Processes and challenges: how the Sri Lankan health system managed the integration of Leprosy Services

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Accepted for publication 23 April 2002

Summary   At the end of 1999, the Ministry of Health in Sri Lanka took the bold decision to integrate its Leprosy Services within the country’s general health system. The integration was completed in February 2001 and is already starting to bear fruit, but implementing the necessary changes has been a challenging task. Many new procedures had to be established, logistics improved, attitudes changed and health workers trained. A broad bridge between curative and preventative health services needed to be built. Integration efforts were supported by an advertising campaign to inform people that leprosy, like any other illness, can be treated at all health facilities. Contrary to the expectation that quality of service would drop following integration, more cases are now detected and an extensive network of government doctors is able to diagnose, treat and manage leprosy patients more efficiently. Prevalence has increased by 36% and the new case load by 41%. A few areas still need more attention, such as integrating MDT supplies within existing systems and improving the flow of information, but nonetheless the ownership of leprosy is shifting rapidly to local health services.

Introduction

Sri Lanka has had an active policy of leprosy control since the early 1980s, and the country was the first in Asia to introduce multidrug therapy for all patients. In 1989, with support from the Novartis Foundation for Sustainable Development, it launched a social marketing programme to change public attitudes to leprosy, encourage people to seek treatment and to improve access to the Leprosy Services. Social advertising campaigns and community mobilization events were carried out to dispel the fear of the disease and create awareness of its early signs. During this period, the national network of field clinics was substantially

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increased to 225, run by 24 leprosy public health inspectors (PHIs) under the direction of three Medical Officers at the Central Leprosy Clinic (CLC). Strong links were forged with regional health authorities and with dermatologists. The entire preventative health staff were trained to detect and refer cases of leprosy, and given pocket calendars with the locations, dates and times of clinics. This concerted effort enabled Sri Lanka to achieve the WHO elimination target of less than one case in 10,000 by 1996.  

These impressive results were primarily achieved because of the vertical structure of the programme, which empowered a highly motivated team to make decisions after careful planning, and implement them directly. However, with the changing epidemiological situation and the low disease prevalence in most districts, the structure of the field clinics had to be changed as the leprosy PHIs were travelling long distances to hold field clinics in areas with few or even no patients. A more cost-effective solution was needed.

Moreover, an unfortunate consequence of the existence of a specialist Anti-Leprosy Campaign (ALC) was that the country’s curative health facilities did not consider leprosy to be their responsibility and a health system with 7,500 medical officers and 3,000 assistant medical practitioners was effectively leaving the disease to one side. At the same time, a comprehensive study showed that the main reasons for the 10% deformity rate among new cases, were the inadequate network of leprosy services and the misdiagnosis by many healthcare providers, including Ayurvedic practitioners. Thus, approaching the end of the decade, although overall prevalence was steadily decreasing, a few high endemic districts remained and there was an increase in the MB and the deformity rates.

Given this situation, in 1999 the Sri Lankan health authorities decided to integrate leprosy services into the general health service despite some hesitation about tampering with a smoothly running programme. Nonetheless integration was seen as the most effective way to address the residual problems facing leprosy elimination, by ensuring easy and early access to treatment for all patients.

**Materials and methods**

**The Blueprint**

Planning for the integration began with the Blueprint for Action, prepared by the Director of the Anti-Leprosy campaign, assisted by the Novartis Foundation and its consultant. It was developed in a consultative process with various categories of health staff (administrative as well as from the curative and preventative health services) throughout the country during extensive field visits over a three 3-month period. The Blueprint covered the key strategic issues including a situational analysis, a vision for the integrated system, roles and responsibilities for diverse health workers, the implementation procedure, time lines, mechanisms to assess progress and the outcome parameters.

The vision of the integrated system was simple: a patient should be able to turn to any curative health facility or dermatological clinic in the country, or to the CLC and receive MDT. Follow-up doses of MDT could be obtained directly from the pharmacist on presenting the patient MDT card if the patient did not wish to see a medical officer. Private practitioners could obtain MDT free of charge for patients directly from the CLC. Complications that could not be managed by the health facility were to be referred to the closest dermatological clinic or CLC. The regional epidemiologists (REs) were identified as the ‘managers’ of the
integration process together with the leprosy PHI for each district. Disability care services were to be provided by the leprosy PHI.

