PULSE POLIO PROGRAMME IN INDIA – A MARKETING PERSPECTIVE TO GOVERNMENT INITIATIVES

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The success of pulse polio programme in attaining near hundred-percent coverage and a very high degree of social mobilisation and community involvement is evident but for the success of the programme in the terms of polio free India, the programme is lagging behind its schedule and twice missed that target. The amount of resources spent on a single vaccine programme cast doubts on the efficiency of the programme also. The use of marketing methodology having the twin purpose of effectiveness in goal attainment and efficiency in resource utilisation, can provide useful lessons for demystifying the issue of health, educating the common persons in the language they understand and motivating them to avail of health services. Application of marketing philosophy and methodology to serve social causes including public health has emerged as a separate discipline christened as social marketing. This paper explores government initiatives for eradication of polio from the marketing perspective and analyses them in the light of total eight P's – product, price, place, promotion, public, participation, policy and politics - to find out the challenges to the goal of polio free India. Various suggestions and recommendations on the basis of eight P marketing mix analysis of government initiatives are put at the end as a mark of our contribution to the social cause.

Introduction

The success of pulse polio programme in India is attaining near hundred-percent coverage and a very high degree of social mobilisation and community involvement, but for the success of the programme in the terms of polio free India the programme is lagging behind its schedule and twice missed that target. The amount of resources spent on a single vaccine programme cast doubts on the efficiency of the programme also. The use of marketing methodology having the twin purpose of effectiveness in goal attainment and efficiency in resource utilisation can provide useful lessons for demystifying the issue of health, educating the common persons in the language they understand and motivating them to avail of health services.

This paper provides marketing orientation to the medical problem having the magnitude of social cause, i.e. studying a medical problem as a marketing problem and finding

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solution that can be achieved by using marketing strategies and tools. Specifically, the paper aims:

1) To understand various government initiatives in taking up issue of social cause - Polio.

2) To find out the use of social marketing by the government in realising the goal i.e. 'Polio Free India'.

3) To suggest the impact of marketing perspective to bring out both the effectiveness and efficiency in government initiatives for eradication of Polio from India.

The information from various secondary sources such as: journals, books, and web sites is analysed in the light of eight strategic tools of social marketing mix, viz., Product, Price, Promotion, Place, Participation, Policy, Public and Politics.

In the first two sections let us understand about Polio as a medical problem, its status in India and government initiatives for eradication of Polio.

Polio

Poliomyelitis (Derived from Greek - polio meaning Gray and myelon meaning Marrow, indicating the spinal cord) is indicative of the effect of poliomyelitis virus on the spinal cord that leads to the classic manifestation - paralysis. Known commonly as polio, it is a dreadful infectious disease. There is no cure for polio; it can only be prevented. Poliovirus is a RNA virus, member of the family Picornaviridae, Enterovirus group. It has 3 Serotypes- P1, P2, and P3. Immunity to one type does not confer immunity to the other two. The virus enters the body through the mouth and multiplies in the intestine.

In India, vaccination against poliomyelitis was initiated in 1978 under the Expanded Immunization Programme (EIP). In 1985 the Universal Immunization Programme (UIP) was launched and implemented in phased manner to cover all districts in the country by 1989-90. During 1986 the UIP was accorded the status of a Technology Mission under the banner of Technology Mission on Immunization. This resulted in significant increase in vaccination coverage. The number of reported cases of poliomyelitis declined from 28,757 during 1987 to 3,265 in 1995. At this stage, in pursuance to the World Health Assembly Resolution of 1988, in addition to the administration of routine oral polio vaccine (OPV) through the UIP the Pulse Polio Immunization (PPI) Programme was launched in 1995-96 to cover all children below the age of three years. In order to accelerate the pace of polio eradication, the target age group was increased to all children under the age of 5 years from 1996-97 (As per news report, 2009). Till 1998-99, the PPI Programme

consisted of vaccination of children at fixed booths on two National Immunization Days. In order to reach the global goal of reaching zero incidence of polio by 2000, a strategy to intensify PPI was adopted in 1999-2000. The strategy consisted of 4 nation-wide PPI rounds, followed by two sub-national rounds in identified states and routine immunization. In earlier years despite good coverage, 5-6% of children were missed OPV even in PPI Programme. During 1999-2000 in addition to booth immunization, a house-to-house search of missed children was, therefore, undertaken, and due to change in the strategy the number of polio cases reported in India reduced to 265 in 2000 from the level of 1934 in 1998. It appeared that India was nearing the 'zero polio' status. But there was a setback in 2002; a total of 1600 cases of paralytic poliomyelitis were reported. The immunization strategy was again reviewed. With intensive efforts in specific areas, the number of cases of poliomyelitis has remained all time low (Total 214 cases) until December 2003. Yet, new foci of wild polioviruses transmission have emerged in Karnataka, Tamil Nadu and Andhra Pradesh (ICMR Bulletin, 2004). The wild polio virus 1 (WPV1) outbreak in India in 2006 (648 cases) was followed by a WPV3 outbreak in 2007 (791 cases). Majority of WPV cases were reported from two large Indian states – Uttar Pradesh (UP) and Bihar. In 2008, India had 503 cases: 62 type 1 and 441 type 3.The number of cases for 2009 is 568: 68 cases are type 1, 499 are type 3 and one is a type 1/type 3 co-infection.

