

Downtrend in new case detection in India: what does it mean?

It has been hailed as one of the biggest achievements in the recent past. While it reflects the can-do attitude that is increasingly and earnestly bandied about as brand India, not everyone is willing to be dazzled by it: it has even spiked the anxiety of a few nonpartisan observers. What I am referring to here is the 'elimination' of leprosy in India. What is really of interest is that after years of frenzied drift-off the huge outperformance in the recent years has failed to fuel critical scrutiny especially from those looking for confirmatory evidence. This may be because of the generally prevalent you believe-what-you-see attitude which encourages prevarication and self-indulgence; it does not provide enough leverage to squeeze in pointed questions. But then why should there be dispute if there is no unconfirmatory evidence and there is no self-doubt?

The most visible part of elimination is the dramatic drop in new case detection. The fall which has contributed significantly to global decline in new cases has generated a mixed reaction: the turnaround is gleefully acknowledged by programme managers as the inevitable consequence of a job well done; the skeptics have questioned its validity. It is unfortunate that the freefall has succeeded in evoking broadside but has failed to elicit sober debate. The uncommon circumstance and the unexpected result certainly



call for critical analysis. Let us look at facts: they speak louder than presumptions.

Several reasons have been trotted out- from academic abstraction to broad-brush, dubious intervention. The downtrend which became evident in 2003 and pronounced in 2004 has not displayed any reversal so far. The annual decline is seen to range from 17% to 35%.

New case detection trend, India and Global & Mass case detection campaigns by year in India: 1993-2006

India/Global	Year					
	1993	2002	2003	2004	2005	2006
India*	456000	473658	367143	250063	169703	139252
Global*	590933	620638	514718	407791	299036	259017
	MLEC / BLAC / Year					
MLEC/BLAC	MLEC First	MLEC Second	MLEC Third	MLEC Fourth	MLEC Fifth	BLAC
Year	97-98	99-00	01	02-03	04	05

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This may look surprising for a programme which had never showed any downward inclination. Critics who are taken by surprise do not see any valid attributable reason other than underreporting of cases. Frivolous and fatuous it may seem, the viewpoint has won its drove of patrons. Pressure to reach the elimination target and measures (like external validation of all new cases before registration, cleaning of patient registers, deferred or refrained registration on the assertion that symptoms are not clear or the patient had previous treatment even if it was one dose or treated by a general practitioner) supposedly to neutralize operational factors which were ostensibly standing in the way of attaining the objective are unapologetically alluded to by detractors as the causal culprits. Validation, cleaning of registers, rigid registration practice were reportedly used as strategy to influence prevalence rather than as a tool to improve quality of service. Statistics allegedly became more important than programme and programme became more important than patient; leprosy service was measured in terms of impact on prevalence. Even though such operational misdemeanors might have been committed by overzealous programme personnel in some places, due to misreading or misinterpretation of messages, leading to a race to reach the target, they could not have contributed to such a massive downslide in new cases. One has to study the past to understand the present. One has to look prior to 2003 in order to understand the later events. When the first mass case detection campaign (1998) called MLEC unearthed more than 250000 new cases (quite a significant proportion were later proved to be wrongly diagnosed) it did not come as a big surprise to many. Unfortunately it went unexamined, unexplored, uncriticised. Reticence among experts was evident when several such mass case detection campaigns which were held subsequently did not draw even a whimper of protest. The misgivings expressed by a few critics were brushed under the carpet. The problem was compounded by persistence of active search for cases as a routine by the programme staff. Enormous numbers were detected establishing a high new case base. There was no thorough critical analysis of the result. It was thus 60 to 70% of the cases were detected by active case detection. About 70 to 80% of the new cases were Paucibacillary in type. In fact in some of the states in the south about 70% of the PB cases were of single lesion! It is not surprising that quite a large proportion of these cases were found to be wrongly diagnosed. When the contractual staff who were assigned to provide critical support in districts where there was paucity of vertical staff but who were interested in keeping the new cases high for their own personal reasons were retrenched (in a phased manner starting from 2003) and active search was stopped, new case detection started showing the downtrend. While the number of new cases detected through MLEC showed an incremental decline, new cases detected through the routine activities did not show a perceptible decline till 2003. This coincided with the retrenchment of contractual vertical staff.

