemen) conducted supplementary immunization activities in 2011 with a focus on geographic areas with high-risk populations and low routine immunization coverage in an effort to boost population immunity. Other vaccination opportunities, such as measles campaigns and child health days, are used to deliver additional doses of oral poliovaccine to help boost population immunity.

23. Afghanistan and Pakistan continue to implement supplementary immunization activities at intervals of 4–6 weeks, and mop-up activities are implemented in response to isolation of WPV in newly infected areas. The short interval additional dose strategy was useful, particularly in security-compromised areas. Both countries have taken maximum advantage of bivalent oral poliovaccine. Large areas of inaccessibility and the lack of high-quality performance continue to hamper efforts for universally high coverage at the district and sub-district level in both Afghanistan and Pakistan.

24. South Sudan and Sudan both implemented four NIDs in 2011 to increase population immunity in response to the WPV isolated from an environmental sewage sample in Aswan, Egypt, in December 2010. The WPV isolated was genetically linked to the last case due to WPV in Khartoum, Sudan, in 2009. In addition, Sudan conducted three sub-NIDs: one in four northern states with a high percentage of mobile and under-served sub-populations and two in the high-risk Darfur states because of the risk of importation of WPV from Chad.

25. Somalia conducted two NIDs and child health day campaigns in 2011. However, almost half of the country remained inaccessible for vaccination campaigns. Only northwest and northeast Somalia were fully accessible. Over 800 000 children under 5 years of age have not been accessible for NIDs or child health days since 2010. In response to the cVDPV outbreak, Yemen conducted one NID in November 2011 and one in January 2012. However, inaccessibility and insecurity continue to limit subnational coverage rates in the high-risk provinces.

26. Immunization campaigns are conducted using a house-to-house strategy targeting all children less than 5 years of age whenever possible. Extensive efforts have been made to ensure high-quality campaigns through detailed micro-planning, with a special focus on high-risk areas and difficult-to-reach, under-served subpopulations. Finger marking of vaccinated children has been used to guarantee that no child is missed. Independent monitors are employed to observe and assess the outcome of campaigns. Their findings help to pinpoint problems, which are then addressed by the responsible authorities. All countries report campaign data to the WHO Regional Office and headquarters within 2 weeks to allow analysis of programme performance in line with the requirements of the 2010–2012 strategic plan for polio eradication. In Pakistan, some high-risk districts are also conducting lot quality assurance sampling as a method to further assess campaign quality.

Surveillance for acute flaccid paralysis

27. Key AFP surveillance indicators (i.e. non-polio AFP rate and percentage of adequate stools) at the national level are reaching international certification standards across the Region. However, analysis of subnational data has highlighted gaps in indicators, which are more significant for the countries that have been polio-free for many years. All the countries of the Region have maintained the expected non-polio

AFP rate per 100 000 children under the age of 15 years except Morocco. The percentage of AFP cases with adequate stool collection is above the target of 80% except in Djibouti and Lebanon. These gaps are identified and used to direct enhanced activities to improve AFP surveillance in these countries.

28. In 2011 and early 2012, external AFP surveillance reviews were conducted in South Sudan and Sudan. In addition, an internal rapid surveillance review was carried out in Aswan governorate, Egypt, in response to a wild poliovirus detected by environmental surveillance in December 2010. The review in Sudan and Egypt demonstrated that the AFP surveillance systems are functioning well and likely to detect circulation or importation. Although the South Sudan review team found that the AFP surveillance system was functional, up to 30% of the country might not be included in the surveillance system because of inaccessibility due to conflict, lack of transportation infrastructure and seasonal weather.

29. In 2011, Yemen and Somalia both reported cases of cVDPV infection due to large population immunity gaps.

30. All countries provide AFP surveillance data to the Regional Office on a weekly basis. The data are analysed and published in the Polio Fax report that is distributed weekly to countries, partners and donors and is posted on the website.

31. Review of the situation in polio-free countries is conducted regularly using the Region-specific risk assessment model to assess the risk for outbreak following WPV importation. The objectives of the reviews are to ensure timely alert for countries, help decision-making in prioritizing technical assistance and provide data for advocacy and funding requests. Recent risk reviews are highlighting Somalia and Yemen as high-risk countries with alarming numbers of unvaccinated children and large proportions of unprotected children.

Regional laboratory network

32. All regional poliovirus network laboratories are fully accredited and passed the proficiency testing panels of virus isolation and intratypic differentiation (ITD). The workload of the network laboratories is considerable. During 2011, the laboratories processed nearly 28 000 specimens from AFP cases and contacts. The laboratory performance is maintained at certification standard. The average time between the receipt of stool samples in the laboratory and reporting the result was 12 days in 2011. Overall, 94% of specimens had culture results within 14 days, 98% had ITD results within 7 days of virus culture positive referral and 94% of final laboratory testing results were provided within 45 days of paralysis onset. The real-time PCR (rRT-PCR) method for rapid characterization of polioviruses was implemented in the national poliovirus laboratory of Morocco, bringing to 7 (out of 12) the total number of network laboratories which can perform ITD methods.

