

Leprosy Situation In South-East Asia Region

*Derek Lobo**

Global Scenario

The Global Leprosy Elimination programme is one of the success stories in the health field. The global burden of leprosy has dramatically reduced from 10-12 million cases in 1985 to around 300,000 cases in 2005. By now, 116 of the 122 countries which were considered as leprosy endemic in 1985 have achieved the goal of elimination of leprosy as a public health problem, defined as prevalence of less than 1/10,000 population.

The global prevalence (PR) of disease had also recorded a sharp decline from about 10/10,000 population in 1985 to about 1/10,000 in the year 2000 and further down to 0.3/10,000 by the year 2005. The dramatic decline is attributed to the efficacy and effective implementation of multi-drug therapy (MDT) worldwide. The leprosy elimination programme has been able to cure over 15 million leprosy patients worldwide by the year 2005. The reported relapses has been extremely low and no case of multiple-drug resistance to MDT has been reported so far (Table 1).

Leprosy situation by WHO region at the beginning of 2005 (excluding the European Region), reveals that only 283,063 cases were prevalent and 407,791

new leprosy cases were reported during the year 2004. In 5 WHO regions, South East Asia (SEA) alone accounts for 65.1% (186182) of the total world leprosy cases, followed by 16.64% (47596) from African countries, 12.89% (36877) from Americas, 3.5% (10010) from western pacific region and 1.89% (5398) lowest from East Mediterranean region. The PR in SEA region is also highest 1.16/10,000 as of March 2005, which was further reduced to 0.86/10,000 population in December 2005. The total new cases detected during the year 2004 were 407,791 accounting for the 72% in SEA regions, followed by 13% in Americas, 12% in Africa, 2% in Western Pacific and 1% in east Mediterranean.

Leprosy Scenario in SEA region:

As we have seen that about 2/3rd of the leprosy cases are being reported from SEA regions. The trend from 1996 to December 2005 (Fig.1), clearly suggests that prevalence of leprosy has declined significantly over this period from 4.60/10,000 to 0.86. The new case detection rate (NCDR) however did not show the same pattern of decline. NCDR was in 32.35/100,000 population in 1996 although increased to 47.76 in 1998, probably due to special case detection efforts through modified leprosy

*Regional Advisor - Leprosy and Other Priority Diseases, World Health Organization, South-East Asia Regional Office, New Delhi, India lobod@searo.who.int

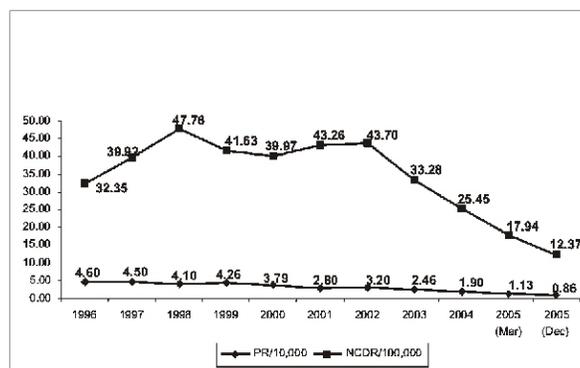


Fig 1 : Leprosy prevalence and new case detection rate in SEA region, 1996 - 2005

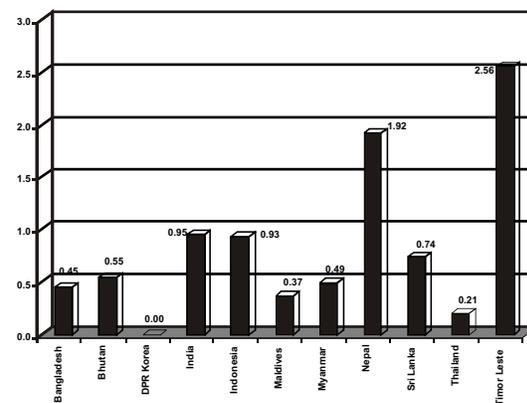
elimination campaign (MLEC) during this period, remained nearly stable until 2002- may be as momentum of MLEC activities but then NCDR also declined sharply from 43.7 in 2002 to 12.37 by December 2005 (down by 71.7%). This is primarily due to minimization of 'operational factors' such as wrong diagnosis, wrong classification, re-registration, delayed treatment completion, delayed release from treatment etc, which were influencing and inflating the prevalence and new case detection figures in India. The inaccurate detections were also related to the practice of setting case detection 'targets' to health workers and programme managers and this practice was discontinued in 2003. The other factor that contributed to the increase of operational factors was the practice of active case detection and campaign approach, repeatedly targeting the same populations which were leading a large number of false detections. This approach was also discontinued in 2003 with emphasis on quality and accuracy of diagnosis, good registration practices and regular updating of registers.