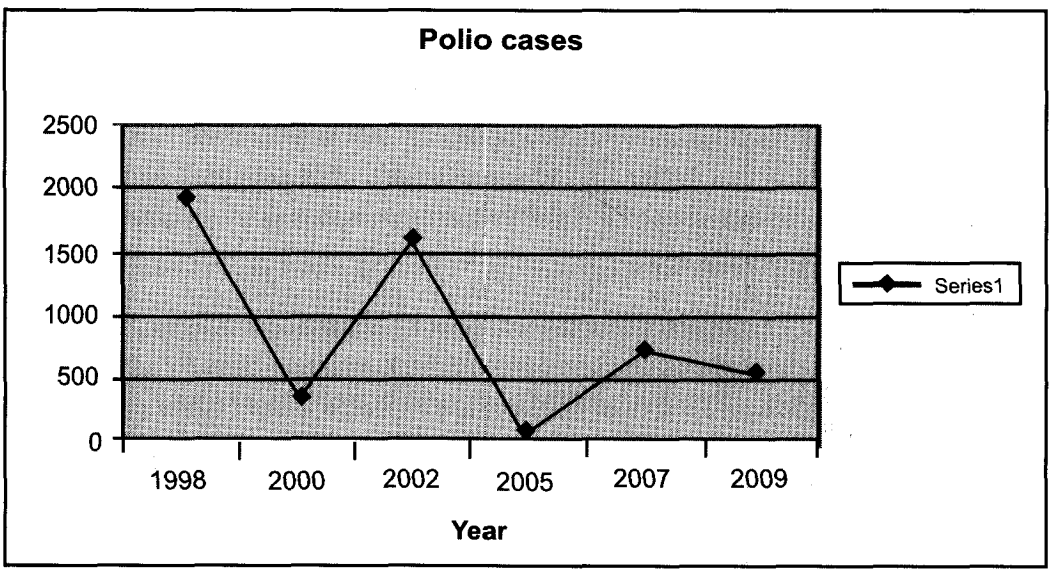


Figure 1: Polio Status in India

As at 19 June 2009, 79 cases of polio due to WPV and 2 cases due to VDPV (Vaccine derived polioviruses) have been reported with onset in 2009. Of the 79 WPV cases, 23 are due to WPV1, 55 due to WPV3, and 1 is a mixture of WPV1+3. There were 2 VDPV isolations: a type 1 reported from Assam in a 57 month old child (date of onset - 7 April 2009) and a type 2 VDPV reported from Bihar in a 24 month old child (date of onset-30 April 2009). The former had non-polio 'AFP' (acute allergic encephalomyelitis and spastic hemiplegia). Four states have reported cases of WPV in 2009 to date (Uttar Pradesh-51, Bihar-24, Delhi-3, and Rajasthan-1) with the endemic states of UP and Bihar accounting for 95% of all cases reported in the country (20th Meeting of the IEAG for Polio Eradication, Delhi, 2009).

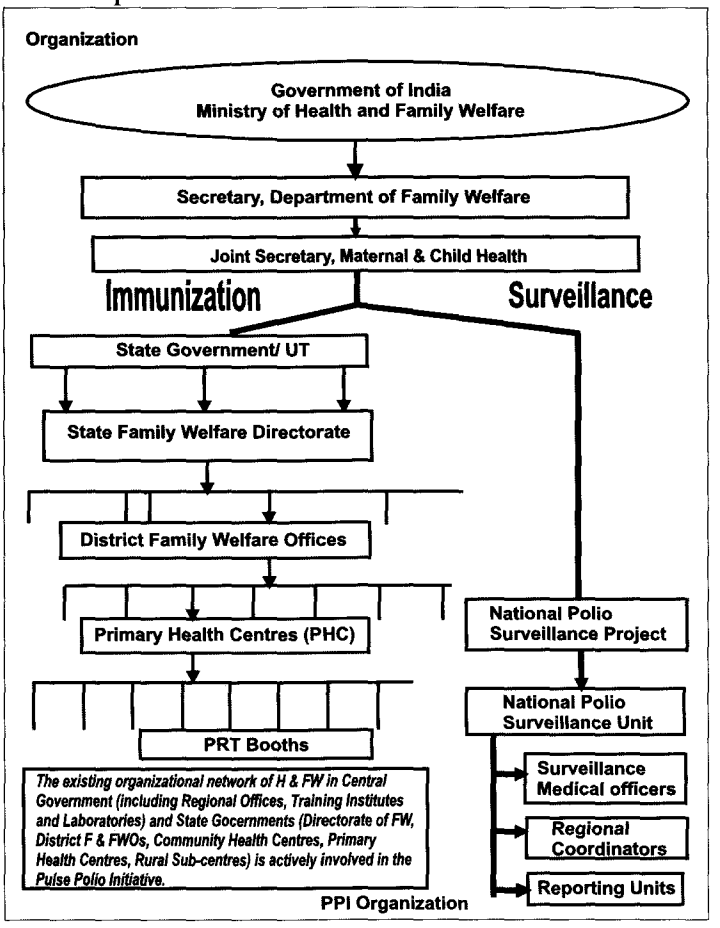
The brief discussion on status of polio in India till 2009 and as summed up in figure 1 also, points out that various initiatives to eradicate polio are in right direction, but for the sudden outbreak of disease in different forms there is a need for more holistic initiatives keeping in view the socio-cultural and political background of the country.

Government Initiative for Eradication of Polio from India

Government of India is playing a vital role in fighting against polio. According to Article 47 (Constitution of India), though health is a State subject, the concurrent list provides scope for the Central Government to take active role in advising, guiding and monitoring the control activities and even make laws especially when issues assume national importance. The eradication of polio from the country is an example of such a situation. The states receive funds from the Centre for the programmes on the concurrent list and are responsible for their implementation. At the Centre, the Ministry of Health & Family Welfare manages health programmes in the country (ICMR bulletin, 2004). In accordance with the guidelines of the WHO, the Union Ministry of Health & Family Welfare, Government of India constituted a Task Force for laboratory containment of wild polioviruses as shown in figure 2.

There is a high level of political commitment for polio eradication in India. President of India has launched the National and sub-National Immunization Days by administering polio vaccine to children. The Prime Minister has appealed to the Nation on television and radio on the occasion of Pulse Polio Immunization Days. He has called upon every citizen to ensure that every parent brings every child under the age of five to receive a dose of oral polio vaccine during the nation-wide Pulse Polio Immunization drive. The Health Minister has assured full support of the Government of India to the states in reaching zero incidence level of polio cases so that India's global commitment of polio eradication by 2012 is achieved. The annual strategy for polio eradication over the next three years had been decided on the recommendations of the India Expert Advisory

Group (IEAG) comprising national and international experts. The IEAG has recommended a total of six national immunisation days, nine sub-national immunisation days and 40 mop-up rounds for the period 2009-10 to 2011-12.



