Leprosy Case Detection Through Community Volunteers—a Low Cost Strategy

TO THE EDITOR:

The high cost of case detection by engaging a trained salaried class of workers in the declining phase of leprosy endemicity is causing concern to nongovernmental organizations (NGOs) which depend solely upon raising funds from the public. If the donors' money is to be used in a cost-effective manner, field experiments on cost management in relation to case detection are urgently needed.

We designed a field study to calculate the cost per case detected, especially skin-smear-positive cases, utilizing volunteers derived from slum communities in Bombay, India. The study was undertaken in three municipal wards, namely, H East, G North and G South. Trained paramedical workers recruited the youths, both male and female, living in the local slums. Some leprosy patients also formed a part of the team which consisted of 15 volunteers (Fig. 1). The volunteers were oriented in suspecting leprosy by using a "Suspect Card." These community volunteers (CVs) were paid Rupees 30 (US$0.66) for 4 hours of fieldwork. Additional incentives were given if the suspected cases were confirmed as definite leprosy patients by the field supervisors. Ru-

FIG. 1. A group of community volunteers participating in case detection in the slums of a western suburb of Bombay, India.

FIG. 2. A slum dweller examining a suspected case (a migrant from Bihar) with minimal clinical signs who was later found to be smear positive (BI 2.5+).

pees 20 (US$0.44), 15 (US$0.33), 10 (US$0.23) and 5 (US$0.11) were paid for one skin-smear positive, one smear-negative multibacillary (MB; >5 lesions), one paucibacillary (PB; 2–5 lesions) case and one single skin lesion-paucibacillary (SSL-PB) leprosy patient, respectively (1US$ = 45 Indian Rupees).

A total of 23 cases were identified by rapid screening of 78,705 slum dwellers by 15 CVs within a period of 31 days. The regular staff detected the remaining 10 during their field supervisory operations. This gave an overall detection rate of 42/100,000 population. The volunteers alone detected 29 cases per 100,000 population. This rate of detection is more or less comparable to the case detection rate of 56 in India ([1]) and 66 per 100,000 population in Maharashtra State, India ([2]). Two cases out of 33 were found to be skin-smear positive and were identified by these volunteers in G South ward, believed to be a low endemic area (Fig. 2). Out of these two, one had relapsed after dapsone monotherapy; the other one is an untreated borderline lepromatous case recently migrated from Bihar.

The mean cost per case detection is Rupees 879 (US$20); per skin-smear-positive case, Rupees 14,500 (US$322). In an earlier study undertaken by us in 1996, trained and salaried paramedical workers examined 161,800 slums dwellers within a period of 42 days, and 76 patients (3 MB and 73 PB) were identified. The detection rate was 47 per 100,000 population. The total cost of detection of three skin-smear-positive cases in 1996 was Indian Rupees 31,666 (US$880) ([3]). The cost of detection of one patient with leprosy in some parts of Cambodia was as high as Rupees 4320 (US$120)([4]).

The costs reported in this study may vary from region to region. Even in this megacity, there are areas of relatively lower endemicity where the detection rates are less. We advocate such innovative methods for NGOs to sustain their leprosy work. Whether governments can adopt these methods as part of their normal activities remains to be seen, although during the MLEC (Modified Leprosy Elimination Campaign) the involvement of the community for case detection as a short-term policy was accepted.

THE TABLE. *Ward-wise leprosy case detection rate.*

Area	Enumeration	Examination	New cases			Total	Detection rate per 100,000
			SSL-PB	PB (2–5 lesions)	MB (>5 lesions)		
H East	47,212	28,435	17	5	1	23	81
G North	45,543	34,486	4	1	2	7	20
G South	21,109	15,784	—	1	2	3	19
Total	113,864	78,705[a]	21	7	5	33[b]	42

[a] Examination rate 69%.

[b] Of these, 23 were actually identified by the volunteers; the rest were detected by the supervisory staff.

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