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CASE DETECTION TARGETED

Leprosy is a disease that has caused untold suffering, dented human dignity and puzzled the pursuers of its myriad mysteries. There are more questions than answers, less elucidation than exasperation, more explanation than factual evidence. Sometimes, human intervention tends to exacerbate the mystery and confound our understanding. The trend of case detection is a case in point.

Case detection trends in leprosy are affected by endogenous and exogenous factors, the former related to the agent (M.leprae) and the host (human beings) and the latter related to external environment. Apparently, reduction in the virulence and pathogenicity of the organism leads to less number of people getting infected and diseased. Improvement in the socioeconomic condition of the population may mean less exposure and more innate resistance to the organism. While the contribution of endogenous factor is difficult to measure it is believed to have had a major influence on the decline and ultimate disappearance of leprosy in the Western Europe. What we are interested in is the multitude of external operational factors that have contributed significantly to influencing the trend of disease in leprosy-endemic countries, especially India. Our particular interest is in targets.

Leprosy control programme in India has evolved through three important phases: dapsone monotherapy, MDT and Elimination-Integration. Complex disease with complicated problems meant intricate solutions and elaborate procedures. Since leprosy is associated with social stigma there is often a tendency among the people affected by the disease to hide or delay reporting to health facilities. To circumvent this several ways were devised to catch people with the disease and treat them. The programme introduced several methods of active search for leprosy cases in the community. Targets were given to cover the population through various surveys. Thousands of leprosy workers went round detecting millions of leprosy cases every year. There was little or no involvement of general health workers. Even the vertical infrastructure introduced to deal with the disease was inadequate resulting in service coverage that was not far enough. Dapsone monotherapy as a technology was not efficacious enough to deal with the multitude of cases being detected. The result was that there was little impact on new case detection. Then came MDT. With it came the avalanche of new ideas, many of them focused on case detection. There was no coincidence of infrastructure with high robust technology. Geographic coverage remained very poor. Active case detection and treatment of cases at Drug Delivery points isolated the programme from the mainstream Public health strategum. Targets for case detection were set at every level. Workers resorted to various methods to unearth cases. Since the intention was to detect cases 'early' one

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ended up with a large number of benign cases. There was no systematic method of validating the cases detected by the workers. Almost two-thirds of cases detected were through various surveys and the rest were those who reported voluntarily to service points. It is interesting to note that while 80% of the cases detected by surveys were PB, only 20% of the cases reporting voluntarily were PB. Complex disease meant complicated procedures which justified the introduction of leprosy-only workers. Each worker was given a target for new cases. The performance of the programme was measured against targets for case detection. Every year targets were hiked. Majority of the workers and states could easily achieve the targets. In fact one look at the target achievement statistics told the simple story of how easy it was for the states to realize the ever-rising targets set for them. Those experienced with public health programmes know very well that you cannot set a target that the programme cannot achieve. No target is too difficult to achieve. The general opinion among experts is that one should not set a target in a programme without any back up validation mechanism. It was common to see some states achieving 250% of case detection target! Sample survey assessment units, established one for each state, could not offer much help. They in fact succeeded in encouraging the programme to revise the targets and provoking the staff to redouble their effort at case detection. While thousands of cases were being detected in the Southern states by vertical workers majority of the states in the north lagged behind because of paucity of vertical infrastructure. Vertical staff were recruited in these states on contract basis. More rigid targets were set for these workers. There was further increase in case detection. It was realized that the only way of reaching complete coverage of the population with MDT service was through integration of leprosy control into general health service. This would enable people to have easy access to service. Procedures for diagnosis, treatment, recording and reporting were simplified. By way of preparing the general health system a massive case detection campaign after training of the general health staff and intense publicity led to further increase in case detection. In the name of strengthening the participation of general health and also improving coverage MLEC was repeated four times. Newly trained staff are likely to make mistakes. You don't need an expert to tell you that. Validation mechanism introduced in the system revealed that 30% of the new cases detected were not cases. When you simplify procedure the result would be an increase in sensitivity with a corresponding decline in specificity. It was realized too late that active case detection resulted in inflating the number of new cases and it was compounded by target for case detection. All surveys were stopped and target for case detection was thankfully discontinued. It was realized that these were standing in the way of the country achieving the milestone of elimination.