Source: www.indiagovernance.gov.in/prac/Polio.pdf

Figure 2: Task Force of Government of India for Polio Eradication

Thus, Government responsibilities in the direction of polio eradication are the following:

- Implement communication plan of action, with inputs from partner agencies.
- Provide overall guidance to multi-agency communication cluster in Lucknow.
- Ensure District Task Forces are fully operationalized, with a sub-committee for communication and social mobilization.
- Implement IEC (Information, Education & Communication) activities (posters, banners, miking, local media) for SIAs (Supplementary Immunisation Activity).

- Using AIR, Doordarshan, Song & Drama division, Field Publicity to publicize SIAs widely in the state, with key inputs from partner agencies in terms of messages, activities, monitoring and evaluation.
- Mobilize headmasters and teachers at the village level, through district and block-level officers, to create awareness and acceptance for SIAs.
- Mobilize all AWWs (Anganwadi women) in the state to promote polio eradication/ dispel rumours during regular meetings with clients; take up special activities to promote community acceptance of OPV.
- Field workers mobilized to promote polio eradication during village-level meetings prior to SIAs.
- Women's self-help groups mobilized to identify resistant families and actively work to ensure no children are missed during polio rounds; conduct information sessions on polio at village level.
- Gram panchayats in high-risk areas given clear direction to mobilize community support for booth day and house-to-house activities (working paper UNICEF, 2003).

Marketing Perspective to Government Initiatives for Polio Eradicatation

Marketing of health as a product, though conceptual, is much related to the issue of behavioural change and developing need of staying healthy. The cost involved in health issues get reduced to much extent if the society comes out of their shell of ignorance and start taking active participation in vaccination, sanitation, and hygiene concepts on their own and take them as their right and first priority to live happily. Success of good marketing is that the consumer herself approaches to demand the product. Marketing approaches and its tools thus have much to offer to the public health community.

David Heymann, the director of the World Health Organization's Polio Eradication Initiative, highlighted: "Coca-Cola, usually cold, can be found in nearly every village in every corner of the globe, no matter how remote", then why the same approach can't be used to create awareness about polio. The main barriers faced by government in the way of eradicating polio could be solved by applying marketing tools like communication (campaigning and advocacy), and motivation of team force. Polio eradication follows two major strategies: routine immunization with oral polio vaccine and mass vaccination campaigns to top up that routine coverage. Let us now understand the main problems in polio campaigns through strategy variables of marketing mix — Product, Price, Promotion, and Place and four extended P's, viz., Public, Politics, Participation and Policy.

PRODUCT

There are two main types of vaccine.

- Salk Vaccine or Inactivated Polio Vaccine (IPV) as named after Jonas Salk is a killed vaccine as it is given by injection.

- Sabin Vaccine or Oral Polio Vaccine (OPV)] named after Albert Sabine is live attenuated vaccine and is given by mouth

Oral polio vaccine is being extensively used in India under the Pulse Polio Immunisation (PPI) programme. Like all viral vaccines, oral polio vaccine is also unstable. Its potency, which means its capacity to give adequate prophylactic protection against polio disease, decreases progressively over the course of time. The higher the temperature to which the vaccine is exposed, the more rapid is its loss of effectiveness. Continuous maintenance of desired cold temperature during all the post manufacturing stages is known as cold chain. Oral polio vaccine (OPV) must be packed with dry ice (solid carbon dioxide) during transportation and must be delivered at the point of use within three days. The life period of OPV is one year after manufacture (Lawate, 2004). Just prior to use, the vaccine containers are usually rubbed between hands in order to warm up the contents a little at the time of administration. Vaccine, removed from cold storage, must be used within 30 days, provided it is stored continuously between +2° C to + 8° C in a refrigerator. If the temperature exceeds +8° C even for a short period, it looses its potency significantly. As far as possible, only vaccine should be stored in a particular refrigerator. However, if other things have to be stored side by side, the vaccine containers should be kept in a closed airtight styrofoam box and stored in the middle or the upper shelves. A thermometer must be kept next to the vaccine box. The temperature should be monitored to be between +2° C to + 8° C. A record must be maintained of the actual temperature daily and power interruptions, if any. While executing a pulse polio programme on a mass scale, some of the above mentioned vital cold chain precautions may not be strictly practiced. It may be because of the reasons such as ignorance, negligence, irresponsible or careless attitude, overload of work, tired and exhausted staff, routinisation of the process of programme implementation and lack of adequate supervisory control. Also many villages in India face acute electricity problem and many of them even don't have the provision of electricity, which makes it worse to maintain the temperature of the vaccine at required level. So, if the sense of responsibility and accountability is not there, the desired goal of effective immunisation of every child will remain only a dream.

It must also be mentioned that some researchers have expressed doubts about the safety of oral polio vaccine. Polio can be caused by wild polio virus or mutant neurovirulent

polio virus in OPV, called Vaccine Associated Paralytic Polio (VAPP). To reduce this terrible side effect, a new polio vaccine schedule was recommended in 1997 (two doses of IPV followed by two doses of OPV). IPV (Injectible Polio Vaccine) is a good option where there is a high rate of diarrhoea among children leading to the OPV vaccine flowing out. It works better by producing protective antibodies in the blood, thus preventing spread of the polio virus to the central nervous system (Sinha, 2006). But, the IPV vaccine is 25 times more expensive than the currently used Oral Polio Vaccine (OPV), and inactivated injectiable polio vaccine programme is far more difficult in a large populous country like ours.