There is a plausible relationship between the decline and cessation of active case detection. One cannot expect the programme to have a sustained high level of new cases in the absence of active search. Those aligned on the programme side allege that there was no criticism when new cases were kept inflated through various debatable means but when the drop became discernable it stirred disapproval. It is pointed out that with the active participation of general health staff there was no longer any need for surveys. Increase in the proportion of MB cases without any corresponding increase in disability among new cases is referred to as an indication that coverage and quality are not adversely affected. There is, therefore, a strong argument, that merits serious consideration, that the major reason for the dramatic fall in new

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cases is the cessation of active case detection even though one cannot rule out other operational factors (their contribution cannot be termed consequential).

It is clear that there are several reasons for the sudden and sustained fall in new case detection in India. Some are apparent and others are obscure. Some are tenable, others are tenuous. It is also not easy to quantify the magnitude of the effect of these factors. Suffice it to say that it is as much insubstantial and arbitrary to attribute totally malafide reasons as it is maliciously intentional to deny the impact of change in intervention for the pronounced drift in case detection.

The most visible impact of the dramatic fall in new case detection is 'elimination'. Perhaps, change in case detection trend would not have generated so much discussion and debate but for its association with elimination. I am, however, happy that it has happened for two reasons: we can now move away from the relentless barrage of rhetoric coming from either side of the fence and harness the resources towards humanizing the programme; and deny the experts the foothold for legitimizing their perennial arguments. It is time to move the discussion from the mainstream and focus on real issues related to people affected with leprosy.

A strong referral system: the need of the hour

Mr. Rajan (name changed), a farmer from Tamil Nadu, noticed a nodule over the back of the right index finger. He neglected it thinking it was a harmless wart. Groups of nodules appeared over ear lobes a few months later. This time the nodules were painful and he had fever. A private Medical Practitioner prescribed antibiotics. The symptoms deteriorated with new nodules over extremities. Unable to spend for treatment he approached the nearby PHC where he received symptomatic treatment. He tried native medicines with out success. Incidentally, he met one of his relatives at a social gathering who advised him to go to an NGO leprosy centre. He was diagnosed as having Lepromatous Leprosy with ENL. He was found to have bilateral enlargement of ulnar and lateral popliteal nerves. The BI was 2+ . He was started on MDT-MB regimen and steroids.

What lessons do you learn from this case report?



ASHA, the future hope



The best thing that has happened to public health programmes in Bihar is the induction of community volunteers to liaise between the community and the health service. Called ASHA (Accredited Social Health Activists) they are going to become important partners and their involvement in leprosy control will certainly help in improving not only case detection and treatment completion but also quality of leprosy service. In the photograph one finds four persons with leprosy referred by ASHA, under Belaganj PHC in Gaya district. One of them has Lepromatous leprosy with infiltration and nodules and lesions without anaesthesia.

Change of Leadership at Central Leprosy Division, Government of India

Dr. P.L. Joshi has taken over as the new Deputy Director General (Leprosy). He brings with him a vast experience from his earlier stewardship of other important public health programmes. We hope that he would steer Leprosy control into greater achievement and strengthen collaboration with major partners.

ILEP places on record the great contribution of Dr. G.P.S. Dhillon, the out going Deputy Director General (Leprosy). We appreciate his sincere effort in bringing a sea change in the Leprosy services in the country.

Re-Constructive Surgeries (RCS) in Medical College Hospitals in Orissa: LEPROA Experience

Integration of MDT services into General Health Care system is a milestone in the history of leprosy control. Though RCS is an important component of POD/disability care, this facility was not available in Government institutions. This is mostly due to lack of expertise in surgery, physiotherapy and motivation of supportive staff. As the ILEP coordinator of Orissa, Lepra Society initiated facilitating RCS services in the medical colleges of Orissa. The first session of RCS was held in June, 2006 in SCB Medical College, Cuttack. Subsequently this facility was extended in Hi-tech Medical College, Bhubaneswar, and MKCG Medical College, Berhampur. In all the institutions Lepra Society is facilitating surgeons, physiotherapy support, part cost of consumables and medicines and the rest is supported by the concerned Medical College.



Results

The year wise surgeries are detailed in the table below.

