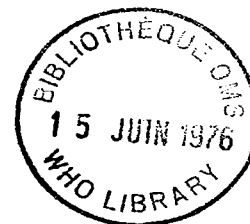




OPERATION SMALLPOX ZERO

by

Dr Z. Jezek<sup>1</sup> and Dr R. N. Basu<sup>2</sup>



INDEXED

In India, the last known case of indigenous smallpox occurred on 17 May 1975 in Pachera village of Katihar District in Bihar. Since then, there has been only one additional case detected, a single importation from Sylhet district of Bangladesh into Karimganj town, the gate to Cachar and to the whole of Assam, on 24 May 1975.

The rapid elimination of smallpox from India (due to the Intensified Anti-Smallpox Drive which began in the autumn of 1973 and achieved its target after only 18 months) has been described by India's Prime Minister, Mrs Indira Gandhi, as an important event and by the Union Health Minister, Dr Karan Singh, as an achievement of which the entire nation can justifiably be proud. The Director-General of the World Health Organization, Dr Halfdan T. Mahler, described it as the greatest achievement in the history of public health - a public health miracle.

In Bangladesh, the last known case of smallpox occurred in Kurulia village, Bhola Island of Barisal District, on 16 October 1975. This was not only the last known case of smallpox on the Asian continent but was also the world's last known case of Variola major.

However, in recent years we have learned lessons from other countries which reached "smallpox-zero" incidence. In Brazil and in Indonesia previously undetected smallpox foci were discovered as long as eight months after reaching zero incidence, evidence that smallpox infection may continue to spread, undetected, somewhere in a country, not only in remote, inaccessible jungle or mountain areas but even close to countries' capitals and sometimes not so far from national smallpox eradication headquarters. This underlines the need for effective and high quality surveillance systems capable of detecting any transmission of smallpox and that this surveillance must be maintained in a constant state of alertness for at least two years after the occurrence of the last known smallpox case in the country.

In the past, the discovery of smallpox outbreaks itself motivated public health workers to find others. As cases became non-existent, health workers have become more complacent and in some areas at block, district and at state levels, medical officers have turned their attention to other problems which increasingly occupy a major part of their time and resources.

"Our greatest danger is now complacency" said Dr D. A. Henderson, Chief of the Global Eradication Programme, and he continued, "we must appreciate the very solemn, awesome responsibility we all share and insure that smallpox is indeed eradicated. We cannot be 90 percent certain, nor even 99.9 per cent certain, we must be 100 per cent sure".

<sup>1</sup> WHO Medical Officer, World Health Organization, Ring Road, New Delhi.

<sup>2</sup> Assistant Director-General of Health Services, Nirman Bhavan, New Delhi.

We must be sure for ourselves and furthermore we must be capable of demonstrating our achievements as well as our effective surveillance system to the National Commission at the end of this year as well as to the International Commission which will visit India in the spring of 1977 to determine if India has met the international certification requirement for eradication.

Operation Smallpox Zero has to consolidate our victory over smallpox and simultaneously maintain effective surveillance activities up to May 1977. As in the past there are several important surveillance techniques and elements which should be continued throughout this period.

1. Periodic active search operations

Active house-to-house searches in rural as well as urban areas throughout all India should be continued. During the early stages of the campaign, active searches were carried out every month. In 1975, after the occurrence of the last known case of smallpox, in most of the states searches were reduced in frequency to every two or three months. In 1976, it is projected to have only three all India active search operations:

an all India Spring Search Campaign in the majority of States and Union Territories from February to April;

a Monsoon Urban Search Campaign with the aim of searching the majority of urban areas of India;

an all India Autumn Search Campaign, after the monsoon period, during which all urban as well as rural areas of the country will be searched.

With so few searches in the entire year it is essential to plan and organize effectively so that all levels of health workers are thoroughly briefed, well-motivated and properly supervised.

2. Surveillance at markets, fairs, festivals, hospitals, outdoor clinics

The field experience gained with "market searches" indicates they are an economical approach to collecting or dispersing health information. Market, fair and festival schedules are regular and predictable, making systematic searches possible with relatively limited resources. In some states and Union Territories market searches have become particularly useful to locate suspected smallpox cases, chickenpox deaths or other cases with fever and rash in between searches.

In each PHC and district health office selected health workers should be detailed full or part-time to "market searches". A proper plan should be outlined in each district health office to make the most efficient use of the market search technique.

3. Special surveillance in selected areas of high risk

All states or Union Territories have geographic areas or population groups which constitute special surveillance problems due to relative inaccessibility of the particular area or the possibility of harbouring unknown smallpox foci. Such specific areas have been identified in recent months and special surveillance activities have to be carried out or maintained. One of these activities, "special searches", may be planned, organized and carried out by State Surveillance teams, district mobile squads and local health staff, particularly in areas such as:

remote areas that may be missed during regular search weeks;  
areas recently affected by smallpox infection;  
border areas or areas which, for various reasons, attract visitors from neighbouring countries;  
areas which are cut off by seasonal changes;  
areas of pilgrimage, melas, fairs and festivals;  
areas where for any reason health staff are absent or no one has previously taken the responsibility;  
areas with beggars and nomads;  
areas having seasonal workers, transient populations, and low socioeconomic groups;  
other vulnerable areas such as coal mines, char areas, refugee camps, construction sites, etc.