PRICE

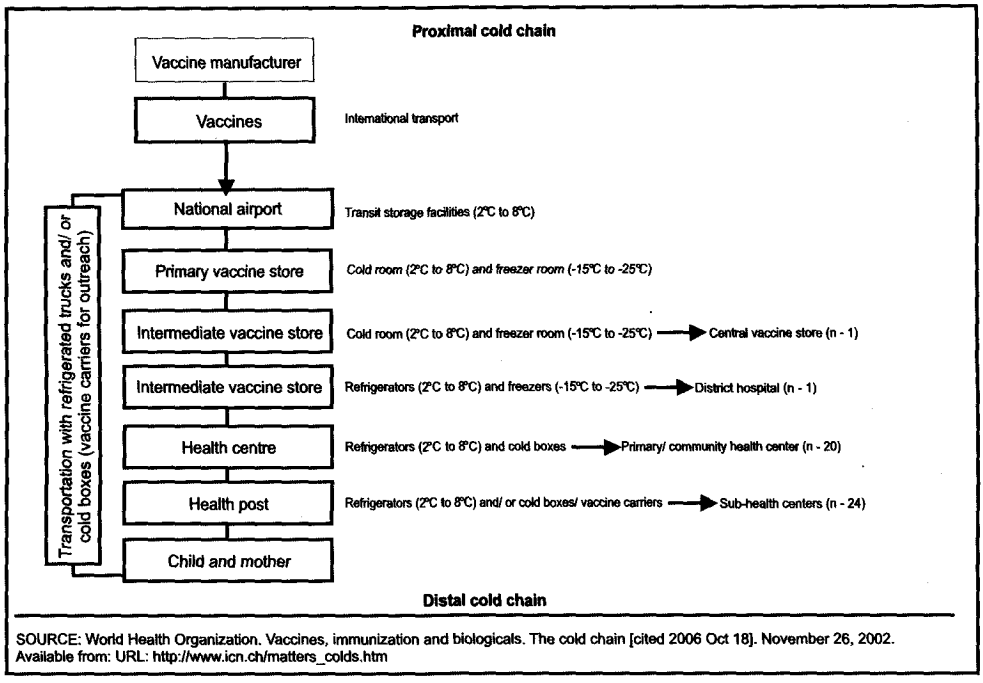
The United States Government through the U.S. Department of Human Health Services, Centres for Disease Control and Prevention (CDC) and the United States Agency for International Development (USAID) provides funding to fight polio in India. Funding primarily goes through WHO and UNICEF. The grants add up to roughly $6 billion in total spent on polio eradication since 1988, when the WHO and partners launched an effort to wipe out the crippling disease. Since 1993 the United States has provided more than $1 billion globally and $150 million in India for polio eradication. Funding from the United States supports the purchase of oral polio vaccines, disease surveillance vaccination campaign operations, the polio laboratory network, and social mobilization networks through UNICEF, CORE and Rotary. After missing the deadline in 2007, India has planned to spend another Rs.32.04 billion to wipe out the disease from the country in next three years i.e. 2009-2012. The cost benefit analysis shows that the world would save 1.5 billion USD annually in post eradication era by avoiding the costs of acute care and, post-certification, and vaccination costs. The major financial benefit comes from stopping polio immunization after eradication is certified. A recent cost-benefit analysis projected that the direct global financial benefit could be as high as $1.7 billion annually.

PLACE

Immunization against a disease is achieved only if a potent vaccine in administered, The system used for keeping and distributing vaccines in good condition is called the 'cold chain'. This consists of a series of storage and transport links, all of which are designed to keep the vaccine at the correct temperature until it reaches the recipient. A typical cold chain system for vaccine is shown in Figure 3. In view of frequent power failures and high summer temperatures cold chain plays a central role in the polio eradication initiative particularly in the rural areas.

WHO has a global protocol for cold chain maintenance. In India Ministry of Health and Family Welfare, Government of India, developed a country-specific guideline for cold

chain maintenance. Researchers reported defects in the cold chain and the need to strengthen this mechanism to achieve successful polio eradication. In their assessment of the cold chain in New Delhi, Aggarwal, et al (2002) reported 15% of vaccination clinics had a shortage of vaccine carriers. Goel, et al (2004) reported unsatisfactory maintenance of the cold chain equipment in their evaluation of cold chain system in Chandigarh. Given the endemic nature of polio in India, it is critical that measures are taken to better secure the delivery of a potent OPV. Data indicate that 24% of vaccine carriers across all the levels of the cold chain were noncompliant.



SOURCE: World Health Organization. Vaccines, immunization and biologicals. The cold chain [cited 2006 Oct 18]. November 26, 2002. Available from: URL: http://www.icn.ch/matters_colds.htm

Figure 3: Cold chain & Temperature Requirements at Various Stages

Another issue of concern is power supply at the primary/ community health centres in this rural district. Electrical power or an alternative source of energy is crucial to the maintenance of the cold chain, and the data indicates that 90% of all primary/community health centres report frequent power failures (5–10 hours) during summer months. This is compounded by the fact that only 45% of these primary/community health centres have a power generator that can help maintain the cold chain (Samant, et al 2007).

PROMOTION

Promotion and communication have played a consistently central role in Global Polio Eradication Initiative programme. Evidence-based and planned communication strategies

such as intensive interpersonal communication and social mobilization, media campaigns, and political and national advocacy campaigns have contributed to reducing polio incidences in India. Several channels of communication have been utilized for disseminating the information such as television, radio, newspaper, local announce-ments using public address system besides home visits by health workers, anganwadi work-ers, local volunteers etc. Singh, et al (2001), have conducted the study in three centres of Delhi. According to their 92.9% knew that the vaccine given on the IPPI (Intensive Pulse Polio Immunisation) day was of polio. The source of information regarding polio and IPPI were television (32.9 %), relatives or friends or neighbours (24.2 %), health staff (20.9 %), posters and leaflets (15.9 %), anganwadi workers (13.7 %), loudspeakers (11.5%), school children (4.9 %), volunteers (3.3 %), radio (2.2 %) and newspaper (1.6 %). Television seems to be an effective media for communi-cating with people in urban area because of its universal accessi-bility. Another similar study for evaluation of pulse polio immunization coverage evaluation in rural area of Agra showed that the main source of information was from anganwadi workers (43.5 %) followed by auxiliary nurse midwife (26.9 %), school teachers (11.4 %), television (9.2 %) etc. It is interesting to note that not a single channel of communication is very effective in generating mass awareness but it requires the combined efforts of multiple channels.