33. Environmental surveillance in Egypt discovered an importation of WPV1 in a sewage sample in Aswan which was linked with 2009 Sudan viruses. Environmental surveillance was expanded in major cities of four provinces in Pakistan. Large numbers of sewage samples from all collection sites are positive for WPV1; the last WPV3 was isolated from Karachi in October 2010. Nucleotide sequencing of viruses isolated from sewage samples showed a linkage with the virus isolated from AFP cases.

34. Regional network laboratories participated in pilot testing for shipment of isolates to laboratories, evaluation of selective growth on cell lines and high temperature selection for detection of non-Sabin-like polioviruses, an iVDPV surveillance project and a seroconversion study in Karachi. The regional reference laboratory of Pakistan supported the molecular sequence analysis of China viruses. Bio-safety

training modules were introduced into the network laboratories and a bio-safety campaign was fully implemented in the laboratories. A tissue culture training workshop was conducted for network laboratories in Kuwait. The Regional Office supported the establishment of environment surveillance in the African Region.

Improving the quality of life of polio-affected children

35. The regional polio eradication programme continued providing polio-affected children with the treatment needed for physical as well as social rehabilitation. In recognition of these efforts, BMG Foundation gave a grant of nearly US\$ 400 000 to the Pakistan programme for this purpose in 2011–2012. These services include physiotherapy, provision of orthotics and corrective devices and facilitating schooling.

End-game issues

Laboratory containment of wild poliovirus and potential infective material

36. This very important activity is meant to minimize the post eradication risk of reintroducing wild polioviruses or Sabin strains from the laboratory to the community, particularly once OPV use is stopped. All the country programmes are making plans for the management of this risk at essential facilities, through the primary safeguard of containment and secondary safeguard of location.

37. Nineteen programmes (Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, occupied Palestinian territory, Qatar, Saudi Arabia, Syrian Arab Republic, Sudan, Tunisia, United Arab Emirates and Yemen) have reported completion of Phase 1 of laboratory survey, inventory activities of laboratory containment of polioviruses and potential infectious material and the quality assurance report. Three countries (Afghanistan, Pakistan and Somalia) have not yet started containment activities. Original or revised reports have not been submitted by Djibouti, Lebanon and occupied Palestinian territory.

Certification of poliomyelitis eradication

38. The Eastern Mediterranean Regional Commission for Certification of Poliomyelitis Eradication (RCC) held two meetings in 2011. In its first meeting in April, abridged annual updates for 2010 were discussed for Bahrain, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Morocco, Oman, occupied Palestinian territory, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia and United Arab Emirates, along with annual updates for 2010 from Somalia, Sudan, South Sudan and Yemen. All were accepted.

39. In the second RCC meeting in November, abridged annual updates for 2010 were discussed for Lebanon and Libya along with provisional national documentation for certification submitted by Afghanistan and Pakistan.

40. The abridged annual update 2010 from Libya was accepted, but the RCC expressed concern about the status of national eradication efforts based on the fact that wild poliovirus is circulating in neighbouring countries in the south, with free population movement occurring across the borders and high risk of importation. This concern is exacerbated by the fact that routine immunization may have declined significantly in 2011, and no supplementary immunization activities were conducted in 2010 or 2011. As well, the AFP rate is showing evidence of significant decrease in 2011. The report of Lebanon was also accepted but the RCC expressed concern about the low rate of adequate stools and the low rate of

timeliness, particularly in 4 governorates (Beirut, South, North and Mount Lebanon) where it is less than 50%.

41. With regard to the provisional report of Afghanistan, the RCC acknowledged the innovative efforts being made to ensure effective surveillance and achieve access to children in security-compromised areas. Regarding the provisional report of Pakistan, the RCC expressed concern that the report fails to identify the clear discrepancy between the epidemiological reality and the information provided, noting that if coverage rates in Pakistan were as high as reported, both for routine and supplementary services, there should not be endemic poliomyelitis.

Technical and financial support to countries

42. The technical support to the regional polio eradication programme has been maintained through the recruitment of 35 international staff supported by another 33 short-term (3 months) officers seconded from the U.S. Centers for Disease Control and Prevention, 27 national professional officers and 248 national medical officers supported by 1100 other national staff.

43. In addition, teams of experts constituting both regional and country technical advisory groups extend technical support to the national programmes on strategic directions. All polio staff are also extending support to the other priority and emergency health programmes at country level.