4. Continuous surveillance by surveillance teams

The primary objective of surveillance teams such as State Surveillance Teams, Municipal Surveillance Teams and District Mobile Squads is to assist in establishing and maintaining an alert and effective surveillance system in their areas of operation. In particular, they should continue to motivate and stimulate health workers to visit villages and mohallas and at frequent intervals to seek out and report fever cases with rash. Furthermore, they should organize and carry out special searches in risky or remote and inaccessible areas where periodic search operations have not been carried out. They should introduce the proper market search technique and outline plans for market surveillance. Similarly they should stimulate an effective secondary surveillance system covering the whole assigned area and motivate government employees, teachers, block development staff, chowdikars, postmen and panchayat and village officials as well as public service organizations to assist in the surveillance.

5. Continuous routine surveillance by all health staff

In rural as well as urban areas today, there are, among others, many energetic health programmes involving malaria, family planning and leprosy workers who visit each village at frequent intervals and address groups of villagers and discuss health problems with them. Each such health worker must be kept aware that he can enquire for suspected smallpox cases, chickenpox deaths and fever cases with rash with the possibility of earning Rs. 1000 if he detects a case of smallpox.

The State Smallpox Eradication Programme in each state or Union Territory should ensure that each health worker realizes the need for a two year surveillance period, can recognize a smallpox case if he sees it, and knows where to report suspected smallpox cases. Furthermore, each health worker should realize that he must search for suspected smallpox cases or chickenpox deaths throughout the year while carrying out his normal duties and not just during the active search operation period.

6. Fever and rash case/outbreak surveillance

In recent months a new element of surveillance has been developed, "Fever and Rash Cases/Outbreak Surveillance". This new element of surveillance requires that each health worker knows he should report fever cases with rash and where to report them.

The fever and rash, "Smallpox Rumour Registers", must be maintained at every basic reporting unit, i.e. in primary health centres, municipality health offices, hospitals, and in dispensaries functioning as PHCs. Maintaining such registers and recording all cases of fever and rash reported to the unit are basic duties of the person in charge of these units.

Each report should be verified promptly by a responsible and experienced health worker, medical officer or senior health supervisor. Results of this verification should be entered in the register and conveyed by special letter to any member of the general public reporting the fever case with rash, thanking him for rendering a valuable public service.

#### 7. Secondary surveillance system

Field experience has shown that a secondary surveillance system in addition to the primary one based exclusively on health workers, not only increases the chances of detecting suspected smallpox cases and chickenpox deaths and the number of fever and rash outbreaks detected, but also often leads to improvements in the quality of the primary surveillance network too. A secondary surveillance network should utilize government employees, school-teachers, block development staff, panchayat and village officials as well as public service organizations.

In each case a meeting should be held to provide instruction to the persons involved and knowledge about procedures for regular reporting as well as information regarding the reward to an informant if an unknown active smallpox case is discovered.

#### 8. Publicity for the smallpox reward

Rewards for reporting active smallpox cases have greatly improved all forms of surveillance. Wide publicity by wall marking, loudspeakers, radio and television announcements, posters, and newspaper advertisements should be given to make certain that all segments of the population are aware of the reward.

The most effective form of reward publicity remains word of mouth information, usually from the searchers themselves or from other health workers during their rounds.

In urban areas, at markets, fairs, festivals and melas, etc., megamikes are more effective than pamphlets. A carefully organized massive publicity campaign in urban areas is essential several days before a search starts, constantly informing citizens about the search as well as where suspected cases should be reported.

#### 9. Routine notification and regular reporting

The routine notification and regular reporting system is the basic framework of surveillance. In recent years the reporting system was streamlined. A network of reporting levels including basic reporting units such as primary health centres, municipal health offices, hospitals and dispensaries functioning as PHCs have been organized as well as state and central NSEP offices.

The basic notification and reporting unit collects information from the local health staff and sends weekly epidemiological reports as well as monthly summaries of all reports of fever with rash to higher levels. Even "nil" reports are insisted upon.

There are more than 5300 basic reporting units in 381 districts of the country engaged in this work.

For suspect cases of smallpox as well as chickenpox deaths, telegrams should be sent to the Government of India, WHO and the State Programme Office. Routine assessment of reports

received at each level and random checking of registers by surveillance officers at all levels is of singular importance to increase not only speed but accuracy of regular reporting so that data reported reflect exactly the epidemiological situation. Similarly all reports of search findings as well as search assessment reports should be carefully checked and evaluated.

As we have mentioned earlier, the objective of Operation Smallpox Zero is to maintain effective surveillance activities throughout the months remaining to May 1977 and so to consolidate our victory over smallpox. We cannot be satisfied by our present work and we must not be complacent. In coming months one thought will be with us: "it is one thing to be unable to find a smallpox case but quite another to satisfy ourselves and the National as well as International Commission that there is no smallpox spreading in a country so vast as India".

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