Data support claims of the contribution of mass and folk media and advocacy to increase awareness and booth attendance. In India, large-scale mass media campaigns involving movie and cricket stars and political figures focused on dispelling rumours about OPV and encouraging caregivers to bring their children to vaccination booths. Indian cricketer R.P. Singh presented Ms. Mayawati Chief Minister of Uttar Pradesh with a cricket bat signed by all the players of his team as a show of support for the 'Bowl Out Polio' campaign. The message on the bat read: 'We want to see the children of India run and play. Let's bowl out polio.' The Bowl Out Polio campaign was launched in 2003 through a partnership comprised of UNICEF, Rotary International, NPSP-WHO and the Board for Control of Cricket in India. Since that time, Indian cricketers have been involved in the campaign and are helping to spread the message about polio eradication (Anupam Srivastava, 2007).

. Amitabh Bachchan works his magic on polio. His is the voice that terrorises the screen villain and also cajoles millions of parents across the country to take their children to the nearest polio vaccine booth. Matinee star Amitabh Bachchan is proved to be the most successful ambassador in the drive to eradicate polio (Figure 4). Most of the parents coming to the polio booths said they had been convinced by Bachchan's exhorting them to do so, on TV spots and radio commercials. "In as many as 70 percent of the cases of people who came to the polio booths, the respondents admitted that Amitabh Bachchan

had been the prime motivator to them in bringing their children for immunisation," said Brent Burkholder, WHO regional advisor immunisation and vaccine development for Southeast Asia (Lola Nayar, 2004). As brand ambassador for Unicef's coordinated polio campaign for the health ministry, Bachchan has been seen and heard scolding, reasoning and pleading with parents to help India become polio free.

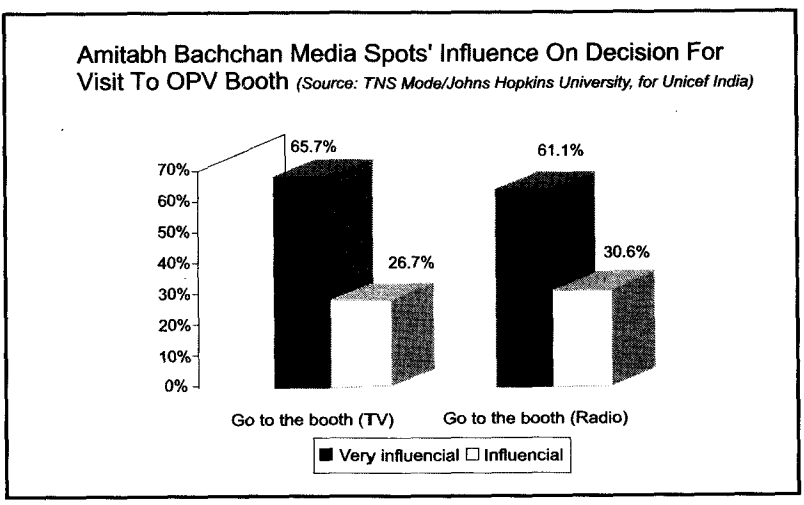


Figure 4: Amitabh Bachchan Influence for Visiting Polio Booths

Apart from the important role played by media in developing a positive attitude and motivating the parents to take their child to the polio booths there are several other efforts which were used to convince people to actually do the action. These include the efforts put in by various group of people and organisations voluntarily helping govt in its effort of polio eradication.

The CMCs (Community Mobilizing Co-ordinator) serve as the interpersonal communication channel to ensure dialogues and actions. CMCs generally include women belonging to the resistant community in the key village, having strong interpersonal communication skills and dynamic personality, well respected in their community. They also use copies of appeals from religious bodies and the local doctor during house to house visits.

Health camps or Health Melas, primarily aimed at building confidence in health services. Free health camps were organised in polio endemic districts, designed to examine and diagnose patients, provide medicines, and refer serious problems to hospitals.

Wall Paintings addressed the need and importance of routine immunization, polio drops and for increasing booth attendance.

Kala Jathha/Folk performance/Street dramas: staged to raise awareness on the need for repeated polio doses, routine immunization and to clarify misconceptions and myths about OPV.

The SMC's (Social Mobilization Coordinators) major function was to initiate interpersonal contact with families in between the vaccination rounds to pave the way for vaccinators' house-to-house visit in high-risk, high-resistant blocks and villages. Together, they were to galvanize decision-makers, opinion leaders, journalists, young people, influencers, teachers and school children into actions to improve public recognition of polio drops, and invent a spirit of festivity around immunization days in the district capital, towns and villages.

During the pilgrimage of Haj, the Saudi Arabian government issued a directive for Hajis (pilgrims) to be vaccinated before arriving in Mecca. Haj, the most important pilgrimage for the Muslims, presents an opportunity for Polio Eradication Partners to communicate the endorsement of vaccination against polio by Muslim countries like Saudi Arabia. Information, education, and communication (IEC) materials distributed include a Ramzam (holy month) calendar distributed to Haj pilgrim. The calendar included appeals by Ulemas (Islamic religious leaders) with pictures of adults and children taking the immunisation drops.

Local paediatricians participated in the publication of appeals pamphlets. Amongst the other participants were the influencers i.e. Teachers, Political Leaders, Shopkeepers, Immam of Masjid etc. Influencers play a key role in accompanying the CMCs on home visits.

Though various communication initiatives have contributed to the remarkable progress in lowering the burden of polio in India, but these are not effective enough in meeting out the challenges of social resistance which played the role of a major hurdle in the way to eradicate polio from India. This paper, therefore, considers public as a separate 'P' to understand the pattern of social resistance in India.

