

# A goddess defied

"Often, before uneducated villagers would agree to submit, the vaccinators would have to jab themselves in front of the entire community, to prove that there was nothing harmful!"

by Arun M. Chacko



Late in May 1975, at the sleepy little eastern border town of Karimganj, Indian smallpox field workers zeroed in on the railway station and successfully isolated a victim of the disease—Saiban Bibi, aged 30, a woman migrant from Bangladesh. That was the last time any of the several thousand people employed by India's Smallpox Eradication Programme had occasion to use their skills.

It had been far from smooth sailing, and at the outset there was a critical shortage of manpower. Mr L. R. Tiwari, a former vaccination inspector who spent 20 years combating smallpox, told me: "Before 1960, Delhi with 2.5 million people had just one vaccination superintendent and 35 vaccinators. (And the capital has always been more fortunate than the rest of the country.) When the Smallpox Pilot Project was started in 1960, staff strength was raised to 37 inspectors and 176 vaccinators. This permitted a door-to-door survey of the entire population, and every individual got his or her primary vaccination."

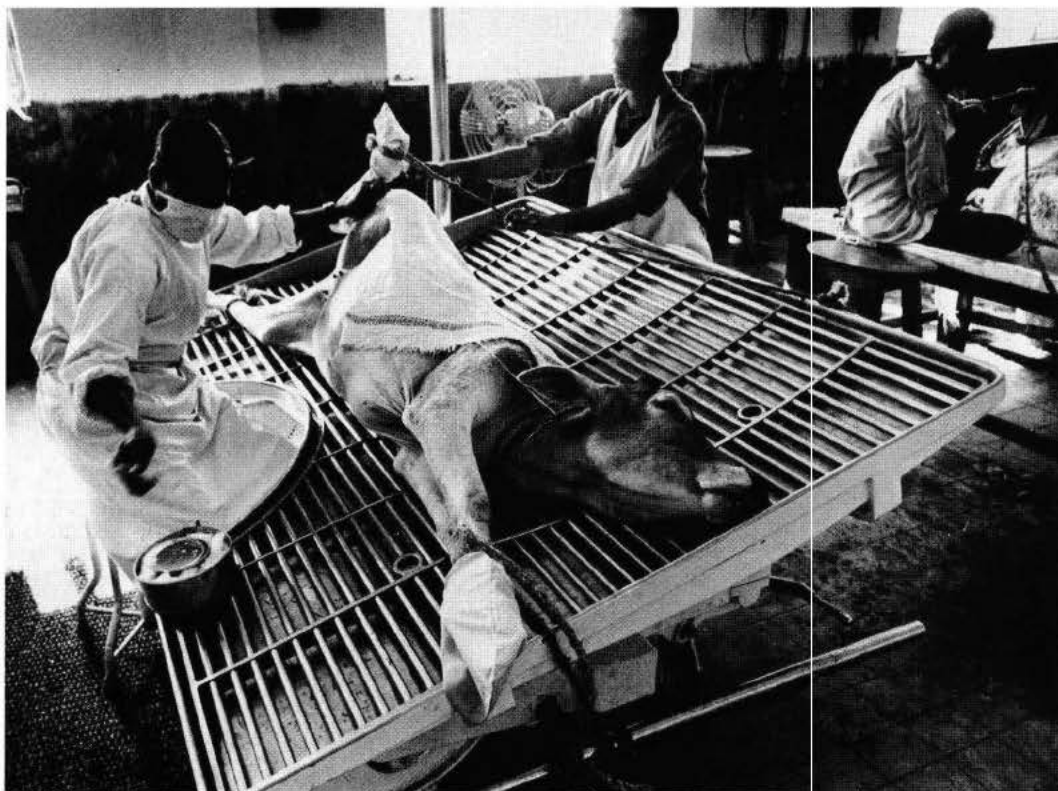
But the primary task was not so much reaching individuals as overcoming ignorance and prejudice. Shitala Mata has for centuries been worshipped as the goddess of smallpox, and temples dedicated to her are dotted around the country. Some devotees believed she spilled

grain from a basket on her head every time she shook it, and each grain turned into a smallpox pustule. Victims survived if she used water from the pitcher in one hand to clean the spilt grain, but did not survive if she used the broom which was in the other. Some people worshipped smallpox cases as being blessed by the goddess. Relatives and friends would come miles to pay homage—and merely succeeded in spreading the infection.

