

Leprosy elimination campaign (LEC) in Myanmar, 1997 to May 1999

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Introduction

The Myanmar leprosy elimination programme (LEC) has made remarkable progress to elimination. Leprosy programme activities were integrated into the country's General Health Programme Services in 1978 and intensified with the MDT programme in 1991. The programme was covered with MDT 100% by 1995.

Forty-eight million people live in 52 districts and 326 townships in the seven divisions and seven states. According to the 1998 statistics, the health centre to population ratio is 1:32,903, that for health assistants to population is 1:35,546 and that for midwives to population is 1:5300. The midwives are the implementers of the LEC. They diagnose the cases and prescribe drug treatment. Thirty percent of the total population (around 14 million) live in urban areas.

The registered prevalence rate (PR) has declined significantly from 54/10,000 population in 1987 to 2.5/10,000 in 1998. However, the new case detection rate did not vary markedly between 1991 and 1997, and is highest in 1998 due to the introduction of LECs. The proportion of MB cases was more or less unchanged at 48% in 1994 and 51.5% in 1998. Children constituted 11.1% of cases in 1990 and 9.3% in 1998, while disability grade 2 cases increased from 8% in 1994 to 13.4% in 1998.

The proportion of new cases under 14 years old was about 10% and the proportion of MB 40%, showing unchanged epidemiology.

With experience gained from 21 LEC teams in phase 1 and 20 LEC teams in phase 2, it was clear that there might be many hidden cases. In all, 7457 cases from 55 townships in phase 1 and 6412 cases from 51 out of 63 townships in phase 2 were revealed with intensive case finding activities. The NCDR after LEC was 2–3 times higher than the NCDR before.

The registered prevalence rates of 44% of all townships in Myanmar were already less than 1/10,000, but this reflects the operational rather than the epidemiological situation.

Except for 23 townships, all the other townships have leprosy and still have to reach the elimination level. Up to now, the programme can provide cover with LEC only in 118 townships out of 326, and this has taken almost 2 years (Table 1).

Table 1. Information about LECs in Myanmar

| No. | Information | Phase 1 | Phase 2 (up to May 1999) |
|-----|---|-------------------|-----------------------------|
| 1 | Planned teams | 19 | 20 |
| 2 | Achieved teams | 21 (20 + 1) | 20 |
| 3 | No. of townships planned | 51 | 63 |
| 4 | No. of townships achieved | 55 | 51 (5/99) |
| 5 | Township coverage % | 17.2 | 15.9 (5/99) |
| 6 | Population coverage % of whole country | 9,650,593 20.7 | 9,419,384 19.8 |
| 7 | Visiting villages % | 41.4 | 52 |
| 8 | Duration | June 97–June 98 | Nov 98–June 99 |
| 9 | Revealed hidden cases | 7457 | 6412 |
| 10 | NCDR/100,000 population | 77.3 | 68.1 |
| 11 | < 14 year NC % average | 8.9 | 8.2 |
| 12 | Grade II disability NC % | 18 | 20.5 |
| 13 | MB NC % | 40.7 | 43.4 |
| 14 | > 5 patches NC % | 38.2 | 37.0 |

Specific activities of LEC phase 1

As the country has planned to accelerate progress to attain the goal of elimination of leprosy within the set time-frame, LECs were undertaken in 55 townships between June 1997 and June 1998 as LEC phase 1, with the support and guidance of the WHO.

Apart from the activities guided by the WHO, there were some innovative and additional approaches, e.g. conducting advocacy meetings at different levels, the use of various kinds of mass media for LEC, the involvement of village authorities and the use of volunteers to search for suspected cases and organize them for screening. The contacts of patients and patients affected by leprosy (PALs) were also examined during the visits. The team visited suspect cases if they failed to come.

Due to time and manpower limitations, the teams could not visit all villages in the area, so there was a need to select the villages to visit and the other villages were designated as 'drainage' villages. Contact tracing was implemented to explore more cases.

Health Service Research (HSR) was carried out with the Department of Health and Preventive and Social Medicine Department, Institute of Medicine, in Bago, to study the effectiveness of LEC.

Specific activities of LEC phase 2

Another 63 townships identified to be vulnerable for a large hidden caseload were subjected to LECs between November 1998 and June 1999 as LEC phase 2. American Leprosy Missions (ALM) provided financial support, and LECs were completed in 51 townships by the end of May 1999.

To detect most of the untreated leprosy cases from top townships of the entire country before December 1999, a quick method of estimating untreated leprosy cases was used. Sixty-three townships, estimated to have at least 100 cases per township, have been selected for LEC phase 2.

