**Editorial** 

## The push to eradicate poliomyelitis in the Eastern Mediterranean Region

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The Eastern Mediterranean Region, and the world, has never been closer to eradicating poliomyelitis. Wild poliovirus transmission is at the lowest levels in history and is limited to a few zones in the two remaining polio-endemic countries – Afghanistan and Pakistan. As at 30 October 2017, only 13 cases of poliomyelitis due to wild poliovirus type 1 (WPV 1) had been reported in the Region in 2017: 8 from Afghanistan and 5 from Pakistan. These two countries collectively reported 33 cases in 2016, 74 in 2015, and 334 in 2014 (1).

While the final eradication of poliomyelitis is tantalizingly close, finishing the job has become increasingly complex. The places and populations where polio is hanging on are some of the most challenging and complex environments in the world for implementing public health initiatives; the very densely populated slums of Karachi, and the two main corridors of movement between Pakistan and Afghanistan, (the Quetta block area of Baluchistan in Pakistan and the Southern Region of Afghanistan, and Peshawar in Khyber Pakhtunkhwa and Eastern Region of Afghanistan). Implementing immunization activities that reach every child is made more challenging by the very high levels of population movement, whether seasonal movements of tribal populations within local areas or over longer distances, movements of families for economic reasons, or long distance traditional nomadic movements. A further challenge in Afghanistan is securing consistent access to all communities for immunization, as the security situation

regularly compromises access in parts of the country.

Governments and partners in both countries are implementing National Emergency Action Plans (NEAPs) for Polio Eradication, which include innovative strategies to reach chronically missed children and those living in inaccessible areas (2,3). Implementation of these plans is coordinated through Emergency Operation Centres (EOCs) in both countries, and also through the EOCs, the national programmes strive to develop collaborative approaches and achieve coordination. Both programmes are guided by Technical Advisory Groups, whose recommendations help inform the development of the NEAPs (4,5).

Strategic communications to build and maintain community demand for polio vaccination continues, and understanding the reasons why children are missed by vaccination remains a priority. Vaccinators continue to be placed at the heart of the eradication effort to foster community trust, and targeted interventions by religious support persons, under the guidance of Islamic Advisory Groups, continue to help address misconceptions relating to vaccination.

In addition to the remaining transmission of wild poliovirus in Pakistan and Afghanistan, there is an ongoing challenge posed by Circulating Vaccine Derived Poliovirus (cVDPV). An outbreak of cVDPV type 2 is currently occurring in the north-eastern area of the Syrian Arab Republic (1). The development of cVDPV is a threat to

communities with low routine immunization coverage, particularly those in areas of conflict and inaccessibility, and type 2 is the poliovirus most likely to regain virulence and cause outbreaks. For this reason, live virus vaccines containing type 2 poliovirus are now no longer being routinely used globally. The current outbreak in the Syrian Arab Republic, where the first identified cases had onset in March 2017, is a stark reminder of the need for unhindered access to children in all areas for immunization. As at 30 October, 53 cases of cVDPV2 were confirmed in three governorates (1). The national programme and local authorities, supported by WHO, UNICEF and international partners, have carried out immunization responses in the affected areas despite tremendous difficulties due to the conflict. Further response may yet be needed to bring this outbreak to a close.

There is also the ongoing challenge of keeping the rest of the countries in the Region free of poliomyelitis. Supplementary immunization activities (SIAs) continue to be carried out in the two endemic and six at-risk countries across the Region (at risk countries include: Iraq, Libya, Somalia, Sudan, Syrian Arab Republic and Yemen), to achieve and maintain high levels of population immunity. In 2016 and 2017, the Regional Polio team has facilitated 23 Polio Outbreak Simulation Exercises in 17 countries to test and improve individual country preparedness to respond to polio outbreaks (1).

Surveillance for acute flaccid paralysis in the Region is stronger. AFP

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surveillance systems reported more than 16 000 AFP cases in 2016 compared to slightly over 13 000 in 2015 – a 21% increase, reflecting improvements in surveillance sensitivity, which have been maintained and extended in 2017 (1). The Regional Laboratory Network is performing with a high level of proficiency. Environmental surveillance is helping the poliomyelitis programme cast a wider net for poliovirus detection. In 2017, environmental surveillance has expanded from the original 3 to 6 countries and it is expected that a further 3 countries will commence environmental surveillance before the end of the year (1).

In the past 30 years of effort to eradicate poliomyelitis, a tremendous amount has been learned about planning and managing multi-partner initiatives, delivering services to all communities, and engaging communities as part of the process. As we come closer to final eradication, the issue of the transition of the polio eradication knowledge, experience and networks to benefit other public health programmes becomes increasingly important. Afghanistan, Pakistan, Somalia and Sudan are among 16 globally prioritized countries for transition planning. Iraq, Libya, the Syrian Arab Republic and Yemen are also among the Region's priority countries.

Member States and partners are determined to finish the job of eradicating poliomyelitis, and to protect all polio-free countries in the process. The overriding priority in the coming months is to stop wild poliovirus transmission in Afghanistan and Pakistan. The cVDPV2 outbreak in the Syrian Arab Republic must also be definitively stopped. Resources must be found to finish poliomyelitis eradication while maintaining high levels of immunity in all countries, and ensuring the highest possible quality of AFP surveillance, all the way through to final certification that the world is free of poliomyelitis. Finishing the job will not be easy, but it can and will be done.

## References

- World Health Organization. AFP Surveillance Bulletin No. 995. Cairo: WHO Regional Office for the Eastern Mediterranean: 30 October 2017.
- National Emergency Action Plan for Polio Eradication 2017– 2018. Islamabad: Government of Pakistan; 2017 (http://polioeradication.org/wp-content/uploads/2016/07/NEAP-2017\_2018\_v6.pdf).
- National Emergency Action Plan for Polio Eradication 2016– 2017. Kabul: Government of Afghanistan; 2017. (http://polioeradication.org/wp-content/uploads/2016/10/ NEAP2016-2017\_Afghanistan-1.pdf).
- World Health Organization. Report on the meeting of the technical advisory group on polio eradication in Pakistan. Cairo: WHO Regional Office for the Eastern Mediterranean; March 2017 (http://apps.who.int/iris/bitstream/10665/255585/1/IC\_Meet\_Rep\_2017\_EN\_19726.pdf).
- World Health Organization. Report on the meeting of the technical advisory group on polio eradication in Afghanistan. Cairo: WHO Regional Office for the Eastern Mediterranean; April 2017 (http://polioeradication.org/wp-content/ uploads/2017/08/AFG-TAG-Report\_APR2017.pdf).