EDITORIAL

LEARNING LESSONS FOR PUBLIC HEALTH FROM POLIO ERADICATION IN INDIA

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After small pox, poliomyelitis seems to be on the right path of eradication and very sooner we will be achieving polio free world.[1] But the success of eradication of polio in India seems to be a great achievement because the biomedical hurdles and technical obstacles in polio eradication were thought to be insurmountable till very late in many international forums but the same have started appreciating the efforts and now India has become a role model for whole world and remaining endemic countries.[2] India's victory over polio has given an apt answer to the queries of intellectual critics all over the world who considered the time and resources spent in polio eradication initiative would go in vain as polio was non eradicable in India considering low standards of sanitation and hygiene or Wild Polio Viruses (WPVs) cannot be eradicated using OPV due to its huge genetic biodiversity and a host of other unexplained reasons.[3] The real journey started in 1988 when World Health Assembly (WHA) launched a global goal to eradicate polio by 2000 India was always amongst the major contributor of poliomyelitis worldwide but since January 2011, no case of WPV was detected(indigenous or imported) and India along with South East Asia region is certified free of polio by WHO officially on 27th March 2014.[4] The lessons gained in the eradication process are immense but this article highlights the major ones which need to be capitalized for other programmes of public health to be successful in any part of the world.

SENSITIVE SURVEILLANCE SYSTEM

Before eradication initiatives by World Health Assembly resolution, India was the maximum contributor of poliomyelitis cases worldwide which remained the same (except few years) till 2009. Although the number of poliomyelitis cases in India were just the estimates before World Health Organization (WHO) launched National Polio Surveillance Project (NPSP) in collaboration with Government of India (GOI) for providing technical and logistic assistance to state and central government.[5] This was a great move towards the polio eradication initiative as it provided an insight to the then existing programme and proved to be an asset in establishing a strong surveillance network and rapid response of polio case. The surveillance network of NPSP is so sensitive particularly in high risk areas that AFP rate and Non Polio AFP rate in these areas is exceedingly high and the contribution of Surveillance Medical Officers (SMOs) is commendable in relation to expansion of reporting units network and their sensitisation. Poliomyelitis has actually set the benchmark for the technically sound surveillance system which is a must for any disease control or elimination or eradication.

POLITICAL WILL

The success of polio eradication totally relied upon the will in the administrative and political wing because the top brass in both the wings had complete influence locally and nationally. As a matter of fact, Indian politicians were seen addressing the masses about polio immunization and administration taking keen interest in monthly district meetings on polio immunization drive in the most important decade of the era. This was a great boost for the busy polio eradicators as the interventions proposed never suffered setback as polio being the main agenda in the health with strong backing up of the stakeholders' advocacy.[6]

LOCAL PROBLEMS REQUIRE LOCAL SOLUTIONS

Problems are never alike everywhere but they do exist to create hurdles in the path of success. In India, which is a big country and the obstacles in obtaining full coverage were varied but they needed a decentralised planning and local solutions were sought to overcome the problems of tough terrain, mass refusals, complacent attitude and monotonous feeling.[7] It was a big challenge to address all the issues nationally and hence the think tanks in the

government and partner agencies at local levels were ready with the timely and appropriate ideas with mobilisation of resources/people through IEC activities.

EVIDENCE BASED INTERVENTIONS/ MID-COURSE CORRECTIONS

In India, Polio immunization has undergone many programmatic changes since inception according to the needs and demand of the situation. India was relying on Trivalent Oral Polio Vaccine (TOPV) completely till 2005 but it was seen despite the vigorous activities, it was not easy to completely wipe out WPV from community. Then a major decision was taken in 2005 to introduce monovalent vaccines i.e. MOPV1/MOPV3 where SNIDs were conducted to ensure the effectiveness of vaccine against the specific strains. Although this intervention proved to be a major game changer but still we were lacking in some regards.[6] The strategies adopted was use of bivalent OPV (type 1 & 3) coupled with strong oversight from state, high quality supplemental immunisation activities, covering hitherto unreached areas such as Kosi river basin and mobile and migrant populations, coverage of populations in transit during major events, help of social mobilisers to overcome community resistance which helped in having just one case of Polio in the whole country due to WPV (type 1) during 2011 which occurred on 13th January in Howrah district of Bengal. Evidence based decisions/ mid-course corrections can go a long way in achieving goals as it is proved in the case of polio eradication initiative.

