

Observations from a 'special selective drive' conducted under National Leprosy Elimination Programme in Karjat taluka and Gadchiroli district of Maharashtra

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The special selective drive (SSD) was conducted on a request from the Joint Director of Health Services (Leprosy and TB) Government of Maharashtra. The study team comprised the Foundation for Medical Research (FMR), assisted by a member of the Acworth Leprosy Hospital Society for Research, Rehabilitation and Education in Leprosy and two from Kushtrug Nivaran Samiti (KNS). The drive was conducted in select villages covered by 6 primary health centers (PHCs) in Karjat taluka of Raigad district and 45 PHCs in Gadchiroli district from March to May 2009 and had the cooperation of the district and PHC level staff. The aim was to train and deploy community level workers (CWs) for early leprosy case detection and through them, to create leprosy awareness in the community. A total of 1053 CWs (126 in Karjat taluka, 927 in Gadchiroli district) were given intensive training by the team. The CWs then carried out a one-day house-to-house leprosy awareness drive in their areas and listed persons such 'suspects' in both Karjat taluka (no.= 514) and Gadchiroli district (no.=1325). Around 40% of 'suspects' presented themselves at the PHCs for examination by the medical team; of these 38 (29 %) and 281 (45 %) respectively turned out to be previously undetected definite cases of leprosy. The PHC-wise NCDR ranged from 5 - 27/10,000 in Karjat (14/10,000) and 2 - 35/10,000 in Gadchiroli (average 13/10,000), both rates being much higher than the reported State average of 1.1/ 10,000. There was a high proportion of child cases (14 and 24% respectively) and grade 2 disability (18% and 12% respectively) which indicate continued transmission of leprosy and delayed diagnosis of cases. The study also notes poor diagnostic skills among the PHC staff. Significant shortage and irregular disbursement of MDT from district store PHCs, combined with transport problem which probably contributed to delay in treatment in over 50% of the cases confirmed by the team.

Key words: SSD, Leprosy awareness, Active survey

Introduction

In keeping with WHO global strategy 2006-2010 (WHO 2005) and the eleventh National Plan (Dhillon 2006), the National Leprosy Programme now calls for further reducing the leprosy [in terms of both prevalence rate (PR) and new cases detection rate (NCDR)] providing quality leprosy

services, enhancing disability management and reducing stigma and discrimination through continued advocacy. In order to sustain leprosy services, a shift towards integrated surgical and deformity prevention in addition to provision of basic diagnostic and treatment facilities is being put in place. In the state of Maharashtra between

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2004 and 2007/2008, the PR has dropped from 2.44 to 0.72 per 10,000 and the NCDR from 34 to 11.7 per 1, 00,000 (Dhillon 2006). Special attention to the State's leprosy endemic districts and blocks is regarded as a necessary next step.

In February 2009, on request of Joint Director of Health Services (Leprosy and TB), Maharashtra State; the Foundation for Medical Research (FMR) carried out a special selective rive (SSD) for leprosy in some endemic parts of Maharashtra. The team which comprised of staff of FMR, a member of Acworth Leprosy Hospital Society for Research, Rehabilitation and Education in Leprosy and workers deputed by Kushtrog Nivaran Samiti (Panvel) carried out the SSD in selected villages served by 6 PHCs of Karjat taluka (Raigad district) and 45 PHCs in Gadchiroli district between March and May 2009. The team obtained the cooperation of the concerned district and PHC level staff. The drive was conducted between March and May 2009. The main objectives and strategies of the study were: (i) To train community level workers to detect and deploy them in the community in order to create social awareness. (ii) To promote early case detection and timely treatment through house-to-house campaigning. The sub objectives were : (i) To assess the burden of undetected cases of leprosy in the area under study. (ii) To identify difficulties in their access to leprosy health care supplied by the State.

Materials and Methods

SSD methodology

Considering the time constraint (i.e. activities had to be completed by mid May 2009), it was decided to carry out 3-4 days of active programme in each PHC area using the following action plan:

- I. To meet district level Assistant Director of Health Services (ADHS) and PHC level Medical Officers (MOs) and Health Officers (HOs) to assess the situation.
- II. Train community level workers (viz ASHAs, ANMs and MPWs) from select areas to become leprosy 'detectors' and spokespersons.
- III. House-to-house visits by them in order to enlighten communities and families about

leprosy and to examine and record persons suspected to show signs and symptoms of leprosy.