Available trends indicate that the country will achieve elimination target by the end of the year. There is no doubt that the programme could achieve high cure rates by introducing flexibility in MDT delivery. Considerable reduction in prevalence was achieved because of this. Further reduction in prevalence could be achieved only by reducing new case detection. The year 2004-2005 saw almost 40% reduction in new cases. This was due to several factors like cessation of active case detection, dispensing with giving targets for new cases, improved competence of the general health staff in managing leprosy and effective monitoring. One should be happy with the achievements. We are happy but we are not satisfied! What do we do?

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We bring the targets back. Every state and every district is prevailed upon to look at elimination as a desirable and achievable target. One can achieve this only by reducing the number of new cases by resorting to several measures. In a recent guideline published and circulated to the states there is clear indication of the destination to be reached by March 2006. Targets are set for the country for reducing new cases to less than 25 per 100000 population, increasing the MB proportion to 45%, reducing the disability proportion to 1.1% and increasing the female proportion to 44%. The states are advised to prepare their strategy based on the guidelines. There is little scientific rationale for setting these targets. This will put a lot of pressure on the workers and the programme officers at various levels. One may not be surprised if workers resort to unsavoury practices to realize the targets. One need not be guided by these measures to reduce new cases. With cessation of surveys and improvement in diagnostic competence through regular orientation training of GH staff there will certainly be reduction in new cases. At this juncture we need a good surveillance system to keep watch on the trend of the disease and suggest immediate corrective action whenever needed. We need to identify sentinel centers in each zone to systematically collect validated data, analyse and inform programme officers about problems so as to enable them to institute focused action and rectify the situation immediately. We have had enough of targets. They have already caused enough damage to the programme. For the health of the programme let us dispense with them. What is required is not target but targeted action.

The system, warts & all, works after all ...

CASE HISTORY I

Mr. Sepang (Name changed) from Nepal came to Nellore and is working as watchman. He noticed a skin patch on the back of right hand three years back. He did not seek treatment for this because as he admitted "there was no problem". He developed pain in the elbow region ten months back. He was not able to pick food and button his shirt. Still he did not seek any treatment. He had similar pain in Oct 04. He consulted a neurologist. He was diagnosed as leprosy with neuritis and MDT PB regimen was given. He completed treatment for five months but weakness remained. He consulted a dermatologist who referred him to DFIT center in Nellore Town.

On examination, he had a large vague hypopigmented anaesthetic patch with illdefined margin over dorsum of right hand extending to forearm. Right ulnar nerve was markedly thickened throughout its palpable course. There was a localised swelling of the nerve near the elbow. The nerve was not tender. There was ulnar weakness in the right hand. Prednisolone was started 40 mg per day in single dose. Posterior slab was provided for restricting movement at elbow. Active exercise (fingers) was advised.

Comments: The practitioner rightly diagnosed as Leprosy with neuritis. MDT-PB regimen was started. Steroid therapy was not initiated. Prednisolone at early stage would have been much more helpful.

CASE HISTORY II

Mr.Krishnamurthy – 57 years old is a weaver in Dindigul town. He belongs to an orthodox Hindu family. He had nodules in his body for two years but he did not bother much about as it did not give him trouble. Slowly the lesions spread all over the body. He consulted a private doctor, a paediatrician, who prescribed treatment for "allergy". The nodules did not subside. He thought that the disease might be due to the curse of God. He consulted some traditional faith healers. He visited many temples and churches – the condition deteriorated and the nodules ulcerated. He again visited the paediatrician whom he had consulted earlier. He referred him to a dermatologist. Dr. Kaleeswaran, who suspected leprosy, referred the case to PSLP, Dindigul for confirmation. Slit skin smear examination showed that he was positive and the BI was 6+. The hospital confirmed the diagnosis, started treatment (MB MDT) and referred him to Municipal health centre, Dindigul for further treatment. Now patient is on MB MDT from 4-3-2005.

