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## **STAMPING OUT POLIO: Millions line up in India**

M.A.J. McKenna / Staff,  
STAMPING OUT POLIO

Editor's note: As the Centers for Disease Control and Prevention works with other organizations to rid the world of polio in 2000, The Atlanta Journal-Constitution will focus special attention on the effort. Watch for staff writer M.A.J. McKenna's special reports on polio eradication in the months to come.

Salim stood out from the queue in front of the tea stall like a sparrow caught in a field of peacocks.

The women of his neighborhood, draped in parrot-green and saffron saris, had crowded their children up the muddy lanes and into the main road of the Nehru Place slum. But Salim's wife had to work Sunday morning; so he had pulled on his Fair Isle sweater and respectable dun-colored trousers and herded his son and two daughters into line with the rest.

He knew it was essential to come, he explained, because people had come to his hut twice to tell him so. Once last week, and again Sunday morning, strangers had rapped on the wooden lintel of his doorway and urged him to bring his children to the booth by the tea stall for the drops that would protect them from disease.

And so Salim, who like many Indians uses only one name, had brought them. Babua, 3, Nisha, 5, and Nicut, almost 6, stepped forward one by one, opening their mouths for two drops of oral polio vaccine.

Three down, 134,999,997 to go.

All over India on Sunday, the same scene was repeated. At hundreds of thousands of booths about 2 million volunteers dripped polio vaccine into children's mouths, recorded their names and their fathers' names, and dabbed their little fingers with violet dye to mark them as immunized.

Today and tomorrow, the same volunteers will fan out across the country, carrying vaccine from house to house in search of children 5 and younger who do not bear the telltale purple stain. By Tuesday evening, they hope to have immunized 135 million children. When they are done, it will be the third time --- in three months --- that India has staged such a campaign.

At the Nehru Place tea stall Sunday morning, Dr. Jeffrey Koplan, director of the Atlanta-based Centers for Disease Control and Prevention, watched the first steps of the mobilization.

"It is an incredible organizational effort," he said. "It's a Normandy invasion-sized operation, taking place a couple of times a year."

Massive though it was, the weekend immunization campaign in India was only one front in a global battle. International health authorities intend to end the transmission of polio by the end of next year. If they are successful, it will be only the second time that mankind has eradicated a disease from the world.

A massive challenge

It is a disease that most Americans have forgotten how to fear. Effective polio vaccines were developed in the United States in 1955 and 1961; since then, fewer than a dozen cases each year have occurred in the country, mostly due to immunizations gone wrong. The last case of wild polio in the Americas was recorded in 1991 in Peru.

But in some parts of the world, polio flourishes. The virus still circulates freely in South Asia and Central Africa. As many as 20 million people are believed to be living with polio's irreversible paralysis; at least 35,000 new cases occur each year. And as long as the virus is present in some parts of the globe, health authorities believe, it threatens the whole world. In 1992 and 1993, Indian polio cases caused infections in Germany, the Netherlands, Norway, Sweden, Malaysia and the Middle East.

To combat polio, an unusual coalition has developed: the World Health Organization, CDC, the U.S. Agency for International Development, UNICEF and the international service organization Rotary International --- with some financial backing from Ted Turner's U.N. Foundation and the William and Melinda Gates Foundation. Working together, they have carved out a strategy that involves several approaches: increasing the percentage of children who receive routine immunizations; improving the data collection that allows experts to track the disease; and boosting vaccine protection in countries' populations by staging the mass events, called National Immunization Days, that aim to reach every child in a country from infancy to age 5.

None of those goals is easy to achieve. The countries where polio remains endemic are among the world's poorest. They lack at least some of the underpinnings of good public health, from basic medical services and reliable population counts to consistent communications and safe drinking water. Many are engaged in civil wars and border conflicts.

India accounts for more than half of the world's remaining polio cases. Its challenges are huge: In some areas, poverty is extreme and sanitation negligible. Its population is about 1 billion --- and each year, 25 million newborn children, vulnerable to polio and a host of other diseases, are added.

#### An aggressive campaign

But India's response has been aggressive. Most of the countries where polio is still endemic stage two national immunization campaigns yearly --- one month apart, so that children will get a double dose of vaccine. (Four doses are considered full protection.)

To accomplish such an ambitious program, the country recruited help from the major players in polio eradication. Working with the government health service, the WHO has set up an intensive system of data collection, the National Polio Surveillance Project, in every administrative district of the country. CDC has sent almost a dozen staff members, most all of whom lived or trained in Atlanta, to India on multiterm assignments.

This fall, it also sent a nine-member STOP (for "Stop Transmission of Polio") team, which spent three months working individually in towns in the two hardest-hit Indian states. (That team included Atlanta volunteers from CDC and a pediatrician from the Republic of Georgia in the former Soviet Union.)

Last week, a CDC group led by Koplan visited India to watch the collaboration in action, a visit that culminated in Sunday's National Immunization Day.

