The polio eradication initiative in Madhya Pradesh, by Deshdeep Saxena

Among the hurdles that the pulse polio campaign in Madhya Pradesh (MP) had to cope with this year is the winter crop. Madhya Pradesh produces more than 60 per cent of the country's soya bean, devoting some 40 lakh hectares to the cultivation of this cash crop. One can imagine the number of agricultural labourers involved in its farming. Even as workers fanned out all over the state to give children the oral polio vaccine, agricultural labourers were busy in the fields cutting the soya bean crop.

Workers also had to trace and reach migratory labourers of Chattisgarh region who are continuously on the move from one construction site to another, leaving home early in the morning and returning late at night.

While the campaign is moving in the right direction in general, it cannot afford to miss even a single child in the target group 0-5 years. This is why reaching these two groups becomes extremely important.

The extent of the polio problem

Surveillance data collected as part of the eradication campaign suggest that the virus may be losing the battle, with 80 confirmed cases of polio in 1999, down from 118 the year before. Only six cases could be attributed to the wild polio virus with certainty; the others were clinically confirmed as polio.

The affected parts in the state are in the Vindhya Pradesh region (Rewa, Sidhi and Chattarpur) and the Madhya Bharat region of northern Madhya Pradesh (Bhind and Morena) which share a border with Uttar Pradesh, as well as some pockets in the Chattisgarh region. These areas contain large populations of scheduled castes and scheduled tribes which make up more than 50 per cent of the state's population. The living conditions of these people are also representative of the state's backlog in areas like literacy, basic education, and levels of nutrition, basic health and poverty. As in the rest of the state, some 31.3 per cent of the population is classified as living below the poverty line.

> ***The problem is further complicated by the fact that Madhya Pradesh has the largest area of any state in the country, and much of this area is undeveloped. There are many villages without approach roads. A health centre set up for a given population often turns out inaccessible to the people it is supposed to serve, because of the sheer distances between village and health centre.***

The state of people's health

Though progress in the health sector led to a significant reduction of the infant mortality rate in the last 25 years, at 97/1,000 live births, it is still higher than the all-India figure of 72/1,000. The health department estimates that about 28 per cent of the state's high infant mortality could be attributed to easily preventable diarrhoeal diseases.

Maternal malnutrition is responsible for the high proportion of low birth weight children born in MP. Such children are weaker and more susceptible to infections which can kill them in the critical first five years of their lives. In 1992-93, the under five mortality rate was 130.3/1,000.

A review of the health sector reveals persistent regional variations with the Vindhya region and northern Madhya Pradesh reporting a comparatively poorer status. For example, the infant mortality rate is 124.8/1,000 and 140.3/1,000 in the Vindhya region and northern Madhya Pradesh respectively.

Other health improvements have lagged behind accordingly. As of 1995, the state had the highest crude birth rate in the country. Waterborne diseases and malaria are big problems in the state. Burhanpur, a tehsil town in western Madhya Pradesh has the highest rate of tuberculosis in the country (*Human Development Report, 1998*).

The health infrastructure
Expenditure on public health has gone from 2.8 per cent to 4.2 per cent of the state budget in the last three years, and the ninth plan contains a further increase in allocations to the health sector. Despite these developments, and an expansion in the health infrastructure in the rural areas, current health services in MP still fall short of what is desirable. There are 11,938 sub-health centres, 1,814 primary health centres and only 197 community health centres in the state, compared to the estimated requirement of 17,506 subcentres, 2,245 PHCs and 561 community health centres.

According to the 1998 Human Development Report, only 29.2 per cent of children in the state are fully immunised, compared to the national average of 35.4 per cent.

The polio initiative in the state
A systematic eradication campaign against the virus was launched in 1995, says DR BNN Chouhan, joint director (immunisation), directorate of health services, MP government. The campaign's strategy varies from area to area, depending on the differences in topography, the level of awareness among the people in the region and coordination between participating agencies.