PUBLIC

Intensive Pulse Polio Programme is targeted for mass consumption, but there are certain sections of the society which resist the programme and pose challenge to its successful implementation. There is no vaccine which can overcome resistance or refusals that are rooted in social-cultural, religious and political contexts. No supply chain can overcome issues of gender-based decision-making in households and medical approaches alone

cannot address certain community concerns (for example, why OPV is brought to their door when many other services are not made available to them in this manner).Thus, considering public as the fifth 'P' put emphasis on the need to find out the way in which government initiatives are targeted to different sections of the society requiring tailored approach to overcome their resistance.

According to working paper of UNICEF (2003), a close examination of why polio eradication is confronted with mistrust, resentment, fatigue and complacency sheds light on the host of factors that shape India's communication strategy. The question that dominated the public mind – the vegetable vendors, factory workers, construction labourers, slum dwellers, farmers and above all, illiterate mothers – was: why repeated doses? Hasn't my child been protected enough? Why must we do it round after round, year after year? And why is my child still infected by polio when he/she has been vaccinated many times? There were, indeed, many questions in people's minds. 'Earlier it was given twice a year, and now it is given very frequently. There must be something wrong about it', 'they are giving this medicine totally free! Why is the government doing this? Why only this medicine and not any other? Why only polio? If they have to give they should give all medicines. What could be the reason?' These and many such questions hover over the minds of people. This strong resistance took three forms. Some believed that OPV causes infertility in children. Some of the various arguments were like this, 'We heard this rumour that this vaccine will affect some nerve in the children which will make them unable to produce children. We then thought that our children will become useless; nobody will marry them and our family will not be able to propagate. This is why we did not give the medicine'. A negative attitude to OPV vaccination developed, and in some communities, it persisted to the point where vaccinators resorted to the physical use of force to coerce families into accepting OPV. One such argument given is 'they force the children to take the vaccine, and when we resist they bring the police'. The fear and suspicion gained currency from two factors. Firstly, the government's family planning programme was the only other service provided freely. It was also the most extensive and visible, besides OPV vaccination. Secondly, the health workers and ANMs (Auxiliary Nurse Midwife) who administered OPV were also the ones that promoted family planning and delivered contraceptives.

Then there were others who have developed the notion that OPV is useless since it cannot protect children from paralysis. Rumours and hearsay were most often reinforced by sporadic occurrence of wild poliovirus cases among children who had been vaccinated, but insufficiently protected with additional dosage. Many villagers in underserved areas had witnessed such incidents, which took away whatever little faith that was left about

the program. And the third notion among people was that Polio drops are themselves the cause of polio disease. Wild poliovirus paralysis cases among inadequately vaccinated children had also led many to suspect that polio drops were the cause of the disease. And those who experienced or witnessed paralytic cases would have discouraged others from vaccinating their children. Apart from these there have been instances of other reasons for showing resistance, like many families reported discrimination as most of health workers were people of higher caste. Another noteworthy trend was the increased percentage of families claiming they had 'no time for the booth', people belonging to this category could mostly be daily wage earners whose three meals for the family depended solely on their income for the day.

The UNICEF working paper (2003) mentioned various steps taken by the government for overcoming the resistance of society. First, government availed the help of anganwadi women and auxiliary nurses to curb the negative attitude of people. They were the promoters of interventions to improve child nutrition and development, ranging from micronutrients to safe drinking water, sanitation and hygiene. Secondly, communication strategy for the behavioural change of underserved was made and special outreach team was formed to interact with families and using persuasion to reduce resistance to lay the ground for vaccinators' visit was thought as a workable solution. The House-to-House strategy of bringing the vaccinators to the door was designed to serve the groups who argued that they don't have the time to visit polio booths. Word of mouth communication was used to disseminate information and imparting knowledge for those who prefer to turn to neighbours or community members, rather than the media, for happenings in their lives for. And the third initiative the use of advocacy, recognizing the importance of enlisting support from the medical professionals, UNICEF and the Social Mobilization Working Group partners urged the Indian Academy of Paediatricians to participate more actively in the polio eradication programme. This effort led to their support in many ways: explaining the need of repeated polio doses to parents, mobilizing other professional bodies to join the efforts, and using their clinics as polio booths on NIDs. Building on the positive experience of engaging paediatricians in 2001, UNICEF took step to involve Muslim leaders to advocate the cause in 2002. And lastly the initiative was taken to develop an effective Information, Education, and Communication (IEC) material. The purpose was to increase knowledge among caretakers about OPV (purpose, amount of doses, vaccination schedule, virus transmission, need for permanent campaigns), and to provide information about places and dates where OPV is administered. Oral communication is the most effective way of reaching and mobilizing populations. Miking and meetings led by community leaders and women's organizations have also been considered effective in mobilizing rural citizens. The use of credible local people was strongly recommended by Silvio Waisbord (2004).

POLITICS

The social marketer often has to deal with groups other than the target audience, mobilize support and pre-empt resistance. Religious leaders and organizations, village heads or community leaders are generally permission granting groups whose approval is necessary. Further, their participation enhances the pace with which the required critical mass is influenced in order to trigger social change faster. The working support of this group has already been discussed in the promotion section but because of their crucial and significant role in the polio campaign they need a separate mention and recognition, as without their support it will be very difficult to overcome the problem of resistance of the society. Teachers at schools call Guardian-meetings at the school and explain to the mothers about the need for polio drops. They also accompany the CMC to visit houses to convince parents/guardians. The role of doctors as influencers, in visiting polio resistant homes, has proved useful too. They have vouched for the credibility of the vaccine from a doctor's point of view. Local paediatricians participated in the publication of appeals pamphlets.