Institute	2006	2007	Total
SCB Medical College, Cuttack	09	Nil	09
MKCG Medical College, Berhampur	09	19	28
Hi-tech Medical College, Bhubaneswar	11	Nil	11
Total	29	19	48

Initiating RCS in Medical College has been a unique experience both for the organization and for the government. It was possible to make it happen after a lot of coordination with the stakeholders namely the units/departments in the medical college and government offices. The experience of undertaking RCS in Medical Colleges is roughly 16 months now. It brings immense satisfaction in terms of integration, reduction of stigma to a fair extent and reduction in cost of conducting RCS. But still there are many areas which need careful attention. The activity becomes easier in places where the involvement of surgeon (of the medical college) is spontaneous.

It is worth mentioning here that the RCS is facilitated by Lepra Society in two other NGO institutions also namely the Leprosy Home and Hospital, Cuttack and the other is the Mission Hospital, Bargarh where nearly 172 RCS has been undertaken since 2006.

Operational guidelines for Leprosy control activities

(World Health Organisation SEA/GLP/2006.2)

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3 Case Detection

3.1 How should case detection be organized?

There are two methods of case detection, active and voluntary. Active case detection is not recommended, except in hard to reach areas where the health infrastructure is inadequate. National programmes should encourage people suspected with leprosy to report voluntarily. Similarly, household contacts of confirmed leprosy patients should also be encouraged to report voluntarily for examination.

3.2 How can early case detection be promoted?

Efforts to increase case detection are focused on facilitating self-referral by people who develop leprosy. This is done by increasing awareness of the early signs and symptoms of leprosy among the general public. Barriers which prevent people reporting for examination should be removed; they are considered here under five headings.

Barriers include a lack of awareness that leprosy is treatable and that treatment is free and available locally. This can be addressed most effectively by public information campaigns using a variety of media, including traditional means of communication.

Secondly, fear is also a common barrier. This may include fear of the diagnosis, fear of future deformity, fear of being exposed as having leprosy or fear that one's family will suffer. The latter two relate to negative attitudes or other forms of stigma and discrimination in society. Such fears may persist long after general attitudes have become more tolerant and instances of overt discrimination have become rare.

Fear and stigma are difficult to remove. They can only be addressed successfully through a combination of strategies that include factual information about leprosy and its treatment, context-specific media messages addressing misconceptions and traditional beliefs about leprosy, positive images of leprosy and testimonies of people successfully cured of leprosy. Contact between the community and treated patients, successful self-care, rehabilitation aimed at empowerment and counselling of patients to build up their self-esteem, also help to build a positive image of those affected by leprosy. At the same time, any negative attitudes, structures or arrangements in the health services should be addressed as a matter of urgency. Assurance of privacy and confidentiality, and treatment with dignity are particularly important.

A third group of barriers include other disadvantages, some of which are culturally determined, such as gender, ethnic group and poverty. These require specific approaches, which include awareness raising and education, but also advocacy for supportive legislation and services, and general poverty alleviation measures.

Physical barriers, such as mountains, rivers or distance pose particular challenges, especially in areas with low health service coverage, and form a fourth category. These need flexible arrangements of diagnostic and treatment services. The final group, issues of security in areas of war or civil unrest, is the most difficult to address, but is nevertheless a reality in several leprosy-endemic countries.

3.3 What are the key messages about leprosy for the general public?

There are four key messages for the general public, which can be expressed in many different ways:

- Curable: Leprosy is an infectious disease but the risk of developing the disease is low. It can be cured with drugs that are widely available and are free-of-charge.
- Early signs of leprosy are pale or reddish skin patches, with loss of sensation; early detection with appropriate treatment helps to prevent disability from leprosy.
- No need to be feared: The disease can be managed just like any other disease; affected people should not suffer any discrimination. Treated persons are no longer infectious.
- Support: Affected people need the support and encouragement of their family and community, firstly, to take the MDT and any other treatment as prescribed, and secondly, to be able to live as normal a life as possible.

Health promotion activities should be carried out for the general public, by any available means, including:

- Word of mouth, including experiences shared by former patients
- School activities, including quizzes and essay competitions with prizes
- Public talks, announcements, plays, puppet shows
- Posters and leaflets (less useful where literacy is low)
- Mass media, including newspapers and local radio
- TV, video, DVD.

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4. Diagnosis

4.1 What is a case of leprosy and when should leprosy be suspected?

A case of leprosy is a person with clinical signs of leprosy who requires chemotherapy (MDT).