- IV. Examination of the 'suspect' cases by the medical team, confirmation of leprosy if any, referral to the respective PHCs for treatment and noting of doubtful cases for periodic follow-up.
- V. Field visits by the team to interact with the patients and family members in their homes.
- VI. Interaction with the facilitator's and stake holders to get their view point.
- VII. In each PHC, about 50% of the villages (24-30 villages/padas) were selected using following criteria in order to ensure adequate coverage.

Equal number of villages with:

- I. High (>4/10000) and low (< 1/10000) prevalence rates
- II. High and very low number of MB cases
- III. High and very low rates of child cases
- IV. High rates of grade 2 deformities
- V. Geographically difficult to reach areas

Selection of trainees

From each village, 2 recently appointed community level workers (CWs) were selected for training and deployment for spreading leprosy awareness in the community/families.

Training/orientation of CWs for leprosy awareness campaigning

In each PHC, one day intensive training was imparted to the selected CWs by the master trainers of KNS and FMR using mainly the flip charts. The training protocol covered-basic information about leprosy, how to detect and how to suspect and what are the early signs and symptoms of leprosy. Importance of timely detection and modalities of treatment, complications related to reaction as well as modalities of house to house campaigning.

House-to-house campaigning

Pair of CWs, thus, trained were deployed to undertake one day house-to-house campaigning

in their respective areas to create awareness, identify and record suspects/ problem cases if any in a preset format. Most importantly, motivate / guide all the suspects detected, to report to the PHC clinic on a designated day.

These activities were carried out between 6th to 19th March 2009 at Karjat taluka and between 17th to 31st March, 2009 and 16th April to 12th May, 2009 at Gadchiroli district.

Results

Training and survey

A total of 1053 local community level workers (CWs) including 126 in Karjat taluka and 927 in Gadchiroli district participated in the training programme followed by a one day house-to-house awareness drive and case detection. Total population of Karjat taluka and Gadchiroli district are depicted in Table 1. In the house- to- house survey, number enumerated were 40,614 (37%) and 2,83,639 (32%) and number examined were 27,998 (69%) and 2,27,538 (88%) respectively (Table 2). A large number of provisionally diagnosed leprosy suspects in both Karjat taluka (514) and Gadchiroli district (1325) were recoded. Besides, there were 94 RFT cases including 30 in Karjat and 60 in Gadchiroli district were recorded.

Over all 29 and ~40% of the provisionally diagnosed 'suspects' presented themselves at the PHC's and 38 and 281 previously undetected cases of leprosy were confirmed at Karjat and Gadchiroli respectively. The PHC-wise new case detection rate (NCDR) ranged between 5 to 27 / 10,000 in Karjat and 2 to 35 / 10,000 in Gadchiroli, the average being 14/ 10,000 and 12/ 10,000 respectively (Table 3). Among the newly diagnosed, in Gadchiroli 63% were PB and 38% were MB where as in Karjat, 55% were PB and 45% were MB. Cases with disability grade 1 (DG1)

Table 1 : Demography

Variables	Karjat	Gadchiroli
Total population	1,09,581	8,94,971
Total no. of villages	174	1678
Total no. of PHC's	6	45

SSD activity outcomes

Table 2 : Outcome of training and survey in 2009

Variables	Karjat No. (%)	Gadchiroli No. (%)
No. of CWs personal trained/ engaged	126	927
Total no. of PHCs covered	6	44
Total no. of villages covered	100 (57)	735 (44)
No. of households covered	7669	59807
No. of persons enumerated	40,614 (37)	2,83,639 (32)
No. of persons examined	27,998 (69)	2,27,538 (88)
No. of suspects detected by CWs	514	1325
No. of RFT cases recorded	30	64
No. examined by medical team	143	644

were higher as compared to disability grade 2 (DG2) in both areas. Proportion of cases with type 1 reaction (T1R) was higher in Karjat taluka. Proportion of child cases was higher in Gadchiroli (24%) than Karjat (13%). Among the examined, there were 5 relapse cases and treatment dropouts (Table 4).

Among the newly detected, 45% gave the history of visiting the PHC 2-3 times in the past 1-2 years of which 25% had presented with similar complains but no diagnosis was made. Severe shortage of multi-drug therapy (MDT) supply particularly all over Gadchiroli was the main reason behind the patient drop out.