The polio eradication initiative is a mammoth campaign involving some three lakh workers who actually administer the OPV drops, 15,000 to supervise them and 10,000 vehicles to carry everybody. As many as 70,000 booths were set up all over the state for the National Immunisation Day (NID) on October 24, 1999 – going up to 77,000 for the November NID. There have been no complaints about functioning of the cold chain in the state.

House-to-house immunisation
Starting in 1999, each round started with a National Immunisation Day, and continued for two more days during which workers went house to house to ensure that all eligible children received the vaccine. While this addition was meant to ensure better coverage, it seemed to create new problems, as many people were not prepared to bring their children to the booths. They said that it was the duty of workers to drop in their house and administer the polio drops.

> ***The bulk of the campaign takes place in rural Madhya Pradesh, where much of the interior areas are just not motorable, and one either uses a bullock cart, a bicycle or just walks. In these extremely difficult conditions, issues like coordination, commitment and motivation are of prime importance.***
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> ***Dr Chouhan explains, "Some villages in Jhabua, for example, are located so far apart, and the village cluster itself may be so small, that a group of workers could spend five hours covering two villages - to contact just four or five families!"***

Mobilising the community
The government mobilised its entire machinery towards the pulse polio campaign, involving school teachers, the women and child development department, *anganwadi*s, *kotwar*s and panchayats. However, this massive workforce was not able to contribute towards a strong and effective awareness campaign to educate the rural community on the dangers of polio, the need for both routine immunisation and the pulse campaign.

Panchayats, who could have played a major role in the NIDs in general and the campaign against polio in particular, failed to rise to the occasion. There are 4,84,000 elected representatives to panchayati raj institutions in Madhya Pradesh, of which 1,84,000 are women. The panchayats know the community, they could have mobilised the villagers, facilitating the work of health workers and NGOs, as well as

implementing the campaign themselves. “They could have made the pulse polio campaign a huge success,” commented a health department official.

An official in the department of health reflected that this nodal agency failed to rise to the challenge. “We spent much of our time in superfluous meetings and seminars to satisfy bureaucrats, instead of making field preparations.”

Coverage

Though the 1991 census figure says that the population of Madhya Pradesh was about 6.5 crore, the current population of the state is believed to be eight crore. On the basis that an estimated 15 per cent of this population is below the age of five years, the target was set at 1.2 crore. In fact, 1.28 crore children were given the oral polio vaccine during the October NID - and the number went up to 1.33 crore during the November round.

For 34-year-old Jeevabai, who earns a living doing domestic work for middle-class families in Bhopal, bringing her three-year-old son to the booth on the November NID meant missing half a day's work – and getting snide comments from her employers. But polio is not an imaginary enemy for Jeevabai. “My elder brother's son, who is now 19 years old, fell ill with polio as a child. Polio devastated his life, and I don't want it to happen to my son.”

However, rather than indicating that targets were ‘surpassed’, such figures suggest that the original targets are based on incorrect estimates. This means that there could be many children out there who have not been reached, notes a senior health department official who does not want to be identified.

Variations in the programme's quality

The programme does not do well when it is extended to areas where the government has a relatively weak hold. One example is in certain districts of Bastar region and parts of Chattisgarh dominated by leftist militant groups. This is also true in remote villages of the Vindhya region and the ravines of Bhind and Morena districts in western Madhya Pradesh where dacoits roam. Almost all the people living in these areas are scheduled castes or scheduled tribes. Most of these people are living below the poverty line and are not immunised.

Similarly, the polio programme's workers hesitate to enter certain districts of Bastar which are controlled by armed leftist political groups. Though these groups have not issued any threats, there is an evident element of fear which also affects awareness campaigns in these areas.

Hard-to-reach groups

Perhaps the biggest hurdle for health workers has been that the rabi crop was being harvested during the October and November NIDs. This meant that a huge number of labourers - men, women and children — could only be reached if the workers went out to the field to find them.