So it was not surprising that many refused to be vaccinated against what was considered to be the goddess's generosity. Another vaccination inspector, Aman Hussain, recalled: "When we first went into the field, people got agitated and soon became violent. The police had to intervene." But that solved few problems.

"The people were agitated about the vaccine, which was believed to come from the cow and was therefore against the Hindu religion", said Mr C. B. Sharma. "Religious groups like the influential business-oriented Jains and the Namdhari Sikhs even started heated campaigns against it. Villagers claimed that their kids died following vaccinations, and undoubtedly some did. However this was because they would rub cow-dung on the fresh vaccination, thus causing tetanus. Or they would immediately suck out the vaccine. But the blame was invariably put on the vaccinator, who received an extremely hostile reception whenever he returned."

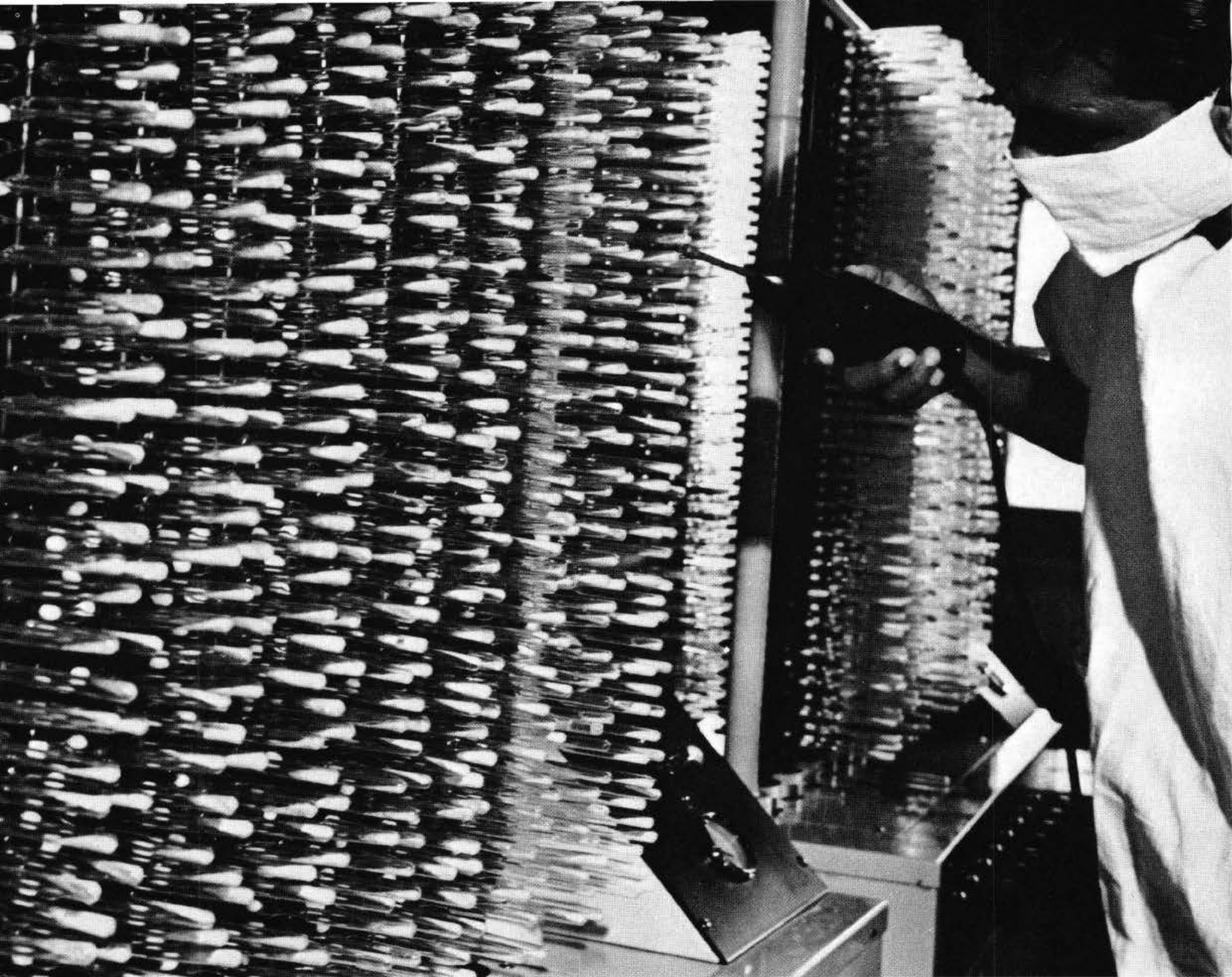
Often the vaccinators would first have to jab themselves in front of the entire community, to prove that there was