Current Scenario in SEA region: The SEA region constitutes of 11 countries that are still affected by leprosy. Of the 11 countries, 9 (81.8%) have already achieved the leprosy goal of elimination (<1/10,000 population) and country like Nepal and Timor Leste are yet to reach the level of elimination with current PR of 1.82 and 2.56 respectively (Fig.2)

The WHO feels that leprosy elimination programme has been successful with the following major achievements :

- The region has achieved the goal of elimination of leprosy as a public

Fig.2: Leprosy PR per 10,000 in SEAR countries as on December 2005



health problem as of December 2005 with a Prevalence Rate of 0.86 per 10,000 population;

- Nine countries have achieved the leprosy elimination goal at the national level i.e. Prevalence Rate <1/10,000 population. India achieved the elimination goal in December 2005, with a reported prevalence of 0.95/10,000 population.
- Nepal & Timor-Leste are yet to achieve elimination but have substantially reduced the Prevalence Rate and are making concerted efforts to attain elimination;
- Prevalence and detection have declined in all countries of the region, with the exception of Indonesia;
- Over 12.7 million cases have been cured; including >11.5 million in India;
- All countries have integrated leprosy services into general health services;
- Extensive advocacy and IEC activities have resulted in greater

awareness, reduced stigma and an improved image of leprosy, and

- Deformity rate among new cases has dramatically declined.

PR in India-Declining Trend

The leprosy prevalence in India was although very high but it has shown tremendous decline over the years; 10.9/10000 in 1993 to <1/10000 in December 2005. However, new case detection rate (NCDR) initially increased from 5.1/10000 in 1993 to 8.5 in 1998 and then slowly declined to 1.5/10,000 by December 2005. This is certainly a tremendous achievement for a country like India which has been contributing about 2/3rd to the global leprosy case load. One of the activities that contributed to this decline has been the 5 Modified Leprosy Elimination Campaigns (M-LECs) conducted country-wide between 1998 - 2003, which were able to detect most of the backlog cases and enrol substantial number of early cases for treatment (Fig 3 & 4).

The other leprosy indicators during the period of 1994-2005 have also changed.

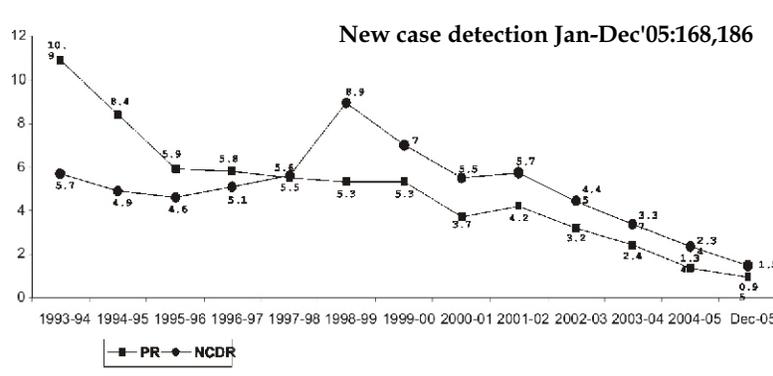


Fig 3. Trend in PR and NCDR in India

The proportion of multibacillary (MB) leprosy has increased from about 26% in 1994 to 45.2% in 2005, possibly reflecting a reduction in active transmission, which is further supported by a decline in child rate by 39.4% (25.9% to 10.2%). The deformity rate (Grade ≥ 2) among new cases had also declined by about 29%; from 6.1% to 1.77%. The increase in MB proportion is a trend observed in most countries which have achieved the elimination goal.

Validation of leprosy Diagnosis under NLEP : Over the years faster decline in some areas and very little or no decline in some other areas have emphasize the needs to cross check the leprosy diagnosis under the programme since diagnostic ability of medical and non-medical persons vary within and between the groups. This exercise done during the years of 2003 and 2004 (Table.1) and was based on 2541 leprosy cases listed in 2003 from 261 block PHC's in 12 districts, one

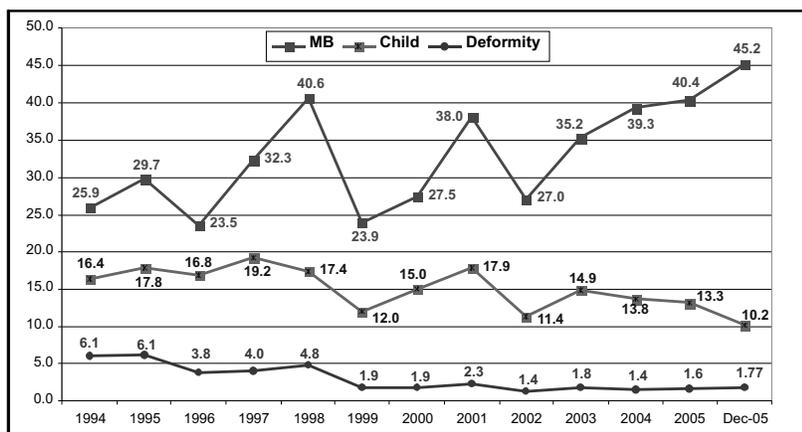


Fig 4. MB Proportion, Child, Deformity among New Leprosy Cases in India, 1994 - December 2005

Table 1: Validation of leprosy Diagnosis under NLEP

Parameter	2003	2004
No. of states/districts/Block PHCs	12/12/261	12/12/224
Cases listed by NLEP	2,541	1,510
Cases seen by validators	1,737 (68.4%)	1,081 (71.6%)
Cases examined by validators	1,503 (86.5%)	879 (81.3%)
PB / MB cases examined	773 / 730	404 / 475
Cases diagnosed as leprosy by both validators	1,235	745
%age correctly diagnosed	82.2	84.8

each of 12 states and 1510 cases in 2004 from 224 block PHC's from same number of districts/states. The validators examined 1503 cases in 2003 and 879 in 2004 and found only 82.2% (1235/1503) in 2003 and 84.8%(745/879) as correctly diagnosed by the NLEP staff. This leaves about 15-18% cases on account mis-diagnosis or over reporting of leprosy situation in the country.