Health workers found it extremely difficult to traverse the vast countryside and visit every farm and field to trace labourers and their families, in order to administer children the oral polio vaccine. “It is a big hurdle for the programme,” admits Dr. Chauhan. Much of the countryside is just not motorable, making the health worker's job extraordinarily tedious.

For agricultural workers, taking their children to the immunisation booth means missing a day's work. “They just can't afford to lose the wages, so they give polio drops a miss.” And there is no possibility of compensating workers for their lost wages if they come to the booth.

Another difficult-to-catch group is the migrant labourers. They are not available in their villages or in their districts. One of these districts is Durg, which supplies a large number of labourers. A look at the statistics for the October NID indicates a poor response in some districts of Chhatisgarh region: Mahasamund district (98.8 per cent), Durg (93 per cent) and Rajnandgaon (99.76). Durg is one of those districts where a fresh case of confirmed polio has been detected recently. The fourth district where a low percentage of OPV administration was recorded in Chhatisgarh was Dhamtari. All these are backward districts with a large population of scheduled castes and scheduled tribes.

These sound like high percentages. However, studies indicate that reports of 110 per cent coverage of the target population translate into 95 per cent actual coverage, at best. A report of 100 per cent coverage suggests actual coverage of not more than 90 per cent. This leaves a very large number of unimmunised children in the state, who are vulnerable to polio disease – and a large reservoir for the virus to continue breeding despite eradication efforts.

> ***The pulse polio campaign faced confusion on the matter of marking children who had been administered OPV. Workers had been directed to mark immunised children with gentian violet, but there was some confusion about which part of the child should be marked. Parents objected to the mark being put on their children's faces. Marking the finger would not be useful since many children tend to suck their thumbs or fingers. It was difficult to mark the foot since most children were wearing socks in the winter. In all this confusion, number of children left the booths without a mark on them. Dr. Chauhan admits that there has been a lot of confusion in the campaign, in the process of which it is possible that that some children were left out.***

Many labourers from the Chhatisgarh region travel all over the country in search of employment. They are particularly difficult to track down; some of them live in hutment colonies, but many of them work as construction labourers and live on the construction sites till the building work is completed. And they cannot afford to worry about issues unrelated to their immediate existence and the next day's meal. The polio campaign is not among their list of priorities. The children of many such migrant labourers get left out in NIDs. Unfortunately, the government has done little to tackle these problems.

Resistant groups

Health officials and field workers note with dismay that (in addition to people from the relatively marginalised scheduled castes and scheduled tribes) the wealthier and better-educated sections of the community tend to be the least willing to participate in the pulse polio campaign. "These people don't see why they should take their children to the booth for immunisation," says a woman manning a booth in Bhopal. They also express doubts about the quality of OPV drops, and finally, they argue that their children are protected by routine immunisation. The pulse polio campaign benefits the community as a whole, not the already-immunised child, and they don't see why they should participate in what is clearly meant for the community's, not just the individual's, good.

Such attitudes can be quite intimidating, and health workers are often afraid of house-to-house visits in the better-off parts of the city or town. "One of my workers was terrified by the barking of a fierce dog. After he had waited for some time, a domestic came to the gate and asked him what he wanted – and sent him off when he found out the purpose of the visit," said a supervisor.

Family power equations can also prevent some women from allowing health workers to administer OPV to their children. They would rather wait for their husband's or mother-in-law's permission.

Though the programme is supposed to reach the target group of 0-5 years, some parents have objected to the oral polio vaccine being administered to infants below the age of one or two years, arguing that they are too

young for the vaccine. They are not always convinced by the explanations of health workers or by other communication efforts.

> ***Some communities also believe that the OPV can make their children ill. In Bhind Morena of northern MP, affluent thakurs insist that their children be given drops from a new ampoule - failing which they refuse the drops.***

Such instances indicate that people from various groups have strong reservations about the value of the OPV for their children. There is a lot of scope for education and awareness just on the quality of the OPV. However, this will need innovative efforts on the part of the government.