Left: So rooted was smallpox in the everyday life of India that the disease had its own goddess, Shitala Mata.

Right: Freeze-dried vaccine being prepared from virus grown on the skin of a living animal—a calf.

(Photos WHO and WHO/J. Mohr)



nothing harmful. Mr Tiwari himself did not complain. But he did remark: "I had to give myself smallpox vaccinations four to five times a year. And every time it worked. We would persuade freshly vaccinated cases to stand around for 15 minutes so the vaccine would dry, and we warned them of the grave consequences of applying cow-dung. When protected kids didn't die in any of the post-1959 smallpox epidemics, opposition to vaccination faded away. There has been no smallpox in those villages and slums for the last 20 years, even though some devotees to Shitala Mata began worshipping the inflamed vaccination scab on the eighth day!"

Over the years, conditions and awareness throughout the country underwent a sea-change. Back in 1958 it would take hours to persuade just one man to take his shot. Field workers would travel miles to track down a case, who might be

*The "bullets" that helped to exterminate a killer disease. Serried ranks of freeze-dried vaccine doses in an Indian laboratory.*

*(Photo WHO)*

carried from village to village just in order to dodge treatment. "Today when we go into the fields, we're welcomed", Dr N. K. Gupta, Delhi's Medical Officer for Communicable Diseases, said with evident satisfaction.

Most crucial to eventual success was the new WHO strategy implemented from 1973. Rather than vaccinate every individual—an impossibility with 650 million people—it was decided to concentrate available resources on areas with smallpox cases. Detection was a critical feature, achieved largely through publicity, with the offer of rewards for anyone finding a sufferer, and house-to-house searches for cases of fever with rash.

"We have now started taking immediate containment measures on the report of any case of infectious disease", Dr Gupta told me. "Patients are removed by flying squad to the Infectious Diseases Hospital, and their homes and surroundings are immediately disinfected. Anyone who came into contact with the case and those living around are given prophylactic immunization. The area is investigated to find out any source of infection or any additional case. We wait and then try to delimit the area in the event of secondary cases."

In the light of long years of experience in the field combating smallpox, what would the field workers do to contain the menace of infectious diseases? They unanimously acclaim the measures spelled out by Dr Gupta—not for the sake of agreeing with a superior, but out of a genuine belief in the superiority of the successful WHO strategy. ■



A última região do mundo afetada pela varíola foi o Continente africano, livre da enfermidade dois anos depois do último caso registrado na Somália. Segundo os cientistas, os últimos casos registrados foi o de um trabalhador de um laboratório de Birmingham, na Inglaterra, que morreu em consequência de um vírus que escapou em 1968. A partir de então, o número de casos de varíola caiu para zero.

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England;

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specialized virus laboratories: in Leningrad, Moscow and at the Center for Disease Control in Atlanta.

## l'antivariolique

es seront renforcées

assembler à la vanne  
tricelle et la vaccine no-  
contre la vanne di  
pourront être dépen

The mass communications media—press, radio and television—lent powerful


... de préjudices, j'en ai eu pour 500 millions de dollars répartis entre les Etats-Uni, la Grande-Bretagne, le Japon, les Pays-Bas et l'URSS.

L'OMS, a mobilisé ce cent millions de dollars en 1951, en pays et plus de 150 000 infirmiers, le malade, la personne en danger de mourir.

de 100 par an.

Mais, le sort de Mme Perle, l'OMS refuse de parler, le patient et le recommander.