Discussion

The main focus of the SSD programme was to train and deploy community workers (CWs) workers for spreading leprosy awareness to promote early case detection. It was hoped that this group

Table 3 : Among the cases examined by the medical team

Variables	Karjat No. (%)	Gadchiroli No. (%)
Total no. examined by the medical team	143	644
Confirmed new leprosy cases	38 (29)	281/626 (45)
NCDR/10,000	14	12.34
Under observation	5	43
Others (non leprosy)	87	302
Rx dropouts	5	11
RFT cases	6	4
Relapse cases	2	3

Table 4: Among the newly confirmed leprosy patients

Variables	Karjat No. (%)	Gadchiroli No. (%)
No. of MB cases	17 (45)	103 (38)
No. of PB cases	21 (55)	178 (63)
Proportion of children	13%	24%
Proportion of females	34%	52%
Deformity grade 1	8%	1.4%
Deformity grade 2	18%	12%
Type 1 reaction	8%	0.2%
Type 2 reaction	0	0

MB : Multibacillary, **PB** : Paucibacillary

would continue to provide better quality service and motivate people with leprosy to seek timely treatment in the PHC.

An important outcome of this activity was the detection and registration of a large number of definite cases of leprosy cases in the community. As depicted in Tables (2 and 3), a total of 514 'suspects' listed by the CWs were confirmed as such by the medical team. A few field visits were also undertaken by the medical team for 'spot' evaluation of the 'suspects' identified by the CWs.

By these means, a total of 38 and 281 previously undetected definite cases of leprosy were uncovered at Karjat and Gadchiroli respectively and 2 to 35/10,000 in Gadchiroli (results not shown), the average being 14/10,000 and 13/10,000 respectively which are much higher than the state average of 1.1/ 10,000. Large number of child cases (14 and 24%) indicate continued transmission of leprosy in the community and 8% and 12% patients were found with grade 2 deformity indicate delay in diagnosis. Enquiry with the patients and health staff at PHCs brought out several problems pertaining to delivery of leprosy services (results not shown).

Among the newly diagnosed, 45% gave the history of visiting the PHC 2-3 times in the past 1-2 years of which 25% had presented with similar complains but no diagnosis was made. One of the reasons seems to be misplaced clinical diagnosis, i.e. "depigmented patch with total loss of sensation". Lesions with partial loss were kept on hold, thus, causing delay in diagnosis. Patients with neural leprosy and nerve anesthesia were also largely missed out. In the remaining 20%, the diagnosis was probably made but the treatment was not initiated due to non-availability of MDT.

Another interesting finding was reaction T1R, T2R and neuritis were uncommon particularly in Gadchiroli and going by the history in majority of cases nerve damage seems to have progressed silently with no evidence of reaction and/or neuritis. One of the most disturbing finding was the severe shortage of MDT supply particularly all over Gadchiroli. All the treatment dropout patients examined by us gave the history of non-availability of drug as reason for discontinuing their treatment. Another compulsive reason for not registering as patient also seemed to be; 'to keep the PR and NCDR low' (as is quoted by some of the staff). All the PHCs had good infrastructure, adequate facility and staff but poor accountability, supervision and several road blocks that hindered access to health care. A large proportion of cases presenting with silently progressing nerve damage, indeterminate lesions

and diffused lepromatous lesions were missed by the MOs due to poor practical experience and capability to diagnose leprosy compounded by lack of interest. Several chronic skin ailments associated with poor hygiene were very common and were seen as co-infection with leprosy. Commuting seemed to be a big problem with patients as well as community volunteers. Even though PHCs are centrally located the commuting distance from the village to the nearest PHC was 5-20 km. ST buses seemed to operate 2-3 fixed times in the morning and evening. Other modes of transport were only auto's and bicycle. It was noted that generally people were ready to accept diagnosis and treatment but main problem was commuting compounded by non-availability of drugs in all the PHCs, Gadchiroli in particular. Many patients also expressed poor faith in the system. It is understandable that leprosy is a low priority list as compared to malaria, TB and other water borne diseases. However, low priority should not mean total neglect.

Drawbacks of the program

One of the drawback of the current SSD program is among the provisionally diagnosed only 127 (28%) at Karjat and 644 (43%) at Gadchiroli presented themselves for examination at their respective PHCs during this study. One of the reasons for a very low turn out at Karjat in particular being, it was examination time for the children and thus, mothers also remained occupied. Secondly, how many of provisionally diagnosed patients sought treatment subsequently at the PHC has not been verified by us.

Conclusion

There is a large backlog of undetected patients in communities in endemic areas of rural Maharashtra. There are also problems in patient's access to and patronage of health care supplied by the State. These are consistent with our earlier study findings carried out in a defined rural and urban area of Maharashtra (Shetty et al 2009). Our suggestions for the betterment of leprosy

care and control are : (i) Do not neglect leprosy (ii) Be more responsive to the needs of the patients (iii) Ensure regular and adequate supply of drugs (iv) Ensure capacity building among the PHC staff and (v) Enforce accountability through stricter supervision by superior officers.

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