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Original Research Article

**Achieving Integration through Leprosy Case Detection Campaign (LCDC)**Giri VC<sup>\*1</sup>, Bhagat VM<sup>2</sup>, Baviskar SR<sup>3</sup> and Showkath Ali MK<sup>4</sup><sup>1</sup>Deputy Director, <sup>2&3</sup>Assistant Director, <sup>4</sup>Director, CLTRI Central Leprosy Teaching and Research Institute (CLTRI), Directorate General of Health Services, Ministry of Health and Family Welfare (MOHFW), Government of India, Chengalpattu-603001, Tamil Nadu, India

## QR Code

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DtGHS, MOHFW, Govt of India, Chengalpattu-603001 Tamil Nadu, India**\*Article History:****Received:** 05/01/2017**Revised:** 24/01/2017**Accepted:** 02/02/2017**DOI:** <https://dx.doi.org/10.7439/ijbr.v8i1.3832>**Abstract**

Leprosy is chronic infectious disease, mainly affects skin and peripheral nerve, caused by *Mycobacterium Leprae*. In India, 58% of global new leprosy cases were detected annually. Due to the passive case detection, large numbers of cases are hidden in the community, leading to more deformity. After integration of National Leprosy Eradication Programme (NLEP) in to General Health Care, the involvement was not satisfactory. Leprosy Case Detection Campaign (LCDC) is a novel concept launched by Central Leprosy Division, Directorate General of Health Services, Govt of India, in fifty districts of seven states having Prevalence Rate 1 to 1.32/ 10,000 populations. This House to House, case search activity conducted by Accredited Social Health Activists and Male Volunteer, on line of Pulse Polio Campaign. Pre-activity meeting of all stake holder at state, district and block level were conducted. Training of Medical Officers and Supervisors were conducted at district level. ASHAs and male volunteers were conducted at block level by Medical officers. The programme has in build mechanism monitoring at District, Block and Primary Health Center level to insure maximum participation and desire outcome. Five districts of Maharashtra around 8340940 people visited by LCDC teams and found 8553 suspects. On examination of suspects by Medical Officers 166 (101 Multi bacillary, 65 Paucibacillary) new Leprosy cases were identified in this campaign. The campaign was mainly able to emphasis importance of active case search in leprosy and awareness in general population through focused Information Education Communication.

**Keywords:** Multi bacillary, Paucibacillary Leprosy Case Detection Campaign, Active case search, Maharashtra.**1.Introduction**

Leprosy (Hansen's disease) is a chronic infectious disease caused by bacteria called *Mycobacterium Leprae*. It is a disease of public health concern mainly because of its potential to cause disability in a small proportion of those affected and is a cause for social stigma and discrimination [1]. Early diagnosis and complete treatment with Multi Drug Therapy (MDT) remain the key strategies for reducing disease burden due to leprosy. The dual effect of early detection of cases in breaking the chain of transmission and reduction of grade II disabilities in a given community is highlighted in the enhanced global leprosy strategy(2011-2015) for further reducing the disease burden due to

leprosy[2]. South East Asia Region accounted for 72% of global new leprosy case load. In the year 2015, as per WHO epidemiological report, out of 2,28,474 global new leprosy cases reported from 105 countries 1,27,295 cases were reported from India. Thus India contributed about 58% of new cases reported globally [3].

Leprosy Case Detection Campaign (LCDC) is launched by Central Leprosy Division, DGHS, Ministry of Health Family Welfare, Government of India, in 50 high endemic districts of 7 states, present study conducted with objective to assess the outcome intervention in Maharashtra.

## 2. Methodology

### 2.1 About LCDC

Leprosy Case Detection Campaign was implemented by Central Leprosy Division (CLD) in fifty high endemic districts of seven states with following objectives 1) to detect the hidden leprosy cases and detect them early so as to stop the community transmission of disease. 2) Need to involve the Stake holder. Still medical officers are not doing confirmation and suspecting the case, as it most relies on vertical set up people who have opted for General Health Care and some contractual staff who were posted in high endemic district during 12<sup>th</sup> Five Year Plan. 2. Hidden Case Detection. 3. Improving Case Detection with the help of Accredited Social Health Activist (ASHA).

The campaign was based on house to house visit by ASHA and male volunteer, examination of house hold members and detects the suspect. The suspects detected by team confirmed by Medical Officers along with in-built mechanism of supervision and monitoring.

