Integration of leprosy services into the General Health Service in Sri Lanka: overcoming challenges to implementation in a remote district

Thushanthi S. Wijesinghe, Pushpa Ranjan Wijesinghe

ABSTRACT

Sri Lanka took a policy decision to integrate leprosy services into the general health services (GHS) in 1999. This paper aims to summarize the emergence of new, specific challenges and how they were overcome during the integration of leprosy services to the GHS in a remote, leprosy endemic district in Sri Lanka. In this article, the regional epidemiologist as the team leader describes the principles used for transition to an effective integrated model of leprosy services from a centralized leprosy control model in the district. In addition, rationale for integration is viewed from the epidemiological and operational perspectives. National and district leprosy epidemiological data from secondary sources are also reviewed for corroborating the effectiveness of integration. Challenges surfaced were mainly related to the transfer of ownership of the programme, selection of appropriate service providing institutions easily accessible to clients, sustainability of leprosy services at the GHS, ensuring participation of all stakeholders in capacity building programmes and co-ordination of patient care in the absence of a dermatologist in the district. An empowered district team leader with specified roles and responsibilities, his sound technical and managerial know how and ability to translate ‘team work’ concept to practice were found to be essential for successful implementation of integration. Decision-making powers at the district level and flexibility to introduce new, area-specific changes to the centrally prepared core activities of integration were also vital to overcome locally surfaced challenges.

Key words: Access, challenges, integration, leprosy, sustainability

INTRODUCTION

In the integration of leprosy services, case-finding, treatment, disability care and rehabilitation closer to the community become the responsibility of general health services (GHS).[^1] Policy making, planning, training, supervision and dealing with referrals are retained at specialized, intermediary and national levels.[^2,^3] Integration improves community awareness, case-finding, access and regularity of treatment.[^4] Additionally, delivery of services at non-specialized units gradually decreases society’s negative perception of the disease and affected persons.[^2,^5]

Several countries have translated integration into a reality.[^6,^7] Transition from a specialized campaign to an integrated service is complex.[^8] Although problems arose due to inadequate planning in some countries,[^9,^10] good preparation and meticulous planning addressed specific challenges in Sri Lanka.[^8] However, due to varying...
Operational and logistic issues, some unanticipated, local challenges emerged in different districts. We describe how we overcame these challenges in Polonnaruwa district during integration.

**PRE-INTEGRATION LEPROSY SERVICES**

Segregation of leprosy patients was initiated by Dutch colonialists and made compulsory by the British through the Lepers ordinance in 1901. Given the socio-economic impact of leprosy, a leprosy control plan was formulated. Subsequently, segregation of only infective cases, rehabilitation of discharged patients, special homes for paediatric and crippled patients, BCG vaccination and treating patients in local hospitals, dispensaries and homes were implemented. In 1954, a vertical anti-leprosy campaign to plan, implement, co-ordinate and evaluate leprosy control activities was established. The field programme of the campaign was conducted through 225 clinics by public health inspectors one each for 25 districts. They conducted clinics, village surveys, multi-drug delivery, contact tracing, default retrieval and educational programmes. The dermatologists and medical officers in the curative health network maintained links with these 225 field clinics run by the preventive care network for referring diagnosed leprosy patients for multi-drug treatment and further follow-up.8,11

Meanwhile, a deformity rate of about 10% among new cases reflected inadequate diagnostic services and misdiagnosis of leprosy.12,14 Given poor geographical and temporal access of only 225 clinics to patients, expansion of services was vital to eliminate leprosy in remaining districts.

Further, with a low prevalence, centrally operated control activities were not cost-effective. Leprosy services provided through the GHS was seen as an alternative for easy access and to address residual problems facing leprosy elimination [Figure 1].8

Integration of leprosy services in Sri Lanka focused on key objectives given in Box 1.

**PRE-INTEGRATION LEPROSY CONTROL IN POLONNARUWA DISTRICT**

Polonnaruwa was a priority district for leprosy elimination at the sub-national level [Table 1].12

The District Leprosy Elimination Programme was exclusively carried out by one well-trained and experienced Public Health Inspector. Self-referrals and patients directed by the curative network were followed up by the Public Health Inspector in field clinics. Complicated cases were referred to the anti-leprosy campaign for specialized management. Patient records were also maintained by the Public Health Inspector.