CROISSANT\*\* AVEC LES PRIORITES SU PURE, PROGRAMMES D'IMMUNISATION, IMPUTABLES A DES CARENANCES NUTRIT:

 **VARIOLE : récompense de 100 000 F.D.**

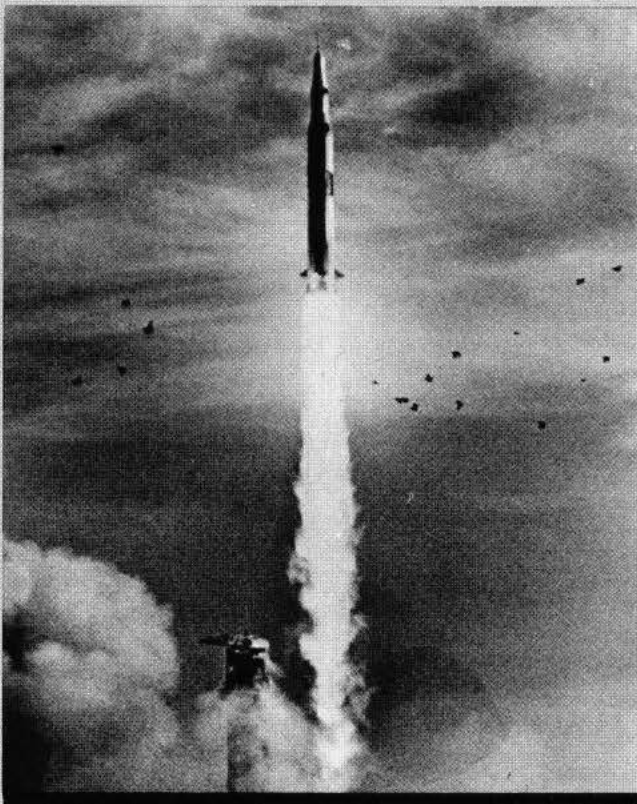
le Doctor's V

# WHO Ready to Declare

**NAIROBI, Kenya (AP)** — It probably killed Pharaoh Ramses V of Egypt 3,000 years ago. But WHO teams have completed intensive surveys in the Horn of Africa region and the four African cook names became the focus of the world's attention. The search for a vaccine that could be a labor-saving device for the world's poor is still in its infancy. The search for a vaccine that could be a labor-saving device for the world's poor is still in its infancy.

and the pustules to subside. English physician Edward Jenner produced a preventative vaccine 180 years ago but there was never a cure.





## HOW MUCH DID IT COST to send a man to the Moon?

Between 1961, when President John Kennedy gave a directive to set a man on the Moon and bring him back "before this decade is over", and the successful landing in August 1969 of two men in the Sea of Tranquillity and their safe return to Earth, the US space agency NASA is estimated to have spent

*US \$24,000 million*

## to wipe out smallpox from the Earth?

Between 1967, when WHO ordered its intensified Smallpox Eradication Programme into action, and 1980, when the Thirty-third World Health Assembly endorsed the final disappearance of this disease from the Earth, the total cost of eradication was

*US \$ 300 million*

## HOW MUCH WILL IT SAVE?

The estimated saving *every year* to all countries when smallpox vaccination is abolished worldwide is

*US \$1,000 million*



## HOW MANY VICTIMS WERE THERE?



In the one year 1967, official health statistic returns showed there were 131,697 cases of smallpox. But the figures showed only a tiny fraction of the real suffering. It is estimated that in that year there were

*over 10 million cases  
of smallpox in the world*



## HOW MANY PEOPLE DIED?

It is estimated that, in 1967, the death toll was

*about two million people*

## HOW MANY PEOPLE WORKED TO SAVE THE WORLD FROM SMALLPOX?



The total number of national staff, in over 40 countries, who worked in the Smallpox Eradication Programme was

*200,000 men and women*

The total number of international staff, from more than 70 countries, was

*about 700 men and women*

## HOW MANY SHOTS OF VACCINE?

Estimated total number of doses of smallpox vaccine used in the global programme:

*2,400 million*

Total produced  
by endemic countries:

*2,000 million*

Total distributed by WHO:

*400 million*

## HOW MANY BIFURCATED NEEDLES?



Between 1967 and 1976 WHO supplied over 40 million needles to the programme. The needle was inspired by the basic sewing machine needle, the loop being ground down to produce the pronged fork. The advent of the bifurcated needle brought major savings in the quantity of vaccine required.