The Blueprint was presented for comments to the Directors of Public Health Services, General Health Services and Planning, Provincial Directors of Health, the College of Dermatologists as well as the WHO Leprosy Elimination Group. A three-day Goal Oriented Project Planning (GOPP) workshop in May 2000 was conducted for the REs and leprosy PHIs to translate the strategy into an actionable plan. The workshop culminated in the first National Steering Committee meeting during which the final plan was officially endorsed by the Ministry of Health and WHO.

D-Day for integration was fixed as January 2001 and the team immediately set about detailed planning to implement the necessary activities. A crucial task was developing the official circulars for all the health workers involved, including specific instructions regarding their responsibilities and procedures to be followed. The circulars gave the institutional anchoring to leprosy and ensured that its management is now an integral part of the job description of all health care providers in the curative sector.

THE PLAN OF ACTION AND GOPP

The Plan of Action developed at the workshop identified four key objectives and activities to achieve them. These objectives were:

- MDT to be available at all curative health centres, private and public.
- Health care providers ready and willing to diagnose and manage leprosy cases.
- Community awareness of the early signs of leprosy and where to go for treatment.
- An operational system of record keeping and monitoring.

A challenging logistical operation had to be initiated to supply all health facilities with MDT and other supplies such as registers, patient information, posters and registers. Estimates for MDT requirements for each facility were calculated on the basis of prevalence and the type of hospital with a provision for buffer stocks at the local level. The national MDT requirement clearly exceeded that of previous years and additional unscheduled supplies had to be requested from WHO. The stocks were provided to the leprosy PHIs who subsequently delivered them on to the institutions in their districts. Close vigilance of the actual patient load was needed to ensure sufficient MDT stocks at those institutions with high case loads.

The reorientation of doctors in the curative sector was a daunting task, given the sheer numbers of health care providers and their distribution among the roughly 1000 institutions throughout the country. Local teams of trainers, who usually included a dermatologist, received Microsoft PowerPoint presentations on how to diagnose and treat leprosy as well as the management of the disease in an integrated system. The WHO also provided over 10,000 copies of its simplified guide to eliminating leprosy for all health care staff. A special booklet to train Ayurvedic practitioners in the recognition of leprosy and where to refer them for treatment was also developed and extensively distributed.

A professional advertising campaign, including radio and TV spots, and posters and bus shelters, was developed to support integration efforts and create awareness of the availability of treatment at all health facilities as well as to overcome any residual stigma attached to leprosy. The central theme of the campaign was a bride with leprosy whose life was unchanged after being diagnosed as having leprosy. A special campaign was developed
for the Tamil community in Sri Lanka. A ‘think leprosy campaign’ was also developed for health care providers.

The preliminary individual patient forms (IPFs) and registers (MDT registers, patient registers, patient cards, etc.) developed for record keeping and monitoring in the Blueprint required simplification based on feedback from those who would be using them. A computer software programme based on Microsoft Access was also developed to allow data collected from the IPF and MDT returns to be collated at the regional epidemiologist’s office by the respective leprosy worker. This necessitated training in using computers and the specific software.

Integration was launched, with a month’s delay in February 2001, with a press conference with the Minister for Health. In the months that followed regular meetings with leprosy PHIs and REs were held to discuss the day-to-day problems of implementation. After 6 months of implementation, the project team started visiting institutions in the districts to see the situation at first hand, together with the local team. Immediate feedback was provided to the local health authorities in addition to clear actions that needed to be taken by each party.

**Results**

**CHALLENGES: ADAPTING TO CHANGE**

From the time of the inception of the Blueprint for integration, certain challenges were identified as ‘hard’ and specific actions were to be undertaken to deal with them. They included:

- Ensuring that doctors ‘think leprosy’ when examining people with skin problems.;
- The logistics of supplying MDT to all health institutions and putting into place a system to replenish stocks.;
- Motivating health care staff to fill out and file patient records and provide copies to the ALC and REs.;
- Informing the public and possible patients that treatment was available at all health facilities.;
- Likely problems faced by patients during follow-up, including issues of confidentiality.

