

## Re-emergence of Wild Polio Virus in East Mediterranean Region: A Threat to World Polio Eradication Program Initiatives?

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### DEAR EDITOR,

About 27 countries, mainly Arabic speaking, of different World Health Organization (WHO) regional offices in East Mediterranean Region poses a threat to World Polio Eradication Initiatives due to re-emergence of wild polio virus (WPV) as evidenced in these countries. The different WHO regions are European Regional Office (EURO), East Mediterranean Regional Office (EMRO) and African Regional Office (AFRO). The WHO European Office countries are free from polio disease and further certified that WPV circulation is interrupted in the year 2002. Nigeria is the only country from WHO Africa Office where polio is still endemic.<sup>[1]</sup> The Afghanistan and Pakistan are the other two endemic countries in Eastern Mediterranean area of WHO office where the circulation of WPV is still not interrupted. Somalia and Yemen have recently reported outbreak of cases of acute flaccid paralysis (AFP) due to WPV type 1 indicating WPV circulation in the area.<sup>[2]</sup> The environmental surveillance in the form of sewer collections from Israel, Palestine and Egypt have demonstrated the presence of the WPV isolates in the samples collected in 2012-2013. However, no polio cases are reported from these countries. These strains of WPV1 are linked not with each other but as well as to those already circulating in Pakistan.<sup>[3]</sup> This explains a potential threat to India and other countries as well viewing

the neighboring border with Pakistan. Anticipating the possibility of poliomyelitis epidemic Israel and Egypt carried out a planned supplementary immunization activities (SIA) campaigns with bivalent and trivalent oral polio vaccine (OPV) to children below 10 years of age. This is because Israel replaced the OPV with inactivated polio vaccine (IPV) in routine vaccination schedule. This IPV coverage is very high. There are concerns that the Inactivated Polio Vaccinated subjects might carry the WPV without development of the disease in comparison to OPV vaccinated subjects who are at low risk of carrying and shedding the virus.<sup>[3]</sup>

The worst scenario has appeared now. 22 new cases of AFP have been identified in war affected country, Syria, just few months ago. The epidemic was reported 250 km away from capital Damascus. WPV1 has been found in stools of 10 AFP cases alarming the country to take immediate actions.<sup>[4,5]</sup> A large scale planned SIA was carried out on 26<sup>th</sup> October 2013 in Syria to vaccinate 1.6 million children with OPV as well as against other diseases.<sup>[5]</sup>

There were concerns about the quality of AFP, environmental and enterovirus surveillance in Europe at WHO-EURO Polio Regional Eradication Committee meeting in May 2013. However, WHO is of the opinion that the risk of transmission of importing the WPV leading to polio epidemics into Europe is comparatively low.<sup>[6]</sup>

The re-emergence of WPV in Eastern Mediterranean countries with outbreaks in Syria and environmental circulation in Israel, Egypt and Palestine is of grave concerns. It may be explained partly by the low immunization coverage in Syria due to war, collapsing health system and population displacement in large numbers since 2010.<sup>[5]</sup> The potential risk of polio re-emergence in Syria was reported by both Global Polio Eradication Initiative and WHO EMRO. This require immediate actions to prevent further spread.<sup>[7]</sup> WHO is of the opinion that there is a high risk of WPV1 transmission from Syria to other countries in the region as well international spread. This may be a setback to the Global Polio Eradication Initiative. A coordinated action by these countries by organizing OPV campaigns from October 2013 to April 2014 might helped to stop the outbreak. An urgent action for reinforcement of the AFP, environmental and enterovirus surveillance is required as advised by the WHO to prevent the spread of WPV1 internationally.

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