(Dr. N. Raman)

Answers to Crossword – L2 (leprosy) (July 2005 Issue)

ACROSS

2K	Ulcer	4D	Early
5I	Ballpen	6D	RCS
7G	Wrist	10A	Sensation
12D	Cracks	13I	Steroids

DOWN

D3	Neuritis	F2	MCR
F8	VMT	I5	Blindness
M5	POD	M11	FOOT
N1	Nerve	O10	SSOD

Checklist for supervising Medical Officer at health facility (PHC/CHC/Hospital)

The last formal training in leprosy (date, period)		
Is aware of his/her own tasks and responsibility in leprosy control	Yes	No
Is aware of the tasks/responsibility of the staff that are supervised by him/her	Yes	No
Is aware of the main components of the programme including its objectives	Yes	No
Knows how to take proper history from a patient	Yes	No
Knows the cardinal signs of leprosy	Yes	No
Does sensory test correctly	Yes	No
Does nerve examination correctly	Yes	No
Knows the criteria for grouping	Yes	No
Prescribes correct regimen to a patient	Yes	No
Counsels the patient correctly	Yes	No
Fills the treatment card properly	Yes	No
Diagnostic competence (based on observation & validation of cases)	**Good**	**Needs improvement**
Able to recount the exact number of cases on record	Yes	No
Keeps track of drug stock in the health facility	Yes	No
Knows how to cross verify the report from the register	Yes	No
Verifies the report before endorsing it	Yes	No
Knows the essential indicators	Yes	No
Uses the essential indicators to monitor the programme	Yes	No
Spends some time on reviewing the programme during the monthly meeting	Yes	No
Able to identify problem in a subcentre and take appropriate action	Yes	No
Visits the field for monitoring the patients and supervising the staff at least 5 days a month	Yes	No
Competence in managing the programme (based on interview)	**Good**	**Needs improvement**
Able to identify reaction and manage	Yes	No
No. of reaction cases managed by him/her since the last visit		
Able to identify disability and manage	Yes	No
No. of disability cases managed by him/her since the last visit		
Competence in managing POD	Good	Needs improvement

Use valid criteria for the scale, “Good”/ “Needs improvement”

TB CONTROL PROGRAMME

'Why's in Tuberculosis Control Programme

Why some TB patients are not on real DOTS?

	REASONS	ACTION REQUIRED
1	Patient refuses DOT. Patient is not aware of importance of DOT.	Adequate counseling of patients at start of treatment. Make sure that patient understood the importance of DOT. Periodic visit by supervisory staff will reassure the patient.
2	Patient wants to adjust the dose himself due to side effects of drugs.	Initial counseling should include the fact that minor side effects cannot be avoided initially and they would disappear after sometime. Reassure the patient and encourage that he should consult the doctor for any problem.
3	Delay in starting treatment. Patient does not have faith in health system.	Delay in starting treatment should be minimized. Patient should be reassured that he would receive complete treatment. Periodic visits by any of the health staff (MO / MPHS / ANM / STS).
4	Patient is not living in the area.	Confirm residential status before starting treatment. Refer the patient to concerned health facility if not resident.
5	DOT provider is not available to patient. DOT provider is not accessible. DOT provider is not acceptable to patient. Close relative as DOT provider.	Care should be exercised while selecting a DOT provider. Patient should be consulted. Apply general principles while selecting DOT provider. PHC staff should be trained for selection and preparation of DOT provider.
6	DOT provider is not aware of importance of DOT.	Adequate counseling of DOT provider before handing over the responsibility. Supportive supervision and encouragement.
7	Lack of supervision	Periodic visits by any of the health staff (MO / MPHS / ANM / STS). Support in case of need (like management of side effect). Periodic review of RNTCP at PHC meeting.