RESEARCH AND DEVELOPMENT

It should be given due importance as it is the bedrock for future strategies. To judge whether the nation was going in the right direction or not and were we able to detect all the WPVs in the community or not, it was decided that Environment sampling in India should be undertaken which started from Mumbai in 2001 and till date Delhi, Patna (Bihar), Howrah(West Bengal) and Punjab are getting their sewage samples checked for WPV and no WPV has been isolated since 2011 onwards which actually corroborates with the AFP surveillance findings in India as no WPV was found to be isolated from stool samples of AFP patients in India after January 2011.[8] The advent of Bivalent Oral Polio Vaccine (BOPV) was a major boost to the program which was proven by various vaccine immunogenicity and seroprevalence studies undertaken by WHO-NPSP in various parts of the country which gave insight to the experts in planning the effective strategy required for polio eradication.

GOOD PLANNING

Generally it is assumed that good planning is job half done and stakeholders involved in this mammoth programme were experts in planning and at ground level, every assistance was given to frontline workers to substantiate the target of full coverage. The most exciting and high impact planning was the 107 Block Plan covering 66 blocks of Uttar Pradesh and 41 blocks of Bihar which were witnessing more than 80% of the total polio cases in whole India. The high quality activity and supervision was maintained in immunization campaigns and surveillance in these areas and whenever needed manpower and other resources were mobilised to fulfil the major gaps. Time to time the planning and its implementation was reviewed by the field workers and monitoring team for the better output and impact of the programme. Field level micro planning was best exemplified by the implementers in the most high risk areas. Addition of influencers for mobilization in microplan to tackle refusals as well as promotion of community participation and formation of grid areas to cover no man's land in difficult terrain was perfect examples.[9]

HIGH PREVENTIVE SERVICE UTILIZATION RATES

As high as 99% utilization rates for preventive services should be achieved for the success of any programme. The credit of control of Poliomyelitis is not solely deserved by OPVs alone but the extensive promotion and distribution of ORS+zinc along with the high coverage of primary Immunization cannot be left out. These were the actual paramount services which has always kept the health workers on their toes during house to house immunization.[10]

STEWARDSHIP

In India, never before the stewardship approach was utilized to its optimum before Intensified Pulse Polio Immunization (IPPI) came into existence. The programme per se was able to nurture stewardship not only at macro but also at meso and micro level. At each level, a steering committee was formed from central ministry to block level, for smooth implementation of the programme with active and co-ordinated involvement of all departments. The programme was driven by strong institutional mechanisms which were put in place based on evidence based actions so as to formulate a better and effective response to programmatic challenges.

REGULAR TRAININGS AND SUPPORTIVE SUPERVISION

To ensure the high quality services, programme adopted

regular, frequent and intensive trainings for 23 million vaccinators and 1.5 million supervisors. This strategy also helped in maintaining high motivation level among the frontline workers and thus complacency was not allowed to creep in the system at any point of time. The supervisory model was unique in the sense that it ensured supportive supervision at every level with prime focus on quality enhancement rather than fault findings. This mechanism helped in providing hands on training for each lacunae which actually helped in augmenting the quality of services.

INDEPENDENT, UNBIASED AND REGULAR MONITORING

Despite having supervision and internal monitoring of their own, government still sought the services of partner agencies especially WHO-NPSP, UNICEF so as to provide useful insights into programmatic bottlenecks.[11] The unbiased and regular monitoring done in field resulted in improving the quality of programmes manifold. The issues of cold chain, manpower, absenteeism, logistics and punctuality were appropriately addressed through this single entity and thereby resulting in dealing them more emphatically.

Polio programme was the most successful of all the current and old health programmes in India. The success story in India was not a fairy tale; it took a toll of people's sheer hard work, compromised social bonding, displacing career's priorities, sleepless nights and weary days. The reasons behind the success are many but this paper tries to capture the prominent ones which can be adopted or replicated under diverse settings in different programmatic conditions. These are the essential building blocks for any programme to be successful which needs to be understood by the policy makers. These learning lessons from polio programme will provide useful insights to public health professionals while designing and implementing people centric health programmes.

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