The operational guideline was finalized at Central Leprosy Teaching and Research Institute, Chengalpattu (T.N), in National level workshop by involvement of all Programme stake holders. State level workshop and coordination was conducted by involving the district and block officers in preparation of micro-planning, financial, human resource and IEC strategy [4].

The district level meeting was chaired by District Magistrate/ Chief Executive Officer involving the officer from General Health Care Staff and representatives from coordinating departments. The timeline for activity and job responsibility for workers/ officers was demarcated clearly along problem solving mechanism at each level. Special instructions were given to strengthen the pre and during activity IEC to yield well result of activity. District level training was conducted for Medical Officers and Health Supervisors to brief about activity and involving them micro-planning and supervision. The In-charge Medical Officers have conducted training of ASHAs along with Primary Health Centre staff to ensure optimum participation in the activity. During the training, micro-planning of activity was done so as to ensure that at least 20 houses to be covered by the team in day. The team consisted of ASHA and Male Volunteer (preferably selected by ASHA). The male and female team member has ensured maximum participation during house to house survey and physical examination by team member. During Micro-planning worker was advised to utilize Intensive Pulse Polio Immunization (IPPI) Microplan, which will help for better coverage for house to house activity. The team member has enquired about signs and symptoms and physical examination of family member, followed by recording in

tally sheet and house marking on door of house. If all members are available for examination that house will marked as L/Date and if some family member are not available or house was locked, this house will be marked as X/Date. The team members will revisit 'X' house and do examination of remaining family members, convert that house to 'L' house to get maximum examination. The Health workers from Primary Health Center were first level supervisors. The district levels officers were the part of second level monitoring. The suspected cases during campaign were listed and confirmed by trained Medical Officers. The case, which need further investigation referred to District Nucleus Team or Tertiary Care Hospital [4-5].

### 2.2 Study Setting

The state of Maharashtra has an area of 307,713 sq.km and population of 96.88 million. There are 37 districts, 358 blocks and 43711 villages. The state population density is 314 per sq. km [6]. The Maharashtra is having 9.23% of Country population and detected around 12.82% of new leprosy cases in 2014-15 as per NLEP Records. As per operational guideline the district having prevalence rate between 1 to 1.32/ 10,000 population, was considered for Leprosy Case Detection Campaign, five districts of Maharashtra namely Amaravati, Washim, Yavatmal, Nagpur and Nashik[4].

### 2.3 Study Design

Prospective study with LCDC intervention house to house case search by ASHA and Male volunteer. As this intervention as part of National Leprosy Eradication programme, the intervention mainly divided in three levels Pre-activity preparation, during activity monitoring and post activity verification by visiting various levels. The pre-activity consist of training, microplan preparation and Meeting at District, Block, PHC wise.

**2.4 Study Period:** February 2016 to April 2016

### 2.5 Study Tool

This presently involved the campaign Intervention. Hence this study consists of assessment of pre-activity preparation by desk review, interview of stake holders, observations of workshop or training programme and Micro-plan Preparation. The microplan consist of Total team allocation that area, logistic required, plan for covering high risk population, day wise plan of team for house to house case search. During activities of visiting to house to house activity, interview of team members and observing the supervision done by first and second level supervisors. Interview of suspected cases and the family members were taken. After these activities interview of Medical Officer involved in case confirmation, participation in meeting of supervisors and also validating field and house activity with help of house marking and interview of house hold was

undertaken by verifying the tally sheet with the home visit and beneficiaries' interview

### 3. Observations and Results

#### 3.1 Quantitative finding in LCDC

Table No. 01: shows the details of new leprosy case detection in five districts of Maharashtra. In entire five districts the LCDC team members visited 1244537 households and examined 8340940 peoples. During the house visits 49,049 'X' houses were generated by the team, of which during the revisit by the team 22,223 houses were converted to 'L' houses after examination 'X' to 'L' conversion was 45.3%. 8553 people suspected by the teams confirmed by Medical Officers leading to total of 166 new leprosy cases. Out of 166 new leprosy cases 101(60.8%) were Multi-Bacillary (MB) and 65(39.2%) were Pauci-Bacillary (PB). The percentage of confirmed cases in relation to suspect was 1.94. This percentage was highest (4.37%) in Washim district, which highlights the quality of activity in the district. Out of 166 new cases detected in campaign, only 02(1.2%) cases were with grade-2 deformity. The child cases amongst newly detected cases were 06(4.3%).