Quality of public awareness of the campaign

The polio campaign's awareness programme depends on a combination of radio, television, cinema slides, videos, posters, banners and even telephone messages to publicise its work. However, this is not sufficient in rural MP, and innovations are needed. Street plays and folk songs in the local dialects have been used to some effect.

During the October 1999 round, Sunil Shukla, IEC consultant for the state health and family welfare department, produced a video film called *Aina Pulse Polio*. The effort aimed to record people's awareness of polio, and also enable introspection by the programme authorities. It was seen by senior officials in the health department and others involved in the pulse polio campaign, and is expected to help formulate a better programme in the future. Mr Shukla says the film was an "eye opener" to the authorities.

> **Aina Pulse Polio** ***is an hour long video programme which was produced to get an idea of people's understanding of polio. People from different strata of society were interviewed on film in public places, homes and so on. As the team interviewed a range of people in and around Bhopal, it became apparent that correct information on the campaign does reach even the educated. For example, a Red Cross doctor asked why he should take his child to the booth for the pulse polio campaign. "Wives of some doctors in Bhopal did not take their children to the booth, saying workers should come to their houses to administer the polio drops," reports Mr Shukla.***

There are still a large number of educated people in urban Madhya Pradesh who do not know the meaning of pulse polio. They do not understand the logic behind administering the vaccine simultaneously all over the country to all children from newborns to the age of five - that in fact the programme's success depends on this 'flooding' the intestines of all children with the vaccine virus. And they ask why this should be done repeatedly.

> ***Health workers are often asked questions like: "But we gave our child the drops just last month; why have you come back again?" If they face such questions in cities like Bhopal, one can imagine the level of understanding among the people of Bastar district's Bhopalpattam, the last tehsil town of Madhya Pradesh bordering Andhra Pradesh.***

Surveillance

Beginning in 1997, the National Polio Surveillance Project carries out active monitoring of acute flaccid paralysis (AFP) in order to track down every possible case of polio. All cases of AFP in children up to the age of 15 are supposed to be reported to the surveillance medical officer. Two stool specimens, taken 24 hours apart, are to be sent to a designated testing centre, to see if the AFP is caused by polio. If poliovirus is found in the stool specimen, further tests are done to identify the type of poliovirus. If the virus is not found, but the paralysis persists beyond 60 days, the case is recorded as "confirmed polio", meaning that it has been clinically confirmed.

Out of the 599 cases of acute flaccid paralysis reported in 1999, 492 stool samples were tested, and 80 were confirmed as caused by the poliovirus.

Surveillance has been carried out with sincerity since 1997, says Dr. Chauhan. This can be gauged from the fact that 599 cases of acute flaccid paralysis were detected in 1999 -- up from 414 in 1998. “It is not that the number of cases are increasing, but more AFP cases are being recorded this time,” said a health officer.

> ***Health department officials say health workers in rural areas used to be afraid of reporting AFP cases, fearing action against them. Surveillance improved once the health department sent out the message that workers would not be punished for reporting AFP cases.***

However, many districts of the state have abysmally poor reporting for AFP: compared to the ideal reporting rate of non-polio AFP of 1/100,000 population, 12 districts reported less than 0.5 cases /100,000 – and five of them reported zero cases for every 100,000 population.

“Polio was never on the priority list of the health department,” said a health official. All these years, services concentrated on family planning. Also, since doctors in Madhya Pradesh avoid rural postings, there are a large number of government posts vacant in rural areas, which are serviced by unregistered practitioners and quacks, who may be neither able nor willing to participate in the surveillance effort. In the absence of doctors, lower level health staff are not particularly interested in recording AFP cases.

The gathering momentum in recording and investigating AFP cases in the last two years has entailed efforts to educate health workers involved in the process.

