

Modified leprosy elimination campaign in Mumbai (Bombay), India—a report

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Summary With appropriate planning and preparation, a modified leprosy elimination campaign (MLEC) was undertaken in Brihan Mumbai (Bombay), which has a population of around 11 million. For the campaign, 4879 non-leprosy paramedical and non-medical personnel were trained and utilized as searchers. The MLEC revealed 1410 new leprosy cases, with a new case detection rate of 1·83/10,000. Over 80% of all cases detected were either single-lesion or paucibacillary (PB), and thus of limited significance with regard to transmission. Further efforts are required to detect and treat cases of consequence (those with more than five lesions and those with positive skin smears) and to identify reservoirs of infection.

Introduction

A Government of India sponsored modified leprosy elimination campaign (MLEC) was undertaken in Maharashtra State during Anti-Leprosy Week (30 January to 5 February 1998). The MLEC was organized with the objectives of:

- mobilizing and training non-leprosy paramedical staff so as to enable them to carry out rapid surveys to detect leprosy.
- screening the entire population in a period of 1 week to detect as many new cases as possible and treat them.
- improving awareness about leprosy in the community to encourage voluntary reporting of new cases.

The MLEC was also organized in Brihan Mumbai (Bombay), a megacity in the State of Maharashtra with a population of over 11 million. This report covers the various tasks undertaken during the preparatory phase and the results of MLEC carried out in Brihan Mumbai during 1998.

For the MLEC, different municipal wards of the city were allocated to seven NGOs, four State Government Units and the Municipal Corporation as Project Areas (Figure 1). The giant

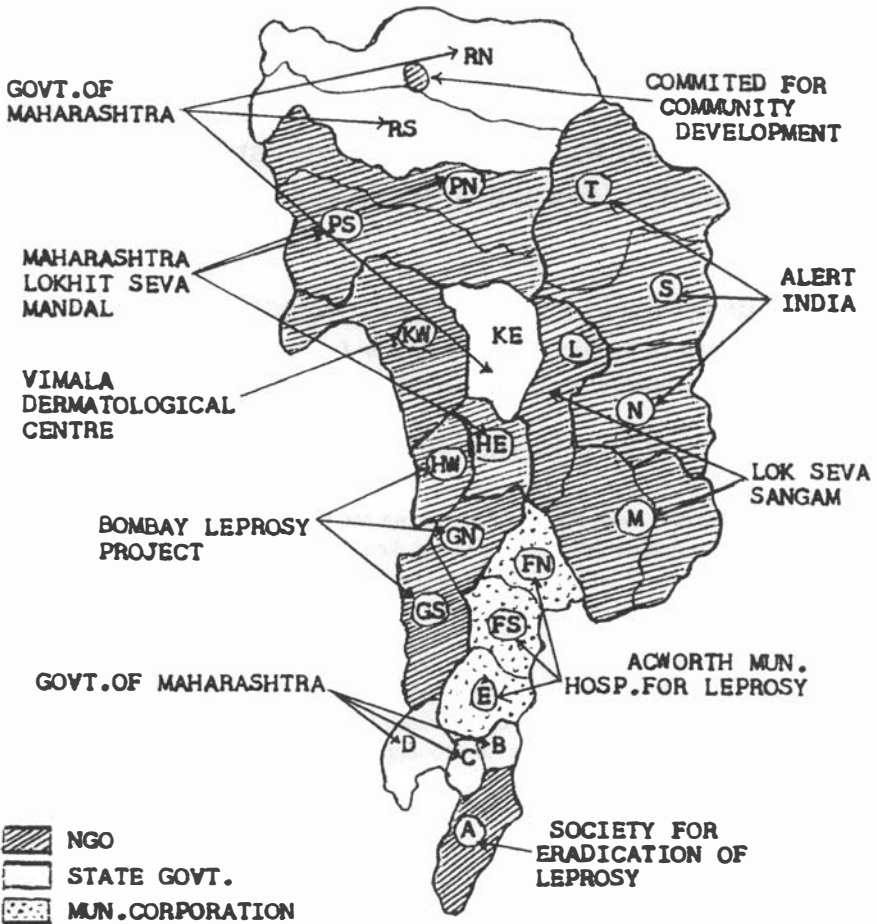


Figure 1. Map of Brihan Mumbai; division of municipal wards among non-government organizations (NGOs), State Government and Municipal Corporation.

task of organizing and implementing MLEC in this vase city was completed successfully through joint, co-ordinated efforts by the 12 anti-leprosy agencies working in the city.

Materials and methods

PILOT PROJECT

To explore the feasibility of mobilizing, training and utilizing non-leprosy paramedical staff for MLEC, a pilot project, carrying out surveys for 3 days at 10 different areas of around 10,000 population each, was undertaken in the city in October 1997. The results can be summarized as follows:

- Community Health Volunteers (CHVs), trained and used 60 pairs
- Population enumerated 104,694
- Population examined 72,962 (69.7%)

- Cases suspected 415
- Cases confirmed 95 (PB, 78; MB, 17)
- New case detection rate 13/10,000

Encouraged by these results, it was considered feasible to undertake the campaign throughout the city.

MANPOWER MOBILIZATION

Considering the vast population to be covered in only 1 week, the following were utilized with the consent of higher authorities:

	<i>Doctors</i>	<i>PMWs/NMS</i>	<i>Volunteers</i>
NLEP staff (Govt, Corporation and NGOs)	24	158	—
Corporation (ward and zonal level)	48	—	3500 (CHVs)
Local community	—	—	1370

The planning and supervision of the campaign was done by the NLEP staff. Corporation doctors supervised during the survey. The actual door-to-door survey was carried out by volunteers, consisting of CHVs, college students and local youths.