**RATIONALITY FOR INTEGRATION**

Thus, through the efforts of the Leprosy Elimination Programme, the country achieved World Health Organization’s (WHO’s) leprosy elimination target by 1995.8 Nevertheless, the sub national elimination target of less than 1 case per 10 000 population had yet to be achieved in a few districts.12

<table>
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<tr>
<th>Box 1: Key objectives for integration of leprosy services in Sri Lanka</th>
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<tr>
<td>Transferring the ownership of leprosy elimination activities to a district health team led by the Regional Epidemiologist</td>
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<td>Ensuring availability of diagnostic and treatment services at all curative health institutions</td>
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<td>Ensuring readiness and willingness of the health care providers in the GHS to diagnose and manage leprosy</td>
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<td>Making the community aware of changes and new service delivery sites</td>
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<td>Ensuring an operational system of record keeping and monitoring</td>
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Figure 1: General health services in Polonnaruwa
**LOCAL CHALLENGES SURFACED DURING INTEGRATION**

Ensuring harmony between the new team leader and the previous owner

Sustaining a harmonious relationship with the previous owner was the biggest challenge for the new team leader. Conceptually, replacement of a veteran by a novice naturally leads to dependence of novice on the veteran without realizing that leadership belongs to the novice. Such dependence tends to confuse health workers in the GHS as to which line of authority to follow, particularly in our case, given the strong image of the previous owner related to leprosy. Therefore, effectively utilizing and sustaining his services in the new role, self-perceived as ‘demoted’ in the post-integration period was daunting.

As in the Jigawa state, Nigeria, where previous vertical staff members were reluctant to integration due to uncertainty of their future role, the discontent on losing the ownership was expressed clearly by the previous owner, as in our case too. However, we convinced decisiveness of his active participation, energy and past experience for success.
Obstacles to harmonious relationship were minimized by making both integral members of the district team. The district being highlighted nationally for successfully overcoming this challenge in the post-integration period is a testimony to the effectiveness of our strategy. Similar effective strategies making vertical staff a part of the change have been stressed in Tamil Nadu, India, and in Nigeria.

The experience and skills of the team leader in human resource management contributed positively to transform attitudes and utilize services of the previous owner against his perception of demotion and unceremonious abandonment by authorities. The modern team building principles were used herein. ‘Mutual dependence’, that is when a group of individuals cast aside self-interests and focus their efforts towards a unified goal, is one principle. The second principle was 'Designated Roles'. Managerial roles of the team leader and roles of the previous owner in monitoring multi-drug supply, [Figure 2] disability care, staff education and supporting the team leader were clearly explained. The central circular on roles of different officers in an integrated setting helped defining specific roles. Similarly, Nigerians too had emphasized new, specific roles to previous vertical staff during pre-integration discussions in their successful integration in Jigawa state in 1999, in contrast to their failed attempt in 1996. Third principle was ‘planned work’. Planning was a democratic, consensual process with active involvement of both officers. Underlined principle was that integration was a process of collective efforts. In the implementation (worked plan), previous owner was given freedom to execute his new roles independently and wherever collective involvement was needed, team leader participated with the previous owner. These two key managers contacted the community through the routine package of primary healthcare (PHC) delivered by PHC workers. Special engagement with the community for active detection of patients was discouraged as a policy. A massive nationwide social marketing campaign targeted the general public for increased self-referrals to the GHS. Ghana similarly demonstrated that decentralization of leprosy control could enhance the ownership at peripheral levels.

**Initiation and sustainability of information management**

**Reluctance of pharmacists in the GHS to accept record keeping**

Although the vertical staff in India were reluctant to hand over record keeping to the GHS, we experienced reluctance of some GHS pharmacists to accept record keeping citing it was an additional burden. This was threatening integration with possible failure of obtaining complete patient and multi-drugs stock data from the GHS [Figure 2]. Internationally too, there were instances of bouncing back of record keeping to the vertical staff due to ill-prepared pre-integration. Thus, it was certain that not only knowledge, skills, but also motivation and positive attitudes were needed to transfer responsibilities to workers in GHS. The team leader identified reluctant pharmacists individually and in ‘one to one’ encounters listened to grievances, explained importance of record keeping, simplicity of forms, negligibility of the additional burden and feasibility of the task. Reasoning was based on expected numbers of daily leprosy patients per institution, on the basis of previous statistics. It resulted in institutional treatment record keeping universally by pharmacists in Polonnaruwa. Results demonstrated benefits of reassurance of the feasibility of tasks, simplifying procedures and registers for workers in the GHS.

**Information management related to the post-integration follow-up of treatment completion**

Although having less fragmented management information is an advantage of decentralized health services, after integration, we experienced fragmented information on patients registered in the district but collected multi-drugs from other districts. It caused difficulties in updating treatment completion records. Thus, in contrast to the pre-integration, where Public Health Inspector knew treatment completion status of each patient under his care, in the post-integration, it was not known for nearly 15-20% of patients. This necessitated immediate attention given the Tamil Nadu experience of an apparent reduction in treatment completion despite an increase in new case detection after integration.

Having foreseen this issue, an Individual Treatment Card posted to the campaign soon after filling the last dose of multi-drugs was designed to update treatment completion status. Nevertheless, only 60% of cards were received by the campaign resulting in inability of the district to receive information on treatment completion.

**Divisional level analysis of leprosy data**

In pre-integration, data for local analysis was available in patient registers at divisional levels. However, this was impractical in the post-integration without a proper mechanism of flow of patient information to the divisional level. Having emphasized the importance of availability of data at the divisional level, we designed an alternative data flow from the district to the divisional level. An additional monthly return to each division with details of newly detected patients, date of their first treatment and details of subsequent multi-drug doses of previous patients was designed. Using this return, divisions were able to complete their data bases.

