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Commentary

Polio

The Indian sub-continent's loosing war

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The recent debate about 'effective control' rather than 'complete eradication' for polio has put the whole Global Polio Initiative into question. The implications for this are indeed daunting, more so for the Indian Sub-Continent, which hosts a huge chunk of the global polio load every year. The tremendous success achieved in combating polio during the previous decade in India and Pakistan is reason enough to continue on with the vaccination efforts. However, other subsidiary issues including social stigma and a weak infra-structure have also to be put into the eradication equation to meet the goal. The Sub-Continent stands at the cross-roads, and time is ripe now to formulate a multi-faceted strategy to eliminate this crippling disease from this part of the world, and consequently give a much-needed boost to global eradication efforts.

The Global Polio Eradication Initiative (GPEI) launched by the World Health Organization has come a long way since its inception in 1988. Currently, only four countries remain endemic for polio: Nigeria, India, Pakistan and Afghanistan; in order of documented polio cases last year.2

The mid-2003 polio epidemic in Nigeria served a big blow to eradication efforts underway the world over.3 Within the course of a few months, polio cases resurfaced over diverse spans of the Globe. However, the Nigeria episode served to re-emphasize the crucial role of continuing the vaccination campaigns. Considering the fact that the Indian Sub-continent remains one of the most densely populated regions in the world, and both India and Pakistan remain on the endemic countries list, talks of 'effective control' rather than 'complete eradication' is a cause of great concern and alarm.4

India, the Sub-Continent's biggest player, continues to face shortcomings in the race for complete polio eradication. Launched over a decade ago, the Polio Eradication (PE) initiative of India brought about a tremendous change, the number of paralytic poliomyelitis cases from an estimated 35,000 cases annually in 1994–1995 dropped to an astounding less than a hundred cases in 2005.3,5 This remarkable success was attributed to an ever intensifying eradication drive that incorporated a very large number of National and Sub-National Immunization Days (NIDs and SNIDs), establishment of an extensive polio laboratory network that has consistently surpassed international standards, strong managerial bodies, introduction of the monovalent vaccine and lately, a multitude of Pulse Polio Programs being conducted in endemic areas on a monthly basis. Consequently, the country reported only 66 cases in 2005, the lowest ever recorded rate.6 The P2 strain had been eradicated back in October 1999, and a decreasing genetic diversity of Wild Polio Virus (WPV) clusters was underway.3 However, the year 2006 served as a big stumbling block. The number of cases cascaded to a massive 674, ten times that of the previous year. Hopes of an early eradication effort in India vaporized, and critics questioned whether it was if at all possible to completely eradicate the crippling disease. Children in India receive over 10 doses of polio vaccine, more than anywhere else in the world.7 Still, coverage of the whole population remains an elusive target, even after the Indian Government intensified its efforts beginning in 2005, by implementing enhanced immunization and surveillance strategies, and more importantly, introducing the more potent monovalent oral polio vaccines types 1 and 3. In fact, the tremendous jump in 2006 is being attributed to a decrease in vaccine coverage: it came to 89% of the population (a meager 9% against poliovirus type 1) in Uttar Pradesh and Bihar, two northern Indian States that continue to remain persistently polio endemic even after ever growing efforts over the years, despite very similar. Embarking upon an eradication program in 1994, the country has struggled through bureaucratic hurdles, inadequate supply of the cold chain, and lack of technical expertise, intense societal opposition and rampant corruption to come close to the task of complete eradication. With the suppression of Type 2 in November 1998, approximately 50% fewer cases were reported in 2005 as compared to 2004.9 However, the number continued to increase in.
Polio: the Indian sub-continent’s loosing war

2006 albeit WPV transmission was at an all-time low. Disparate to neighboring India, the immunization coverage is a much bigger problem in this pre-dominantly Muslim country. Not only does the routine coverage of infants with the oral polio vaccine come to a disappointing national average of 64%, the issue of variability amongst the different provinces is a big obstacle. Polio in Pakistan continues to be confined in known areas: south and central North Western Frontier Province, the Quetta area of Balochistan, and Karachi in Sindh. The local Religious Communities have often deemed the polio vaccine as being ‘un-Islamic,’ deeming it a conspiracy for making the masses infertile. This has sparked great chaos and confusion amongst the general populace, most of whom are illiterate and look upon the religious personnel as their leaders and teachers. Therefore, the vaccinators have faced severe difficulties in these constituencies, even at the cost of their own lives. In addition, the aforementioned areas house the major chunk of Afghan refugees in Pakistan. Therefore, getting access to these people also means overcoming the twin troubles of population mobility and social stigma. The ongoing ‘war on terrorism’ in these border areas only adds to the misery.

The war against polio in the Sub-Continent has to be fought on a number of fronts, not merely by embarking upon various immunization strategies. Both governments have, at one time or the other, adopted multiple vaccination approaches, including introduction of the monovalent vaccines, but the results have never tallied with the expectations. Undeniably, the coverage issue is the most pertinent one, more so in Pakistan. However, other subsidiary issues have also to be addressed. The matter of social resistance amongst the communities can only be solved by increasing awareness and knowledge, not by initiating stringer immunization goals. Undoubtedly, this curtails implementation of plans that increase literacy in the long run. In addition, it has been shown that poor sanitation and overcrowding are important factors in the transmission of polio in India and Pakistan. Therefore, government spending on infra-structure and environment can also play a crucial role. The Sub-continent indeed stands at the cross-roads and it is time now for both, the health workers and the policy makers, to act in conjunction, to eliminate polio using mass-vaccination and by various societal-uplift initiatives.

References
7. New strategy to eliminate polio from India. Euro Surveill 2007; 12.