Leprosy should be suspected in people with any of the following symptoms or signs:

- pale or reddish patches on the skin (the most common sign of leprosy)
- loss, or decrease, of feeling in the skin patch
- numbness or tingling of the hands or feet
- weakness of the hands, feet or eyelids
- painful or tender nerves
- swellings or lumps in the face or earlobes
- painless wounds or burns on the hands or feet

Although the majority of leprosy patients have straightforward skin lesions which are easy to see, experienced workers know that there is a great variety in the skin lesions of leprosy. Some skin lesions are very diffuse and difficult to distinguish from normal skin: in these cases the other symptoms and signs become important.

4.2 How is leprosy diagnosed?

A reasonable degree of certainty is required before making the diagnosis of leprosy. A suspect should not be registered as a case, because the diagnosis of leprosy has adverse social consequences.

Leprosy is diagnosed by finding at least one of the following cardinal signs:

- (1) Definite loss of sensation in a pale (hypopigmented) or reddish skin patch
- (2) A thickened or enlarged peripheral nerve, with loss of sensation and/or weakness of the muscles supplied by that nerve
- (3) The presence of acid-fast bacilli in a slit skin smear

Definite loss of sensation in a skin lesion may be detected by touching the skin lightly (use something like a piece of cotton wool); ask the person to close their eyes, then touch the skin in different places, asking the person to point to each place that is touched; if the person cannot feel places within the skin patch, but does point to other places where the skin is normal, the diagnosis of leprosy is confirmed.

Examination of the nerves is an important part in examination of a person affected with leprosy but requires experience and should be done only by those staff specifically trained to do it.

Skin smear examination requires a suitably equipped laboratory with staff trained to do this test. Leprosy skin smear services could be made available in selected units (such as those already doing sputum smears for the diagnosis of TB). In most patients, a skin smear is not essential in the diagnosis of leprosy, but in some cases of early MB leprosy it may be the only conclusive sign of the disease. The majority of people with leprosy have a negative smear.

Peripheral level

Examine:- all the skin in a good light to identify all skin patches

- note the number of patches
- test for loss of sensation in the skin patches
- assess the disability grade (section 4.6)

If there is definite loss of sensation in a skin lesion, make the diagnosis of leprosy, count the number of lesions to find the classification (section 4.3) and start the person on MDT immediately (section 5.1). If there is no loss of sensation, do not start treatment, but refer the person for further examination.

Referral level

- (1) Examine the whole skin in a good light. Identify all the skin patches. Note the number of patches. Note if there are nodules around the face or ears, areas of plaque or infiltration of the skin.
- (2) Test for loss of sensation in the skin patches, as indicated above. Definite loss of sensation in a skin patch is diagnostic of leprosy.
- (3) Examine the nerves for enlargement and test for loss of feeling and muscle weakness: this is to be done only by those trained to do it.

Nerves which are commonly enlarged:

- The great auricular nerve on the side of the neck, below the ear, is sometimes visibly enlarged: gently feel it to make sure it is the nerve (solid) and not one of the veins in the neck (full of fluid).
- The ulnar nerve at the elbow, the radial cutaneous nerve and median nerve at the wrist, common peroneal nerve at the knee and posterior tibial nerve at the ankle, should be gently palpated for enlargement. This is a practical skill that must be learned and practiced in a training session.

Definite nerve enlargement, with loss of sensation or muscle weakness, is diagnostic of leprosy, but it requires experience to do this examination properly.

Testing for sensory loss and muscle weakness in hands and feet:

? See section 4.6 for all aspects of testing nerve function.

- (4) If possible, arrange for a skin smear test, especially if there are nodular lesions, or if most of the skin is infiltrated with very indistinct lesions and if there is no obvious loss of sensation. These features are more suggestive of multibacillary disease, in which the skin smear is often positive, but some of the other signs, such as loss of sensation, may not be present.

A positive skin smear in an untreated individual is diagnostic of leprosy.

To be Contd.

Different Presentations of Leprosy



Multiple brownish macules and plaques on the back, arms, thighs.



◀ Infiltration and nodules on earlobes

Leprosy lesion on the forearm ▶



SSOD heals

(Soaking, Scrapping, Oiling and Dressing)



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