#### 3.2 Qualitative finding in LCDC

Leprosy Case Detection Dynamics in Districts: The majority of cases are being detected by vertical staff (Non Medical Supervisor / Non Medical Assistant / Leprosy Technician / Para Medical Worker) or by Contractual NLEP staff. Some of Medical Officers are not well skilled for case diagnosis or confirmation or defaulter retrieval. The majority cases reporting to tertiary care / teaching hospitals are diagnosed and not being properly followed up. Contractual staff playing important role in screening and particularly retired vertical staffs who works now on contract basis

#### 3.3 Impact of LCDC

Leprosy problem extent was sensitized in District administration and Coordinating departments. Attempt to transfer ownership to General Health care staff through LCDC. Capacity building of Primary Health Care staff in case detection and NLEP. Urban area where ASHA are not available team prepared with help many volunteers like Medical, Nursing, Pharmacy students were helpful for programme. Large numbers of suspect were identified by team during house to house activity followed by confirmation from Medical Officers and validated by District Nucleus Team. IEC activity will help to increase awareness about the leprosy and services provided.

**Table 1: Details Suspects and Confirmed leprosy cases in Leprosy Case Detection (Five Districts)**

District	Population Covered	Suspected cases	New Cases Detected			Percentage of confirmed cases (in respect of suspects)	Disability amongst new cases detected		Child cases amongst new cases detected		
			MB	PB	Total		Gr-I	Gr-II	PB	MB	Total
Nagpur	1227443	961	12	19	31	3.23	0	0	0	0	0
Amravati	2236219	2522	22	17	39	1.55	2	1	1	2	3
Washim	928206	595	21	5	26	4.37	0	0	0	0	0
Nashik	2282913	3060	33	12	45	1.47	2	1	0	1	1
Yavatmal	1666159	1415	13	12	25	1.77	0	0	2	0	2
<b>TOTAL</b>	<b>8340940</b>	<b>8553</b>	<b>101</b>	<b>65</b>	<b>166</b>	<b>1.94</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>6</b>

**MB: Multi-Bacillary, PB: Pauci-Bacillary, Gr-I: Grade I Deformity, Gr-II: Grade II Deformity**

### 4. Discussion

In the year 1955, leprosy programme started as National Leprosy Control Programme and then was converted in 1983 as National Leprosy Eradication Programme after the introduction of MDT and the Resolution passed in World Health Assembly. India plays crucial role in leprosy eradication as it contributes about 58.8% of newly detected cases [3]. In leprosy, patient doesn't play the sick role so it is very important for the health system to reach every individual for early case detection which will enable reduce Grade II deformity.

In the year 1998, Modified Leprosy Elimination Campaign (MLEC) was launched with the objective of case detection through campaign mode. This campaign

implemented in five rounds was able to detect the huge number of leprosy cases more than the routine case detection in entire year. This proves that in Indian set-up, where some issues are more addressed in campaign mode we will be able to curtail the chain of transmission [7].

In the year 2005, leprosy services have been integrated with General Health Care services but in the last few years this integration was not able detect the desired numbers of new leprosy cases because of the passive mode of case detection leading to large amount of hidden cases in the community [8]. The LCDC is an attempt on pilot basis to involve the general health care staff in NLEP along case suspecting by house to house survey method by utilizing ASHA and Male Volunteer. Previously main emphasis was given on passive mode of case detection. The present

approach of LCDC mainly creates awareness in general population through intensive IEC and is also able to understand the importance of leprosy case detection amongst general health care staff. The house to house activity is being done by ASHA and male volunteer who are part of same community and so it helped for more cooperation from the community.

## 5. Conclusion

In India, Leprosy case detection activities were mainly through passive mode, which lead to more undetected cases in the community and lesser involvement of General Health Care staff. LCDC was an attempt in seven states( of which Maharashtra was one) to involve the General Health Care staff in leprosy case detection through active case detection by using ASHA for House to House survey method. After this LCDC-1 Govt of India, planned to replicate same in the 163 Districts of 20 States/Union Territory with 40 crore target population.

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**Conflict of Interest:** Author declare no conflict of interest.

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