

Polio eradication—a landmark achievement for India

The South-East Asia Region will be the fourth WHO region in the world to be certified as polio free, leaving just two regions yet to be certified



Reaching the vast population with diverse socio-cultural practices, overcoming the physical and social barriers, achieving high vaccination coverage in all areas despite weaknesses in health systems and ensuring coverage of the most vulnerable newborns and migrant populations have been the major challenges that have been overcome by the polio programme in India. Photo: Bloomberg

Unprecedented progress has been made towards the goal of polio eradication in India.

The last case of polio due to wild poliovirus in the country was detected on 13 January 2011 in Howrah district of West Bengal. This monumental progress in polio eradication brings India and the South-East Asia Region of WHO, comprising 11 countries (including India), very close to the polio-free certification.

The South-East Asia Regional Certification Commission for Polio Eradication (RCCPE) is scheduled to meet in New Delhi in the last week of March 2014 to review the documents of 11 countries of the region before it certifies the region polio-free. The South-East Asia Region will be the fourth WHO region in the world to be certified as polio free, leaving just two regions yet to be certified.

Contrast this landmark development with estimates that prior to the introduction of the oral polio vaccine in India in 1978, nearly 500 children were being paralyzed due to polio every single day in the country.

The programme was intensified and mass polio vaccination campaign launched in 1995. This reduced the number of cases to less than 2000 cases annually, until 2010, when only 42 cases were reported during

the year followed by the last polio case in January 2011.

It took India nearly 16 years, since it began its efforts to eradicate polio, to finally get rid of the wild polio viruses from the country. The success of polio eradication in India is a tribute to the strong commitment and leadership of the Government of India and the state governments. Ably supporting them were the polio partners—WHO, UNICEF and Rotary International. However, the fight against polio couldn't have been won without the dedication and hard work of the frontline workers and volunteers, and the unequivocal support of all sections of the society. Backing this monumental effort was an investment of millions of dollars by the government and donors.

The programme in India developed need-based strategies for reaching maximum children during each polio immunization campaign. Each nation-wide campaign in India involves vaccinating nearly 170 million children in more than 240 million households by 2.3 million vaccinators. Special polio immunization drives for vulnerable populations/areas in the form of subnational immunization campaigns have been conducted as a part of which, 70 million children are vaccinated during each campaign.

Reaching the vast population with diverse socio-cultural practices, overcoming the physical and social barriers, achieving high vaccination coverage in all areas despite weaknesses in health systems and ensuring coverage of the most vulnerable newborns and migrant populations have been the major challenges that have been overcome by the polio programme in India.

Research and innovations have been an integral part of the programme—providing new direction to the eradication effort. Studies to assess the population immunity and to explore the best vaccines for boosting population immunity were behind major programmatic decisions. The more efficacious monovalent oral polio vaccine (mOPV) was introduced in 2005 and the bivalent OPV in 2010 to break the last chains of poliovirus.

Heightened surveillance for poliovirus has been the backbone of the polio eradication initiative in India. The surveillance system for polio in India operates at very high levels of sensitivity and speed and has consistently surpassed the WHO recommended standards and global indicators of sensitivity. The surveillance for poliovirus detection in humans is supplemented with environmental surveillance. Sewage sample testing is being conducted in areas with large migratory populations (Mumbai, Delhi, Patna, Kolkata and Punjab) to detect any polioviruses in the environment. The programme consistently applied surveillance data to prioritize and guide immunization activities and future strategies. No wild polio virus has been detected in India from any source since January 2011 despite a very sensitive surveillance system in the country.

The programme has a strong monitoring system in place to identify gaps in the preparedness and implementation of the polio vaccination campaigns. More than 3,000 independent monitors are deployed to provide feedback on programme quality so that immediate corrective actions can be taken based on real time information generated through this system.

The India Expert Advisory Group for polio eradication, comprising international and national experts, has played a pivotal role in reviewing the polio eradication programme and suggesting appropriate measures for further programmatic improvement.

While tremendous progress has been made over the past many years and sustained over the past three years, India remains at a risk of polio resurgence through a distant or cross-border importation of the wild poliovirus from countries with ongoing transmission. India has, during previous years, exported wild polioviruses to other countries. The risk of the virus returning to India from any of the currently infected countries is a real one. India, therefore, needs to ensure that high population immunity is maintained against poliovirus, the surveillance remains sensitive to pick up any importation and all states are in a state of emergency preparedness to respond urgently to any importation, if it were to occur.

India is fully aware of the present global situation of polio eradication. As a polio risk mitigation strategy, 102 vaccination posts have been identified along the bordering areas of Pakistan, Nepal, Myanmar, Bangladesh and Bhutan to ensure continuous vaccination of children under the age of five years crossing these borders. The country is also seeking polio vaccination of all travellers coming to India from the polio endemic and recently infected countries before their departure to India.

India is already playing a critical role in the development of the polio end-game strategy, with support from WHO and other partners. The strategy involves a switch from trivalent oral polio vaccine to bivalent oral polio vaccine and a phased withdrawal of the oral polio vaccines from the programme with the possible introduction of inactivated polio vaccine (IPV) in routine immunization schedule. India is conducting research to support policy decisions as a major part of the polio end-game strategic planning.

The polio eradication programme is a “model of excellence” for other public health initiatives in India and global health interventions as a whole.

India is using the polio infrastructure, expertise and operational experience to strengthen routine immunization in the country and protect its children from other vaccine preventable diseases, as well as for health system strengthening, by applying the lessons learned from polio eradication for achieving wider health objectives in the country.

This progress in polio eradication cannot afford to pause and we cannot rest on our laurels. It is vitally important for India to continue with the good work until global polio-free certification is achieved.

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