44. Most countries of the Region continued to provide much of the resources required for the eradication effort, particularly with respect to routine immunization and surveillance. In addition, considerable external financial resources were secured to support national activities, especially operational expenses, technical support and continued surveillance activities. The external resources provided through WHO to support activities planned for 2010–2011 exceeded US\$ 120 million.

45. The main contributors of these funds were Rotary International, the Governments of Canada, the United States of America and United Arab Emirates, Bill and Melinda Gates Foundation, Department for International Development (United Kingdom), and the Governments of Italy, Norway, France, Australia, the Russian Federation and Germany.

Coordination with other WHO regions

46. Coordination with other WHO regions is continuing in a very satisfactory manner. There is weekly exchange of surveillance data and important epidemiological information. Efforts are also made to synchronize dates of supplementary immunization activities, or at least ensure cross-border coordination of activities.

47. The Horn of Africa Technical Advisory Group is a vivid example of close coordination between some countries of the African and Eastern Mediterranean regions. Laboratories in both regions are also extending support to each other. The laboratory of the Kenya Medical Research Institute is supporting Somalia and South Sudan, and the laboratory of Sudan is supporting Eritrea. The Regional Office is supporting Nigeria in the development of environmental monitoring.

48. In the current scenario, it is very important to further strengthen and enhance coordination between regional and country levels and to engage the national governments. Neighbouring countries should communicate and share information, particularly with regard to reporting of polio cases, coordinating the dates of vaccination campaigns (vaccinating the migrant and displaced populations simultaneously) and sharing best practices.

49. The Tajikistan outbreak revived coordination efforts between the Eastern Mediterranean and European regions. In addition, the Pakistan reference laboratory supported the molecular sequence analysis of Tajikistan viruses. There was importation in China from the Sindh province of Pakistan in 2011, which resulted in an outbreak in China in Sinkiang and Kashghar provinces (bordering Pakistan), with 21 polio cases.

50. The regular participation of representatives of other regions in regional polio meetings such as those of the Regional Technical Advisory Group on Polio Eradication and RCC ensures exchange of information on lessons learned and useful practices. Public health experts from Nigeria and China are among the members of Pakistan's technical advisory group on polio eradication.

Regional commitment for polio eradication

51. An emergency approach to polio eradication efforts, in response to the declaration by the WHO Executive Board, has been adapted in the Region. Emergency standard operating procedures for Pakistan and Afghanistan have been activated with immediate effect. An advocacy mission was conducted to Pakistan in March, during which the Regional Director met with senior officials of federal and provincial governments and attended a meeting of the technical advisory group on polio eradication. The focus of the visit was on implementation of the national emergency action plan and the issue of security. A joint forum has been constituted to expedite human resources support to Pakistan and Afghanistan. The Regional Office is holding weekly teleconferences with polio eradication teams in Afghanistan and Pakistan.

52. The commitment of national authorities in both endemic and polio-free countries to the poliomyelitis eradication goal continues to be at its highest level. The Regional Committee receives annual progress reports and its resolutions are setting the strategic directions for the programme.

Future directions

53. Priority will continue to be given to interrupting wild poliovirus transmission in Pakistan and Afghanistan, using the emergency approach.

- In Pakistan, the main emphasis will be on full implementation of the national emergency action plan by the federal and provincial governments through their consistent ownership and oversight. Special attention will be given to ensuring accountability at the delivery level, especially in relation to vaccinators and their supervisors, introducing a staff surge at district and union council levels, encouraging innovative local solutions to the problems and expanding partnerships.
- In Afghanistan, activities will focus on further strengthening collaboration with all forces to achieve periods of tranquillity to ensure access to children during supplementary immunization activities, increasing support staff at the operational level, implementing the national emergency action plan, improving the quality of supplementary immunization activities and routine EPI, and institutionalizing strict oversight by the government and performance-based accountability mechanisms.

54. For all polio-free countries, the priority is to maintain high population immunity, certification-standard AFP surveillance and the capability for early detection of and response to any importation.

55. In Somalia, efforts will continue to secure the permission of anti-government elements to conduct supplementary immunization activities in areas under their control.

56. For countries at high risk of spread following importation, including those affected by recent political instability in the Region, the main directions are to undertake preventive campaigns, for example in Libya, Syrian Arab Republic and Yemen

57. The risk assessment tool will be further developed and used to conduct subnational risk assessment, and countries will continue to be alerted to gaps and appropriate measures to be taken.

58. Collaboration to improve routine EPI coverage will continue in all Member States. Sustaining population immunity will also help prevent the occurrence of VDPVs.

59. Coordination and collaboration with other WHO regional offices will be maintained.

60. Coordination activities will be strengthened between neighbouring countries, particularly between Afghanistan and Pakistan and among the Horn of Africa countries.

61. Collaboration with partner organizations will be optimized to ensure availability of required financial resources.