However, as the implementation of the programme unfolded, a different set of challenges began to surface. They were mostly ‘soft’ in the sense that they dealt with issues relating to attitudes, ownership, roles, threats and communication issues, and became apparent in the following areas of the programme management:

- New roles of the ALC, PHI and the REs.
- Relationships between team members.
- Local level analysis and use of epidemiological and other data to formulate policy and action.
- Accountability.
- Interagency communication.
- Managing the process at different implementation levels.
NEW ROLES OF THE ALC AND THE RES

Under the integration plan, the ALC, PHIs, and REs have taken on some new roles. The ALC adopts a policy formulation role along with managing the integration process, setting standards and developing itself into a resource center. Similarly the PHI becomes a team member of the local leprosy team, supervises the institutions and runs deformity clinics. The REs take up a role as local managers of the programme, problem identifiers and action originators. All of these roles are rather complex in nature and need new skills, reorientation of approach and thinking and the creation of an environment that is conducive to action. Although some of these aspects have been included in the set of official circulars defining the new responsibilities of the officials involved, their implementation needs various other inputs and most specifically, training.

RELATIONSHIPS BETWEEN TEAM MEMBERS

Translating the concept of empowerment and teamwork into reality has also been difficult, as government officials are used to following instructions given by a higher authority. The two key players, the RE, a novice to leprosy work and the leprosy PHI, the veteran leprosy worker, are each responsible to their own units. The natural tendency for the novice to depend on the veteran has led to the ownership of the programme sometimes falling between these two officials. At times there was confusion between them as to the lines of authority, which affected instructions to the local level from each. In some areas, however, REs have shown a lot of initiative (e.g. Polonnaruwa, Galle, Kegalle, Anuradhapura and Ratnapura) and are beginning to take ownership of the programme.

Although the local team should include a dermatologist, they are not available in all districts and in some instances the team spirit remained a distant expectation. This minimized the full utilization of the project’s human resources at the district level.

LOCAL LEVEL ANALYSIS AND USE OF DATA TO FORMULATE POLICY AND ACTION

Complete integration cannot occur without a transfer of decision-making power to local level. Although the Blueprint envisaged the local collection and consolidation of data, specific software that simplifies analysis and generates the necessary reports, the need to empower the local health staff with the necessary skills was only identified at a later stage. Consequently, there was limited local level analysis, paving the way for the direct involvement of the CLC in local planning and problem solving. Furthermore, evidence based decision making is the exception within the local health contexts (at provincial, district and MOH levels) and, as in most situations, instructions are given to local health staff.

ACCOUNTABILITY

The transfer of accountability from the ALC to local health authorities was the most difficult within this policy change. Most health staff, including higher officials, do not consider leprosy to be a general health problem, but one which should be dealt with by a specialized institution. For example, despite a clearly defined mechanism to obtain replenishment MDT stocks, responsibility for leprosy has constantly bounced back towards the CLC.
The blueprint prepared at the outset identified 12 levels of activity. These included the reduction of stigma at a community level, up to formulation of national policy. At each of these levels, different individuals with differing orientations are involved, with different tasks. The management of these processes involves local health institutions. Working with such institutions and agencies is a challenge to the ALC, which has a very limited staff. The expectation that the leprosy PHI should liaise with these institutions to facilitate action proved to be unrealistic at times as they are not as qualified as their new counterparts and require new skill as well as training.

INTERAGENCY COMMUNICATION

Implementing integration cuts across many agencies including the Ministry of Health (Line Ministry), Provincial Health Ministries, Deputy Provincial Health Directors, Epidemiology Unit, and the ALC. However, all the formal and informal communications regarding leprosy still originate and are disseminated from the ALC. The low prevalence of leprosy may have been a cause of this, but given the challenges of implementing the policy change, the ALC has now been called upon to generate new ideas to create the two way communication process necessary to share experiences among institutions.