RNTCP WITH A DIFFERENCE

The Damien Foundation project in Delhi covering a population of one million in Southwest part of the union territory has been implementing tuberculosis control since 2003. Since there are no Government health facilities in the area, the Government has allotted to Damien Foundation two TB unit areas each covering a population of around 500000. Damien foundation likes to share information about the project with the readers because of the unique way in which the project implements TB control in the allotted population.

Of the two TB units one was getting financial support from GOI till March this year. Damien Foundation declined to accept any financial assistance from April this year. Except for anti-TB drugs no other assistance is taken from the Government. The project has ten Microscopy centres including the central hospital each staffed by a microscopist-cum-field worker with a motorbike for mobility. Five of the ten workers are basically field workers trained in sputum microscopy whereas the other five are laboratory technicians trained in field work. Surprisingly, none of the field workers with laboratory technician's diploma had been exposed to sputum microscopy during the study course. Therefore all the ten workers were given two sessions of training, each of fifteen days duration, on sputum microscopy. In addition they also underwent regular RNTCP training given by the Government. The project has two senior TB supervisors, one Senior TB Laboratory supervisor and a Medical Officer. The supervisors are provided with motorbikes and the Medical Officer a jeep for mobility.

Each worker does IEC activity twice a week in one of the pre-identified areas from 6 to 8.30 in the morning. The message conveyed to the community is about the symptoms of tuberculosis and where to go for help in case anyone had the suggested symptoms. In each microscopy centre there is one worker who manages the OPD from 9am till 2 pm 6 days a week. Three days a week are designated as DOTs days when the worker treats the patients under treatment under his supervision. For five centres, Monday, Wednesday and Friday are the DOTs days and for the other five it is Tuesday, Thursday and Saturday. If a patient is absent he/she is contacted the same day in the afternoon. On other days patients reporting to the centre with minor complaints are treated and if there is any respiratory symptomatic, spot sputum is collected from him and he is asked to come the next day with early morning sputum. The worker collects the sputum samples and examines them the same day. He is also expected to counsel newly diagnosed cases and submit reports every month to the project.

The Senior TB Supervisor (STS) attends the centres on DOTs days and assists the worker in preparing the cards and ensuring that all the activities are carried out by the worker as per the guidelines. He visits the field to verify the address of newly diagnosed patients and to counsel them, identify DOTs providers for patients near their residence, meet the community volunteers once a week and participate in IEC activities.

The Senior TB Laboratory Supervisor (STLS) visits the centres on non-dots days to supervise the laboratory work.

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External quality assurance was introduced in 2003 itself. A predetermined number of slides are collected from each centre by the STS and blinded by the Office assistant before they are given to the STLS for verification. Discrepant slides are sent to central lab supervisor in Chennai for examination. The Medical Officer also visits the centres on DOTs days to diagnose cases and supervise the work of microscopist. All the staff come to the central hospital every Saturday afternoon for a meeting to discuss various problems and issues.

The project gets cases through voluntary reporting, referral by General practitioners and volunteers and referral hospital. Sputum negative suspects are referred to hospital for confirmation of diagnosis. So far the project has been able to mobilize 50 General practitioners, 147 Registered Medical practitioners, 180 community volunteers and 25 others for referral and DOTs supervision. The project has achieved 61% of the case detection target, 51% of the target for new sputum positives and a cure rate of 88.5%.

Fig. 1. Lid gap in the right eye due to facial nerve paralysis.

Fig.2. VMT for facial nerve.

VMT FOR FACIAL NERVE

Ask the patient to close his/her eyes and keep them lightly closed as if in sleep.

If there is no gap, ask him/her to close the eye tightly and try to pull the lower lid down and see whether the patient is able to keep his/her eyes closed against resistance.

A gap visible between the upper and lower eyelids	Grade 'P'
Able to keep his eye closed against resistance	Grade 'S'
Not able to keep his eye closed	Grade 'W'