Organisations involved

The polio eradication initiative involves coordination between the state government, voluntary organisations, professional associations and international agencies. UNICEF is providing funds for vaccines, WHO is involved in monitoring, the state government is using its machinery to reach the vaccine to everyone, and Rotary is providing some funds and publicity. NGOs are generally involved in assisting the health department, providing vaccines and maintaining the cold chain. They have also provided some 8,000 of the 10,000 vehicles being used for the programme. (The state government has provided about 2,000 vehicles.)

Workers from CARE, which has a network in parts of rural MP, are also involved in identifying the children in the target group for OPV administration in certain areas. These details are also used to estimate the requirements for vaccine, vaccine carriers, the number and location of booths, and the problems of border districts. The organisation’s director in the state of MP supports other people’s views that the campaign has been well planned and coordinated, and that it went off relatively smoothly.

Dr. Chauhan says that the massive task would not have been possible but for the help of these organisations.

Effect of the polio programme on the health infrastructure and on immunisation programmes

The polio eradication programme has created awareness of among health workers of the polio problem, and the importance of vaccination in general. However, contrary to some people’s expectations, it has not benefited the health infrastructure. “We did not construct new buildings, or purchase machines for the polio programme, so there is no question of the programme resulting in infrastructure development,” says Dr. Chauhan.

He also holds that the campaign has not adversely affected the department’s day-to-day functioning. In the rural areas, routine immunisation is done on Tuesdays. If the NID happens to coincide with an immunisation

day in the state, routine immunisation is shifted to another day. “We just can’t be complacent about routine immunisation,” he says. The health department wants to ensure that the campaign does not confuse routine with pulse immunisation in the people’s minds. “We are very particular in this regard,” says Dr. Chauhan. “Our routine immunisation on Tuesdays must go on.”

Role of the media

The media could have played a vital role in the polio campaign, but it has failed to do so. Reporting on the polio campaign is confined to reproducing official press releases, along with a photograph of a minister - usually the health minister — administering polio drops to some children. Both press releases and photographs are supplied by the polio campaign office. Radio and television coverage is similar.

Health department officials seem more on getting photographs of themselves in the paper or on TV, pushing into the background the lakhs of workers who actually run the campaign. This also reflects poorly on the health department’s own interaction with the print and electronic media. It has not sought to encourage journalists to go out into the field and report on the NIDs.

In this situation, media coverage which is not of the press release variety can sensationalise without factual basis. The result can be damaging to the programme.

For example, there have been at least two newspaper reports of vaccine-related adverse reactions. In one report, a child in Betul district was said to have died immediately after taking the oral polio vaccine. In the same district there were also reports that a number of children developed polio shortly after being administered the drops. The reports were not supported by interviews with health officials or medical personnel. Both reports did severe damage to the campaign.

However, the government’s reply was not much more productive. The health department denied the second incident, describing newspaper reports as “misleading”. It also stated that experts had inquired into the incident and that polio drops could not cause paralysis – which is not true. The oral polio vaccine is the safest vaccine in the world, they said, and there is no case of adverse effect by the OPV anywhere in the world – also not true. The government’s report adds that paralysis following OPV drops can only be coincidental.

The government did not comment on the first report on a vaccine-related death.

Such reports can be misleading and also create an atmosphere of suspicion and panic, particularly in the absence of a prompt and clear response from the government.

The poor quality of the government’s response to such reports is echoed in its reluctance to provide public information to journalists writing on the campaign. Officials associated with the campaign must recognise that their work includes maintaining a link to the print and audiovisual media.

A long battle ahead

The knowledge of such roadblocks in the state’s campaign to eradicate polio from the state should be seen as a challenge. There are indications of the campaign’s success: surveillance data indicate that reporting of suspected polio cases has increased. Some innovative efforts have been made to understand people’s perceptions of the campaign and the reasons for any unwillingness to participate in it. Further reflection and will certainly benefit the programme as it attempts to reach its goal of eradicating polio from the state.