

Editorial

Polio Eradication Initiative- Surmounting the last mile

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While the WHO has reiterated its commitment to Polio eradication in the recent Polio Eradication Strategy 2022-2026: Delivering on a Promise, some experts share concern on core objective and the strategy opted to achieve them.

T Jacob John, in his correspondence published in the Lancet, has argued that person-to-person transmission is the common mode of transmission in the subcontinent¹. On the other hand, the WHO continues to insist on fecal-oral as the primary mode of transmission of disease and seeks to rely on the advantage of Gastro Intestinal Tract mucosal immunity offered by OPV 2. This claim to stop the chain of transmission could not be substantiated in this region during the last 30 years of the Global Polio Eradication Initiative

Perhaps the more active mode of transmission is person to person instead of the fecal-oral route. It is well-known that results of research studies demonstrate efficacy in controlled environments, whereas the effectiveness of a strategy is judged in a community-based program. Program results may differ from those found in studies.

An editorial in the Lancet titled “Polio eradication: Falling at the last hurdle” published in October 2022 drew on the opinion of experts to comment on lowering expectations from eradication towards sustained control – targeting eradication of the disease and not the virus. A lack of funding also remains a concern for the viability of the Global Polio Eradication program.³

In my recent article “Emerging challenges to realizing Polio Eradication and their solutions” published in the Eastern Mediterranean Health Journal⁴, I conducted a review on the effectiveness of Polio eradication efforts from a context based in Pakistan. The policy review addressed most of the above-mentioned issues and other challenges faced in Pakistan, one of the two endemic countries which has a relatively stable health system, yet failed to eradicate the disease.

Oral Polio Vaccine (OPV) was chosen for the program given the Gastrointestinal tract mucosal immunity it provides, with intent to limit the excretion of virus. This has worked in most regions of the world but has failed in Pakistan. Neighbor India was also late to eradicate the disease due to similar epidemiological reasons. Coupled with the emergence of cVDPV, where cases from outbreaks, which continue to outnumber wild polio cases by

many-folds since 2017, the effectiveness of our current strategy is called into question – particularly when considering the specific epidemiology of the disease in Pakistan and the effectiveness and safety of the OPV.

In 2020, Pakistan faced a major outbreak of both wild polio and cVDPV. This was the first time cVDPV cases outnumbered wild polio cases, highlighting the importance of addressing both simultaneously, as mandated in Polio Eradication and End Game Strategic Plan 2013-20185 wherein a shift to IPV-only schedule and withdrawal of OPV was planned for when wild polio transmission was stopped. However, this was not achieved.

At the time of inception of Global eradication initiative in 1988, the only challenge was to eradicate wild polio viruses and the strategy was framed to address that. This strategy proved to be very successful across the globe however failed to achieve the objective of Polio eradication, as two countries, Pakistan and Afghanistan remained endemic. The unanticipated emergence and spread of multiple outbreaks of cVDPV has further complicated the eradication initiative. Given the current situation a modification in the strategy, to be effective at eradicating both wild polio and cVDPV simultaneously is desired and a shift to IPV only in routine primary immunization and OPV withdrawal must be conducted in a single step. The shift is supported by evidence where this region had the lowest OPV seroconversion rate in the world⁶, our own unpublished data, cVDPV outbreaks, a growing and widespread resistance to OPV (but not for IPV) during SIAs, and security threats to health workers during SIAs. It warrants we adopt a country specific strategy to overcome the ‘final mile’ to eradication.

Left unaddressed, the wider world remains at risk of re-introduction of wild polio, as recently reported from Malawi and Mozambique, and further outbreaks of cVDPV in non-endemic countries of African region, Israel and USA and positive environmental sample from the UK.

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