HEALTH POSTS

Under the India Population Project V, 176 Health Posts are established in the city to cater for preventive health services to 60,000–80,000 population each. In order to cover the entire population of the city systematically, a Health Post was considered as a Unit. The NLEP field staff were posted at each Health Post to plan and implement MLEC according to population size. Moreover Health Posts also served as nodal sites for training programmes, for health education and for daily reporting and assignment of duties.

TRAINING

The training of NLEP staff, Corporation doctors and searchers was conducted separately in batches.

The training of NLEP doctors and field staff mainly concerned planning and implementation of the campaign at the Health Post level.

Ward and zonal level Corporation doctors were instructed about clinical leprosy and the purpose of the campaign and their role therein.

Two hours of task-orientated training was given to searchers (volunteers) in batches at the Health Post by the respective Medical Officer/NMS in which they were instructed regarding common clinical features of leprosy and the use of 'flash cards', with the main objective of identifying possible leprosy cases. They were also trained regarding the filling in of survey forms and the preparation of a daily report in a fixed format.

INFORMATION, EDUCATION AND COMMUNICATION (IEC)

At the national and state level, publicity for the MLEC was accomplished through mass media, including television and radio.

Each NGO and other organization took up intensive IEC activities in their project areas by putting up banners and posters, distribution of pamphlets and handbills, holding exhibitions, etc. Wide publicity in local newspapers was given by holding press conferences 2 days prior to the start of the campaign.

SURVEY

The actual door-to-door survey was carried out by the searchers, who worked in pairs (male and female volunteers) from about 8 a.m. to 12 noon, so as to cover about 500–600 people each day. During the survey, in every house, the flash cards were shown to ask if anyone had lesions similar to those shown in the pictures. Only the exposed parts were examined.

Day-to-day surveys were planned and supervised by the doctor or senior health staff in their respective Health Post areas. The survey forms, referral slips and reporting formats, supplied by the Government, were used uniformly throughout the city.

The daily reports on the population enumerated and examined and the list of suspected cases were collected from searchers and compiled at each Health Post, further consolidated at the ward level and communicated telephonically to the Control Room, so that the daily report of the MLEC in the city could be ready by 6 p.m. every day.

CONFIRMATION OF CASES

The cases suspected by the searchers were examined in detail by the doctors and senior health staff to see whether they had leprosy. The cases thus confirmed were immediately brought under MDT. The task of confirmation of cases started during the survey and was completed by the end of February. About 10% of the cases confirmed by the NLEP staff were further cross-checked by state level senior doctors.

Results

Details of the population covered and cases detected during the MLEC in 1998 in Brihan Mumbai are summarized in Table 1.

Of the estimated 11,139,577 population of the city, 10,581,703 (95%) were covered during the campaign, of which 7,698,517 (72.7%) could be contacted for examination. The searchers reported 23,249 cases with suspected leprosy lesions, of which only 1410 (6%) could be confirmed as new leprosy cases, thus giving a new case detection rate (NCDR) of 1.83 per 10,000 population.

An analysis of the new cases reveals that 84% had PB leprosy (single lesion 51%, two to five lesions 33%). This exercise also detected 70 (5%) new smear positive cases and 36 (2.5%) cases with grade II deformity.

The new cases detected in the campaign showed unequal distribution, with the NCDR in different municipal wards of the city ranging from 0.6 to 3.3 per 10,000 population.

Discussion

This campaign clearly showed that a vast population could be covered in a period of 1 week by mobilizing adequate staff. The exercise also showed the unique situation in which State

Table 1. Results of modified leprosy elimination campaign (1998) in Mumbai

Name of institute	Population		Cases detected				Total
	Enumerated	Examined	PB		MB		
			Single lesion	Two to five lesions	Positive	Negative	
1. Alert India	1,380,301	955,827	91	33	4	30	158
2. Bombay Leprosy Project	1,798,979	1,440,976	41	44	19	—	104s
3. Maharashtra Lokhit Seva Mandal	1,249,552	883,371	65	70	15	24	174
4. Lok Seva Sangam	1,644,197	1,273,799	222	112	5	23	362
5. Society for Eradication of Leprosy	176,322	146,111	17	8	3	9	37
6. Vimala Dermatological Centre	403,408	290,241	23	9	5	14	51
7. Committed for Community Development	41,929	33,989	14	19	—	6	39
8. Acworth Municipal Hospital for Leprosy	1,200,732	832,091	80	39	7	14	140
9. Supervisory urban leprosy units (I, II, III, IV)—Government	2,686,283	1,840,112	170	130	12	33	345
Total	10,581,703	7,698,517 (72.7%)	723 (51%)	464 (33%)	70 (5%)	153 (11%)	1410

Government and Municipal Corporation staff and NGOs could effectively work together to complete the task in a stipulated period of time, using planned guidelines.

Although only 6% of the suspected cases could ultimately be confirmed as leprosy cases, the campaign has been beneficial in not only detecting 1410 new cases but also in training 4870 volunteers and improving leprosy awareness among millions of people.

It is worth noting that despite many routine surveys having been previously carried out in the city, a significant number of new cases could be detected by the MLEC, indicating that the routine survey activities of the National Leprosy Eradication Programme (NLEP) are probably inadequate for this purpose.

Analysis of the new cases detected again highlights the fact that the present survey methods predominantly detect cases of limited significance with regard to transmission. The reservoirs of infection responsible for disease transmission are still not being dealt with effectively.

The results of the pilot project referred to above in terms of NCDR were found to be higher than those of subsequent MLEC in the city. This is understandable, as only 'hot spots' were selected by each organization in its project area for the pilot project.

The impact of MLEC on subsequent new case reporting in the city and its comparison with the pre-MLEC period will be reported separately.