A comprehensive manual was developed after conducting a workshop for the project managers and members to implement the planned activities systematically. In the manual, the outlines are highlighted for (i) the preliminary data collection for qualified planning, such as standardized forms, health centre area map, listing the contacts, etc., (ii) guidelines for advocacy meetings, as these are crucial for the success of the LEC, (iii) development of guidelines for the information session to improve community awareness and participation and (iv) conduct of basic health service (BHS) training at the health centre instead of townships, to increase cover and effectiveness.

Instructions on the formation of the training teams with efficient trainers were given and the criteria to select the eligible trainees suggested.

To improve the village cover, LEC teams of two types were formed. One was headed by Leprosy Inspectors and the other by Field Supervisors (Health Assistants or Lady Health Visitors). Supervision was also carried out by the township medical officer. The reporting formats for the purpose of supervision, compilation, implementation, monitoring and evaluation were standardized.

Achievements

AREA AND POPULATION COVERAGE

- Within the 2 years, 118 townships had been covered by LECs.
- Up to May 1999, 40% of the total population had already been covered.

VILLAGES VISITED

- During LEC 1, only 41% of the villages had been visited by search teams; however, this rose to 52% in LEC 2.

NEW CASES DETECTED

- Up to May 1999, 13,869 new cases were discovered.
- The NCDR was 77/100,000 in LEC 1 and 68/100,000 in LEC 2.
- The other indicators, such as percentages of under-14 new cases, MB new cases and new cases with disability grade 2 was three times higher than in previous years, in both phases 1 and 2 (Table 2).
- Ninety-five percent of new cases were voluntary reporters in LEC 2, compared to 90% in LEC 1.

NEW CASES IN LEC VILLAGES

- Forty-six percent of visited villages and 15% of the 'drainage villages' had new cases, but the new cases and registered cases were not different, as in LEC 1.

CAPACITY BUILDING

- Screening of the suspected cases, diagnosis, classification, charting and prescription of treatment were carried out by the general health staff, especially midwives.

Table 2. Prevalence rate (PR) and new case detection rate (NCDR) by division before and after LEC phase 2

| No. | Division | Total townships | Previous year | | LEC | |
|-----|-------------|-----------------|---------------|----------|------|-------|
| | | | PR | NCDR | PR | NCDR |
| 1 | Yangon | 7 | 0.9 | 9.5 | 7.3 | 43.0 |
| 2 | Bago | 10 | 3.4 | 39.2 | 13.1 | 93.5 |
| 3 | Magway | 7 | 2.9 | 23.5 | 13.2 | 101.9 |
| 4 | Sagaing | 8 | 3.0 | 23.9 | 8.9 | 66.0 |
| 5 | Mandalay | 8 | 1.8 | 19.10.99 | 7.2 | 48.4 |
| 6 | Ayeyarwaddy | 11 | 1.6 | 16.9 | 9.2 | 69.1 |
| | Total | 51 | 2.3 | 22.3 | 10.0 | 72.0 |

- Technical staff provided only technical assistance, thus making GHS more skilful and confident.
- The area of added knowledge on leprosy and control programmes, and the knowledge concerning the ways to reveal hidden leprosy cases were improved.
- In some areas, the NCDR was increased up to 10-fold, thus revealing the leprosy situation more clearly and increasing the motivation of health staff.

COMMUNITY AWARENESS

- After conducting LEC, the community was more aware about leprosy and its control.

PREVALENCE RATE CHANGES AFTER LEC

- One year after the conduction of LEC, the PR has gone down to its lowest recorded level.

EVALUATION

- By standardization and development of data collection and reporting formats, we are ready to provide data and information to identify the problem areas for further action.

Problems encountered and solutions

LEC TOWNSHIP COVERAGE

At least 177 townships in Myanmar are leprosy hyper-endemic, and the others also have leprosy as a public health problem.

LEC phase 2, already reported from 51 townships, shows that both low and high PR before LEC are increased after LEC significantly above the elimination level. Thus, although the situation of registered prevalence (1996–1998) in the townships showed a declining PR in most, the activities to reveal hidden cases were still needed. However, the time left to cover the whole country is very short. Conventional LEC took 2 years to cover 118 townships.

NEW CASES AFTER LEC

In Shwe-daung township, about 40% of the total new cases detected within a 3-year period resulted from LEC 1 in 1997. Forty-four cases (15%) were detected by routine case finding methods in between the two LECs and the other 73 cases (24%) were explored by a repeat LEC exercise carried out in 1999.

