



Poliomyelitis Eradication in Iran: Opportunities and Challenges

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In 1988, the forty-first World Health Assembly adopted a resolution for the worldwide eradication of polio. It launched the Global Polio Eradication Initiative (GPEI) (1), in which the number of polio cases have decreased by a rate of over 99% since 1988. In 2011, it has been reported that the estimated number of cases which were 350000, decreased to 650 cases.

The National Polio Eradication initiative in Iran was launched in 1990. Future to the establishment of the Expand program on Immunization in 1984 and its integration with the primary health care services (in 1986), efforts were made to increase the coverage of all EPI Vaccines in the context of PHC. This resulted in high vaccine coverage against all EPI target diseases including Polio by 1989, and hence paving the way for polio eradication initiative which was launched in 1990 (2, 3).

Stopping poliovirus transmission has been pursued through a combination of routine immunization and supplementary immunization campaigns which are guided by high quality surveillance. In the first years

when the global polio eradication program was initiated approximately 50 polio cases were reported from Iran annually but the last laboratory confirmed indigenous polio case was reported in 1997, and importation of wild poliovirus from neighboring endemic countries (Afghanistan and Pakistan) was stopped in December 2000. Thus the country has remained polio-free for the past 12 years (1).

The existence of an excellent primary health care system based on health houses, health posts, and rural and urban health centers which is accessible to more than 95% of total population, is a cornerstone for the achievement and maintenance of polio eradication in Iran. Routine Immunization against Polio has been mandatory since 1984. The routine OPV3 has reached and maintained coverage of close to 100% since 2002 (1, 2).

Supplementary immunization activities (SIAs) including NIDs, Sub-NIDs and mopping up operations have been crucial to the success of polio eradication in the country. NIDs were successfully implemented annually

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Eradication of poliomyelitis in Iran is a significant health achievement regarding a vaccine-preventable disease which used to paralyze tens of children every year. This has prevented considerable suffering and has saved millions of dollars which would have been otherwise spent on vaccination and hospital care of polio patients. Eradication of a vaccine preventable disease like polio will ensure further commitment of high level decision-makers and politicians to health programs and hence their moral and financial support for prevention and control of both communicable and non-communicable diseases in the country.

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during the period 1994 – 1998. Since 1997 sub-NIDs have been carried out in high risk areas every year for prevention of reemergence of wild polio virus due to circulation of virus in Afghanistan and Pakistan and risk of importation of poliovirus from these endemic countries (3).

A robust surveillance system for Acute Flaccid Paralysis (AFP) reporting in Iran has been established since 1991 (1, 4). The AFP polio performance indicators have been improved since that time, remarkably. One of the most important indices for AFP surveillance performance is non-polio AFP rate which must be more than 1 in 100000 under 15 years population. This index always has been more than 1 in Iran and has further increased to 3.1 per 100000 in 2011. Completeness of routine reporting and active surveillance in the years 2010 and 2011 was 98.5% and 96.8% respectively, with more than 80% adequately collected stool samples since 2001. The National Certification Committee (NCC) has submitted its annual reports on certification of poliomyelitis eradication to the Regional Certification Commission (RCC) since 1998 (5). The Documentation for Certification was accepted by the 9th RCC meeting in October 2002. The RCC agreed that all WHO polio eradication strategies were implemented properly and that: “the polio-free status in the country has been maintained. The existing of sensitive surveillance system, high coverage of routine immunization and the special program to vaccinate high risk groups will guard against importation and circulation of wild poliovirus in Iran (6). In addition existence of the updated plan of action for detection and response to wild poliovirus importation is adequate for early detection and timely response to any event related to the possible importation of poliovirus in the country”. During the period 2003-2005 the NCC has continued to submit Annual Reports to the RCC for its review and approval. The “Final Documentation for Certification of Poliomyelitis in Iran” was approved by RCC in April 2006 (6). For the past 5 years (from 2006 to 2011) Abridged Annual reports on

maintaining polio-free status in Iran have been submitted to the RCC and fully confirmed.

However, the ongoing circulation of poliovirus in the neighboring polio endemic countries poses a threat to polio eradication in Iran. This calls for intensive international, regional and national efforts aiming at interruption of wild poliovirus circulation in the endemic countries of the Region. As the elimination of poliomyelitis in the Eastern Mediterranean Region has been delayed and hence calling for continuation of supplementary immunization activities (SNIDs), this has resulted in community fatigue and reservation of medical professionals against repeated SNIDs. Allocation of adequate financial resources for continuation of polio eradication activities in the face of “Zero polio cases” for more than one decade is another challenge to be addressed by the national authorities.

Authors' Contribution

None declared.

Financial Disclosure

None declared.

References

1. WHO. Progress towards interruption of wild poliovirus transmission, January 2004 to March 2005. *Wkly Epidemiol Rec.*2005;**80**(17):149-55
2. Gerald LM, Bennett JE, Dolin R. *Principles and practice of infectious diseases*. sixth ed. Chchurchill Livingstone; 2005. p. 149-60.
3. WHO. Progress towards global poliomyelitis eradication: preparation for the oral poliovirus vaccine cessation era. *Wkly Epidemiol Rec.*2004;**79**(39):349-55
4. WHO. Expanding contributions of the global laboratory network for poliomyelitis eradication, 2000-2001. *Wkly Epidemiol Rec.*2002;**77**(17):133-7
5. WHO. Polio laboratory manual. 2004; Available from: http://www.who.int/immunization_monitoring/laboratory_polio_resources/en/index.html.
6. Zahraei SM, Gouya MM, Esteghamati A. Endgame of polio eradication initiative and OPV adverse event; a case report. *I J Infect Dis Tropical Med.*2007;**11**(35):7-11