If they needed evidence that polio still poses a problem, team members didn't have to look far. A few hundred yards from where Salim stood with his children, Rama, 26, pushed the hand levers that propelled the battered three-wheeled cart he rides in. His legs, wasted to the size of a toddler's, were curled and propped on the crossbar; he had had polio at 10.

"He has a shop where he sells cigarettes and tea," said Dr. Penkaj Bhatnagar, the surveillance medical officer for the district, translating Rama's words. "He understands that the drops they are giving today are to prevent polio. He will tell people to bring their children for the drops so they will not become like him."

The booths that dotted the brick alleys of the Nehru Place slum, and 4,000 other locations in Delhi --- a city of 10 million people --- were staffed by two or three government employees, drafted for overtime duty by summons delivered to them Friday. Supporting them were an army of volunteers. Sunday morning, almost 3,000 Rotarians had fanned out across the city to deliver vaccine to the booths, carrying the vaccine droppers in over-the-shoulder coolers fitted with four ice packs each. Others had walked through neighborhoods in advance, slinging banners over light poles and knocking on doors.

"Covering 135 million children in one day is a mammoth task, which is why the government has accepted the help of other agencies," said Raman Bhatia, a national organizer for Rotary's Polio Plus campaign. "It is a massive operation."

So many of India's poor are illiterate that advertising the immunization day proved a major challenge.

At the edge of the Qu'tab Minar, a 12th century fort built by Muslim conquerors from the rubble of temples they had destroyed, a "mikee" --- a three-wheeled auto-rickshaw hired by a government official and fitted with a loudspeaker system --- steered through the streets swathed in an advertising banner, belching diesel smoke and broadcasting recorded messages in Hindi.

In Ghaziabad, 15 miles from Delhi in the state of Uttar Pradesh, similar messages brought 70-year-old Dile Singh and his grandchildren out of a collection of yellow concrete houses where cows grazed on garbage and into an immunization tent draped with pink and green banners of demure goddesses.

"Yesterday, there was one vehicle with a loudspeaker," said Dr. Prasad Wainganker, the area's surveillance officer, translating for the old man. "The (children's) father is working, so he brought them."

#### Complete coverage critical

The messages that brought Dile Singh and Salim to the immunization booths are part of a "social mobilization" campaign, in public health parlance. In an effort that requires enormous attention to detail --- the Delhi government began planning Sunday's initiative in May --- social mobilization takes precise tailoring. Messages in Hindi will not reach migrants who speak Bengali; male canvassers may not approach Muslim women.

In one neighborhood Sunday, the technique was not working. Despite appeals broadcast from the minaret of the local mosque, few of the residents of stacked-up slum housing on the banks of the Yamuna River sought immunizations. At a booth near a water tank, only 25 children had received drops by 11 a.m. In a quarter-mile walk downhill to the river, following a rivulet of filthy water and human and animal waste, CDC staff found only one child who showed the identifying purple swipec of dye.

Halfway down the hill, Saira, in her 20s, stood over a muddy cloth that held six fly-covered river fish she was offering for sale. Of the four toddlers around her --- Sulim, Roxana, Punam and Rani --- none had been immunized.

"She says she has work to do," Bhatnagar explained. "And she knows that if she does not go, they will come to her house tomorrow to give drops to the children."

Her response alarmed Dr. Jon Andrus, a CDC employee who has been in Delhi for six years.

"A lot of kids are being missed," he said. "It will be critical tomorrow that teams of vaccinators come in and really sweep this place. This is a very high-risk area; if they miss this and get 100 percent of the rest of Delhi, this will remain a reservoir of polio, and it could spread the infection back into the city."

Organizers had worried in advance that Sunday's immunizations would draw light crowds because it was Ramadan, when observant Muslims take nothing by mouth during daylight.

But in Vijay Nagar, a Muslim settlement of white-washed, blue-decorated mud huts in Ghaziabad, more than 100 children who collected around the CDC observers proudly waved their telltale purple fingertips as proof they had taken the drops.

The crowd of kids grew so thick that Koplan, to draw them off, started an impromptu game of cricket with the village's preteen boys.

In the bus afterward, rumbling back to town through the haze of Delhi's air pollution, he compared the tour to his experience in smallpox eradication, which first drew him to CDC and South Asia 27 years ago.

"In the old days, that would have been a way of improving surveillance," he said. "Because by screwing around like that, I would have attracted a couple of hundred kids, and they know everything that's going on in a village."

Wiping out smallpox holds lessons for eradicating polio, he added: The great public health triumph of this century is informing what should be one of the significant achievements of the next.

"Smallpox showed that countries that have nothing --- that have very few successes to show the world --- can engage in a worldwide, one-of-a-kind undertaking," he said. "That is the major thing for a country like this. When they say, 'We can't do it,' you can say, 'You did do it. And you'll do it again.'"