PARTICIPATION

In Global Polio Eradication Initiative programme communication interventions have played a consistently central role. This large public health initiative is organized by WHO, Rotary International, the US Centres for Disease Control and Prevention (CDC) and the United Nations Children's Fund (UNICEF). Other leading partners include the United States Agency for International Development (USAID), the Bill & Melinda Gates Foundation, governments of polio-affected countries, donor agencies, non-governmental and private sector organizations. There is no substitute for the engagement and direct oversight of state government, and state and district civil administrations, on polio eradication activities. But without the participation and help of other organisations, like UNICEF, WHO, Rotary, World Bank, donor governments, corporate bodies etc, it would not be possible to achieve the goal of zero polio or polio free India. The Government of India signed the 1990 Declaration of the World Summit for Children, committing itself to eradicating polio by the year 2000. Besides providing funding to fight polio as discussed previously these partners also render important services, such as:

- Coordinate bodies at Centre, State and district level to implement communication plan of action

- Coordinate data management and information sharing with partner agencies working on communication at national, state and district levels

- Coordinate IPC training for vaccinator teams through SMO (Surveillance Medical Officer) network.
- Providing technical inputs in the development of IEC materials (posters, banners, miking)
- Undertaking intensive social mobilization activities in high-risk areas of 19 districts.
- Conducting coverage evaluation and media impact evaluation
- Implementing national level advocacy to ensure sustained political and social commitment to polio eradication.
- Resource mobilization
- Identification of resistant families in areas of working and implement IEC activities for awareness generation/social mobilization (working paper UNICEF, 2003).

POLICY

India Expert Advisory Group (IEAG), a policy advisory body of the Government of India is responsible for suggesting from time to time various policies to the government of India in its endeavour to fight polio. The Interagency Co-ordinating Committee (ICC), a committee responsible for resource mobilization and partnership coordination, constituted a National Social Mobilization Working Group on the recommendation of IEAG. The Working Group set forth to engage members of legislative assemblies, religious leaders, journalists, and health workers in awareness-raising, including a WHO sponsored workshop aimed at motivating health workers to actively seek out the un-reached. There was no explicit mention of the house-to-house service which helped in achieving good coverage. The multiple channels of communication focused on reminding parents of the importance of vaccinating all children below 5 years old with polio drops, right from infancy (Working paper UNICEF, 2003). IEAG is responsible for providing advice and suggestions to government on issues like NID (National Immunisation Days) and SNID (Supplementary National Immunisation Days) schedules, making special provisions for high risk areas in UP and Bihar, estimating & ensuring adequate supply of OPV, ensure presence of government medical officers to monitor implementation of the program, identify important events in the year (Chaath, festivals, and other gatherings) marked by large gatherings of people (thousands) and ensure polio immunization during these activities, efforts to overcome the challenges of poor vaccine efficacy, development of a clear media management protocol for the polio program, train polio teams etc.

Implications of Eight P's Analysis

India has missed two deadlines for eradication of polio; one in the year 2000 and another in the year 2007. Inspite of the fact that a lot has been done and is still going on to fight polio, the success still seems far away. The efforts put in by government and other non-government partners are undoubtable. An advisory body (IEAG) is constituted to give review of the progress from time to time and recommend the action to be taken to take the lead forward. Government of India in support with organisations like IEAG, WHO, UNICEF, Rotary etc and the experience gained from the countries which are awarded polio free status has done tremendously well, but the truth is that India is still fighting against polio. The marketing mix analysis in terms of eight 'Ps' (4 original 'Ps' and 4 extended 'Ps') thus highlight the following barriers in the way to eradicate polio:

Vaccine failure and failure to vaccinate

Scientifically speaking, an effective vaccine ensures that more number of people are protected than actually immunized, but this is not happening in India with OPV as two third of cases are continuously occurring in children aged less than two years as had always been in the past. Some researchers have expressed doubts about the safety of oral polio vaccine. Polio can be caused by wild polio virus or mutant neurovirulent polio virus present in OPV, called Vaccine Associated Paralytic Polio (VAPP). Reports of occurrence of a number of cases in children who had received more than 4 doses has questioned the efficacy of OPV, in UP and Bihar. But in other cases vaccination failed due to difficulty in reaching children located in remote areas. International agencies i.e. UNICEF found coverage with OPV3 as low as 27% in Bihar, 38% western UP and 45% in eastern UP states of India which are most severely affected by Polio. Recent WHO reports found this coverage to be deteriorated, due to unidentified reasons. The coverage in NID is always reported more than 90% but in present scenario it needs further close monitoring as it is not logical that a vaccine which can be effective in one region cannot achieve the same in another. However, in certain cases it is vaccine failure as the child may be suffering from diarrhoea, or the drop may not have fallen correctly into the mouth of the child or the vaccine that was used was deteriorated.

Lack of funds/ financial crisis

The final push towards global eradication of polio is facing a financial crisis. According to WHO another $1 billion would be required over the next two years to rid the world of crippling disease. However the Global health watchdog is presently facing shortfall of $575 million for its polio efforts planned during 2007-2008.

Resistance by society

After almost 10 years of running the program in India, myths still continue to exist about the polio in general public. The successive cohorts, especially in endemic areas, do not have sufficient awareness on the polio which is essential for participation and cooperation of the people. Poor acceptance of OPV immunization by Muslim community has further compounded the problem. Although organized resistance seen in 2002 is not seen now, still there are pockets of resistance to OPV immunization in West UP. Children in western UP from Muslim community have consistently been missed both during SIAs and for routine immunization. Significantly almost 79% of polio cases in 2004 in UP have occurred among Muslim children. In west UP high-risk districts, there is still an immunization gap between Muslim and non-Muslim children. But if we have the look on the statistics of Muslim countries like Pakistan & Somalia it is not facing the same problem as in India. Thus, the problem does not lie with community, but it lie in the communication and advocacy. The solution may lie in including such efforts in school textbooks and curriculum of all activities to generate awareness and let people be involved in the program.

De-motivated Volunteers

Health workers play a crucial role in the fight against polio. It is they who takes all the pain and face all the difficulties to reach the remotest of places and become victims of the direct resistant behaviour and sometimes unethical behaviour of the targeted population. They are also burdened with the pressure of achieving the maximum coverage of polio doses. Sometimes this frustration discourages them and motivates them to use force and coercion in administering the polio doses. This further becomes the cause for forming a negative opinion among the masses and thus social resistance.

Poor Immunization coverage

A coverage evaluation by UNICEF indicates that in UP, OPV3 coverage in 1999-2000 was 35%, it was 50% in 2000- 2001 and 41% in 2001-2002. In Bihar OPV3 coverage in last four years is only between 21-25%. There is also decline in OPV3 coverage in other states. In Rajasthan OPV3 coverage in 2002 was only 35%. Because of low coverage a vast pool of susceptible children are left without vaccination.