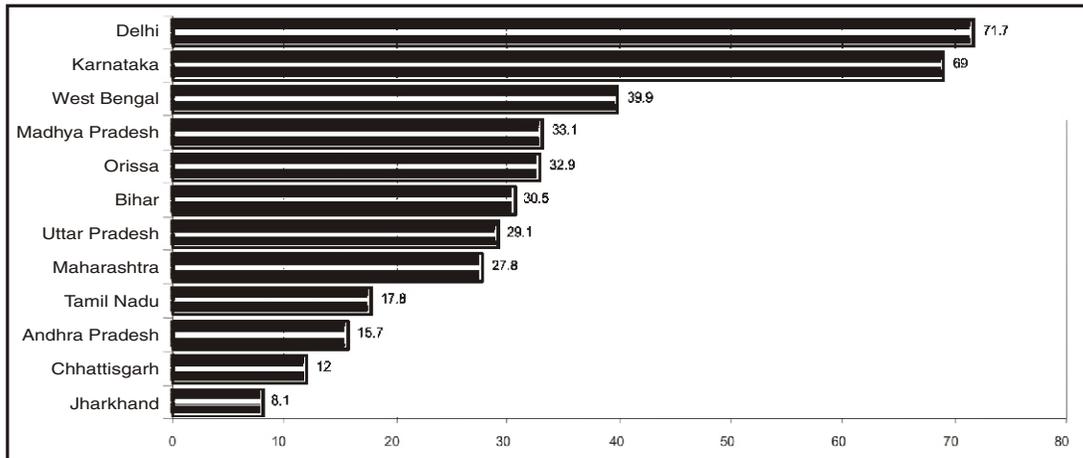
Over-reporting of leprosy : The extent of over-reporting has been shown to have 3 components viz Wrong diagnosis, re-registration of cases and non-existent cases. The data reveals that about 25-28% of the cases validated are over-reported in 2003 and about 30% in 2004.

Operational Factors Influencing Prevalence & New Case Detection In India: The experience in the programme has suggested the following factors influencing the prevalence and NCDR indicators leading to over-reporting:

- Wrong diagnosis
- Re-registration / Double registration
- PB cases recorded as MB
- Delayed treatment completion- Irregularity or Drug shortage at peripheral level
- Delayed release from treatment
- Over-treatment
- Non-existent cases

Results of Case Validation Study 2003 and 2004

Indicator	Andhra Pradesh	Bihar	Chhattisgarh	Delhi	Jharkhand	Karnataka	Madhya Pradesh	Maharashtra	Orissa	Tamil Nadu	Uttar Pradesh	West Bengal	Total
Source of over-reporting %													
Wrong diagnosis	12.7	1.1	2.3	0	2	12.5	21.1	18.2	15.8	8.9	8.9	9.9	9.4
Re-registration	3	14.9	6.6	40.4	4.2	49.5	10.8	9.6	12.2	7.6	12.5	30	13.5
Non-Existent cases	0	14.5	3.1	31.3	1.9	7	1.2	0	4.9	1.3	7.7	0	5
Total													25-28 %



Reasons for Over-Detection In India :

1. Setting case detection targets and basing performance appraisal on target achievement
2. Over-diagnosis and re-registration of cases due to
 - (a) Non-adherence to WHO recommended case definitions
 - (b) Active search & surveys repeatedly targeting the same population groups
 - (c) Repeated leprosy elimination campaigns in the same areas
 - (d) Lack of "Quality" and "Accuracy" of diagnosis
3. Job insecurity among staff involved in leprosy services leading to large number of suspect or doubtful cases being recorded as leprosy cases

Leprosy Elimination In Sea Region : Challenges

Sustaining political commitment and ensuring adequate resources in order to sustain elimination at national level, progress towards further reducing the burden of leprosy;

- Strengthening integration of leprosy services into the general health

system through capacity building and skill development, in order to ensure and sustain quality leprosy services, including diagnosis and treatment;

- Ensuring a wider coverage of leprosy services, especially in currently under-served population groups such as remote rural areas, urban slums, migrant labour;
- Increasing and sustaining community awareness through sustained advocacy and IEC activities to promote voluntary case detection and decrease the stigma;
- Minimizing/preventing operational factors;
- Preventing discrimination and displacement of leprosy affected and ensuring
- community based rehabilitation and integration of cured/disabled leprosy persons into the community, and
- Streamlining the MDT supply and stock management at all levels, considering the low endemic situation.