Sixty-six percent of the new cases after LEC were from the villages, where we had already detected new leprosy cases during LEC 1.

Only 23% of the new cases were single-lesion and about 40% of the new cases had a history of less than 2 years. It is likely that many hidden cases are still to be detected. The reasons for this may be:

1. Area coverage – the search teams could not village every village.
2. Methodology and implementation – weakness in the completeness of the instructions and guidelines.
3. Behaviours of the hidden cases (ignorance, fear, stigma, etc.).

The second and third reasons are more important.

POPULATION COVERAGE

Thirty percent of the total population live in urban areas, especially the larger cities, where conduction of LEC is not feasible.

A considerable number of the population are special groups who are not easily reached with elimination activities, e.g. armed forces and industry.

EFFECTIVENESS OF LEC

In some areas, the effectiveness of LEC in terms of the detection of hidden cases is in question. Comparison of new case detection rates before and after LEC suggests that more hidden cases are to be found in some areas.

The problems encountered are listed below:

1. A considerable number of townships are still left to conduct LEC.
2. New cases detected after LEC are still quite numerous, thus contributing to prevalence figures and making it more difficult to attain the elimination goal in time.
3. For special areas and groups, especially in greater cities, the hidden cases were not yet detected and treated.

SOLUTION

1. A nationwide LEC has been planned for late October 1999, to detect the remaining cases and to cover all townships in time.
2. HSR will be conducted, to explore the reasons why all the cases cannot be detected during LEC. Behavioural research will be included.
3. To develop an action-orientated surveillance system and 'mopping up' activities.
4. To improve the activities and area coverage by developing a partnership approach.
5. Appropriate utilization of communication media for the different areas and population.

6. Repetition of LEC whenever necessary.
7. Strengthening of monitoring and supervision in LEC.

Sustaining activities

Waw is one of the eight townships in Bago district. By way of example, it maintained its highest NCDR throughout the year from 1991 to 1996 by routine case finding activities. It started to decrease in 1998, 1 year before LEC. During LEC in 1999, the NCDR was almost the same as before, i.e. 37/100,000, the lowest in 8 years. A similar pattern can be seen in Daik-U township also.

To reduce the NCDR by routine case finding activities in Myanmar took about 3–7 years. However, LEC can reduce the NCDR by more than can routine activities.

LEC methodology is therefore an essential activity to accelerate the elimination of leprosy. LEC was affective in all its three tiers, i.e. better case finding and effective treatment, capacity building and enhancing community participation. However, it should be emphasized that LEC activities need sustained effort by the GHS as well as by the community.

The active involvement of the medical and general health staffs is also crucial. To ensure their sustained involvement, annual review meetings and workshops should be organized.

To integrate the LEC methodology into GHS, with essential support and management, as a routine activity is likely to be a vital and sustaining activity.

Various methods of communication should be utilized for the specific groups and areas. The role of media, especially the private sector, should be increased to accelerate and sustain the programme.

To achieve and sustain elimination of leprosy, the involvement of local and international participating bodies is of great importance. This is the time for everyone to participate in leprosy elimination.

Short- and long-term impact

In the areas which have recently conducted LEC, the NCDRs and PRs are markedly increased. However, after 1 year, they go down to the lowest level recorded.

There is therefore no doubt that LEC can reveal a large number of hidden cases within a short period, but based, for example, on our experience in Shwe-daung, one round of LEC will not be sufficient to produce long-term impact in terms of revealing hidden cases as well as creating community awareness.

Conclusions and recommendations

There is no doubt that LEC is one of the core activities to accelerate elimination and to help the achievement of that goal. However, to make it more effective in sustaining the control programme, the following steps are to be recommended:

1. A nationwide LEC in Myanmar should be conducted in 1999. Every village in every

township in the country should be visited during the campaign, either by the search team or teams of trained volunteers and local NGOs.

2. Strengthening of monitoring and supervision is necessary to make LEC more effective.
3. HSR studies should be supported a) to reveal almost all the hidden cases with minimum frequency and b) to ensure sustainability.
4. A Health Management Information System (HMIS) should be built in to the LEC.
5. Management of the health system should be expanded from integration to participation.
6. To enhance leprosy awareness in the community and promote voluntary reporting of new cases, not only by improved coverage and LEC activities, with the active involvement of medical services and GHS, but also by the utilization of appropriate media, especially from public sectors.
7. LEC should be repeated either in conventional or integrated settings, if the epidemiological data indicate that it is needed.