Failure to Reach All Children

One of the most crucial reasons for poor accessibility was migration of people from one state to another; which made it very difficult to reach all children. Analysis of immunization status suggests that virus survived in West UP and central Bihar due to gaps in SIA implementation. The main problem in Bihar is of poor accessibility due to natural calamity

like frequent floods that hamper immunization activities in the state. These are the reason why hundreds and thousands of children were missed during vaccination rounds.

The other factors which are also responsible for spread of polio cases include overcrowding, poor sanitation, un-hygienic conditions, unavailability of safe drinking water, lack of commitment of all sectors of local administration and many more.

Recommendations and Suggestions to Help Fight Polio

In the light of implications of marketing based analysis, the study provides certain useful suggestions and recommendations which can be adopted to gain power and strength in country's efforts to fight eradication of polio.

Appropriate mix of promotional tools

The first suggestion focuses on the need of an appropriate mix of all promotional tools. In today's world people have access to information on almost any topic, through a variety of mass media activities, such as television, radio, computers, local and national newspapers, magazines, books, exhibitions, fairs, leaflets and posters etc. Message of polio can be delivered in a variety of interesting ways with the help of media. Various quizzes and contest, street plays, talk shows documentaries, interviews, can be planned, celebrities can be invited to make an appeal and participate in the immunisation program, and slogans can be used to increase the motivation level. Announcements for specific vaccines can be made in the vernacular language corresponding to the districts where those vaccines will be given. Radio announcements in local languages can also be used vigorously to target messages to specific groups. Interpersonal channels of NIDs promotion can also be done by involving local leaders, religious leaders, school pupils, drama groups, and peer educators.

Targeted approach

Most of the strategies that were used to fight against polio were mass strategies and thereby failed to achieve the goal for which they were meant. It is strikingly noticed in our analysis that there is social resistance to IPP programme. But, the reasons for resistance differ across people depending upon their socio-cultural background, status of working or non-working, educational background, and even at some places for religious background also. It is vital for any polio eradication campaign is to tailor the message according to the characteristics of target audience. Typically people listen to a message when it touches their lives and concerns them. There is a need to disseminate the information so that it appeals to them and relates with them.

Simplicity in message

Message should be simple yet powerful. One of the most common mistakes by first-time advocates is an attempt to communicate too much detailed information. Instead, policy makers need simple messages that clearly and quickly get to the heart of an issue. For advocacy purposes, a few well crafted facts can be worth hundreds of statistics. Often there is no need for false alarm or sensation to draw attention to the disease or disaster. The story of one person suffering from a disease can create a more lasting impact than the fact that there are millions of victims. Sharing real-life stories of those who live or work with diseases can help non-medical audiences relate to complex medical issues. Use of images can also make the message more interesting, memorable and effective.

Advocacy

One of the strategies to combat social resistance is advocacy. It is about winning support of key constituencies in order to influence policies and spending, and bring about social change. There is a need to devise advocacy programs in a certain way that it can create an everlasting impression in the minds of the target population. It should not only make the people aware but also create a motivational factor that will lead them to action.

Making health a priority

Marketing personnel are known for their talent to create demand for the product but these days they are also showing their excellence in creating needs. This talent can be effectively utilised to create a need for living a healthy life among the targeted population. One of the main causes of reoccurrence of polio cases is lack of hygiene and sanitation. Health care is generally not relevant to the needs of every day life and is often neglected. This can be done by making health a priority in all sectors of society and by active participation and involvement of communities in their own health development. Efforts should be made to bring the concept of health in the subconscious mind of the individual.

Participation of school pupil

School pupils can play a vital role in spreading the awareness. They take home messages to their parents and also disseminate messages in the community through drama, and role plays. Primary-level pupils are more effective in mobilization, while the older high school students can serve as volunteers at immunization posts.

Handling rumours

The negative publicity or the spreading of rumours is again a hurdle in the way to success. Certain rumours that permeate the population hurt the NIDs/SNIDs campaigns and so it is required that additional efforts should be made to educate the population. The most common one is that the polio vaccine causes impotency among the children. Other rumours cited are that the vaccine contained family planning or the HIV virus. Written guidelines should be distributed to the districts on how to handle the rumours. The districts should be subsequently instructed to intensify their interpersonal communication, through door-to-door visits and the use of religious leaders, heads, teachers and other influencers.

Motivating the workforce

Last but not the least the motivation of health workers is also very important. There is a need to maintain the motivation level of health workers by giving them extra allowances. Certain districts felt that volunteers were more effective during NIDs than were regular health workers. Volunteers tended to be more willing to work without pay or even to stay overnight at a mobile post when transportation was not available. Medical student volunteers are found to be particularly enthusiastic and reliable and should be continually utilized in subsequent campaigns, especially for such immunizations as measles, where non-trained volunteers are not suitable. Those that opt as volunteers must be motivated in a non-monetary term in form of certifications etc. Success of this health campaign is much depended on the performance of an aggressive and motivated workforce.

Conclusion

Polio eradication in India is at a crossroad. India is using the same vaccine, same participation of international partners, same standards which other nations have used to successfully eradicate polio, India is still fighting against polio and occupies its position as one among the top polio affected countries.

It's already a high time for India to eradicate polio from its deep down roots as the resources including the enthusiasm of millions of health workers, commitment of governments and faith of the polio experts all over the world are running out. The academics is clear, the strategies are well planned and discussed, the only thing that is required is a little change in approach and mindset of the people. The paper, therefore, pinpoints the areas which need particular attention to further strengthen government resolve for polio free India. There are certain gaps in logistic arrangements that need attention. The more important gap however is in the attitude of target population which resists the successful implementation of the programme. Therefore, a mass programme

needs targeted approach for its implementation and it is more the responsibility of communication planners to bring creativity and innovation to make it possible to reach out to the resistant audience.

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