EPIDEMIOLOGICAL IMPACT

From an epidemiological perspective, both the prevalence and new case load increased by 36% and 41%, respectively (Figure 1). The new case load rate has increased from 0.89/10,000 inhabitants in 2000 (1,700 new cases) to 1.2/10,000 in 2001 (2,398). The prevalence has increased from 1,158 in 2000 (0.6/10,000 inhabitants) to 1,583 (0.8 per 10,000 inhabitants). These figures have been corrected for about a 5% re-registration rate that was detected because of the alertness of some leprosy PHI and the person responsible for data. The new case load might still include a small percentage of re-registered cases in some areas, but this will be compensated by the fact that all the IPFs have still not been received. The deformity and child rates have not increased significantly at national level.

Almost every district has registered an increase of case detection, which was more significant in low endemic areas. High deformity rates were observed in low endemic districts. Although there were increases in new cases in districts of Puttalam, Kurunegala, Matara, Galle, Kegalle, Batticaloa, the prevalence rates have remained unchanged.

Discussion

In spite of the initial difficulties, leprosy services are now fully integrated within the general health services. Field visits to a cross section of institutions in the country have confirmed MDT is available in all curative health facilities. Registers are being maintained at all levels and the patient MDT cards are up-to-date. Only a small number of patients who were interviewed collect their follow-up MDT dose directly from the pharmacists without seeing a medical officer, often due to poor awareness of this option. Most patients also stated that they would prefer to take more than 1 month’s treatment at a time.
Figure 1. Prevalence rate by province.

Data from the Northern Provinces was not available.
The field visits have also identified areas which need improvement such as further simplifying the information system, modifying the patient MDT cards to permit recording complications, training needs, and moving MDT logistics into the general medical supplies.

Most of those physicians who were trained diagnose and treat leprosy at their institution and feel confident about managing the disease. Although the training programmes covered about 85% of doctors working under the provincial administration, the attendance of doctors in the large teaching hospitals was much lower, bringing the average coverage of doctors down to about 60%. The low attendance was primarily due to a lack of interest in leprosy, given the low case load as well as the existence of dermatological departments in these institutions. The attractiveness of future training will be increased by widening the subject to cover the management of hypo-pigmented patches in general, with a specific emphasis on leprosy. Private practitioners will also be targeted in the next round of training sessions as a large proportion of patients turn first to them.

The distribution of MDT will be integrated into the national drug delivery system of the medical supply division. Buffer stocks will be maintained at the Central Leprosy Clinic, Regional drug stores and with REs. MDT will be included in the drug estimation requisition book, which has to filled out by every health institution in the country. The REs will help the pharmacist estimate the quantities needed for their health facility.

In conclusion, based on the Sri Lankan experience, the following parameters appear to be the important indicators of successful integration:

- Improvement in the epidemiological indicators e.g. reduced deformity rate, lower child rates, lower MB rate and high cure rates.
- Most new cases detected and followed up by doctors in outpatient departments.
- Functional information system with timely flow of information from curative to preventative health services.
- Effective mechanisms to ensure adequate supplies, including MDT stocks at the local level.
- Development of district databases and activities based on epidemiological evidence.
- Annual budget allocations based on evidence-based strategies developed by local health staff.
- An environment in which patients do not hesitate to seek treatment, comply with the full course of treatment and feel well cared for at the local health facility.

The successful integration of leprosy into the general health services was primarily due to the consultative and participative approach adopted throughout the process from planning through implementation to monitoring. The high degree of political support from all level of the health administration has also greatly facilitated the process.

Integration has also brought treatment closer to patients throughout the country. Even in the North and North Eastern part of the country, areas that have been difficult to access due to the continuing conflict, the local health authorities have made arrangements to deliver MDT to patients diagnosed at mobile clinics run by international NGOs such as ICRC. Above all integration reduces the reliance of the Health Ministry on external support, ensures the long-term sustainability of leprosy services and gives the authorities the confidence to consider integrating other disease treatments into the general health services.
References