However, we encountered a divisional level indifference to managing information due to the negative influence of the pre-integration system where divisional statistics were maintained by the Public Health Inspector. Outcome could
have been bouncing back of information management to the vertical staff. We avoided this by training newly designated ‘Programme Planning Officers’ to manage leprosy information at the divisional level.

**Re-orientation of all healthcare providers in leprosy services**

Capacity building at district/sub-district levels was the key in transition from vertical to an integrated programme.\(^{[18]}\) Although re-orientation of medical officers was a challenge for the centre\(^{[19]}\) with a national figure of only 85% of re-oriented provincial doctors,\(^{[22]}\) in our district, their response to re-orientation was overwhelming. In all institutions, team leader identified absentees and special individual or group re-orientation sessions on symptoms, diagnosis, management and rehabilitation of leprosy patients were held for them. This strategy enabled re-orientating all medical officers in GHS in the district as opposed to 85% of provincial and 60% of central ministry hospital doctors trained nationally.\(^{[22]}\) Additionally, PHC workers were re-oriented for detecting suspected leprosy cases in community, referring to GHS, de-stigmatization, counselling and community involvement.

Leprosy services are more accessible and effective when provided closer to community.\(^{[23]}\) In Sri Lanka, traditional medical care, sought by many with symptoms such as numbness, joint pain, paralysis, etc., is crucial for service provision closer to community. Inadequate knowledge of traditional practitioners on leprosy was a reason for high deformity rates in Sri Lanka despite low prevalence of leprosy.\(^{[13,14]}\) Therefore, re-orientation programmes were extended to all traditional practitioners to dispel myths and familiarize them with signs and symptoms of leprosy. Although the task was challenging, their participation rate and enthusiasm was remarkably high.

**Ensuring and sustaining easily accessible services in the local context**

Although ensuring availability of diagnostic and treatment services at all curative institutions\(^{[15]}\) was a key national objective, due to some district-specific characteristics indicated in Box 2, we faced a dilemma as to whether we should deviate from this national policy.

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<th>Box 2: Reasons for considering preventive institutions for leprosy services</th>
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<td>Increase in self-referrals to monthly leprosy clinics at divisional health offices due to pre-integration familiarity</td>
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<td>Preference of patients diagnosed prior to integration to continue treatment from divisional offices</td>
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<tr>
<td>In certain areas, due to easy access, preference for patronizing divisional offices for diagnosis and treatment</td>
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<tr>
<td>Customarily reference of suspected patients to the divisional offices by PHC workers</td>
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<tr>
<td>High demand of the MOHs to be actively involved in leprosy diagnosis and treatment</td>
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Considering relevance of these reasons for easily accessible services, district authorities allowed preventive institutions to continue leprosy services. Brazil\(^{[2]}\) and Myanmar\(^{[23]}\) similarly have effectively used family health teams to provide leprosy care in the post-integration.

**Patient care without specialist dermatologists in the district**

Although integration does not exclude specialized elements,\(^{[2]}\) interestingly, absence of a dermatologist in the district had overall positive effects on integration. Low interest in leprosy by medical officers due to increasing specialist dermatologists was reported as a reason for their low attendance for re-orientation programmes in large hospitals during integration.\(^{[18]}\) Despite more than 60% of leprosy patients in Sri Lanka\(^{[24]}\) and 80%\(^{[25]}\) in China being detected in institutions with a dermatologist in the post-integration period, in Polonnaruwa, the majority of new patients was detected by non-specialists at all levels.

**Lessons learnt**

One lesson to be learnt from our experience is the possibility of unfolding different local challenges during actual implementation notwithstanding meticulous national planning and preparation preceding it. Change is always fraught with difficulties but proper management strategies help overcome these.\(^{[26]}\) We elaborate that commitment and innovation by district managers are vital for success and lack of which has the potential for failures of the programme as demonstrated in Jigawa state in Nigeria\(^{[10]}\) and in Tamil Nadu.\(^{[9]}\) Based on our experience, we highlight the indispensable nature of having an empowered, district team leader with specified roles and responsibilities to address these issues successfully and sustain services.

For the future benefits of programmes, it is worth mentioning that sound technical and managerial know-how and commitment of the team leader are essential in solving multi-faceted challenges. Such district health managers empowered to effectively monitor integration and correct operational problems early have also been reported from Ghana.\(^{[18]}\) However, we accentuate the challenging role of the manager in the presence of the previous owner. We opine that efforts such as accepting the previous owner in the team to compensate his perceived loss of status, spelling clear roles for him, practicing team work concept and creating a favourable environment for operation used to off-set challenges in our district will be useful in similar future exercises.

Implementation of integration varies within and between countries.\(^{[2]}\) In this context, we learned that peripheral decision-making power and flexibility in introducing new area specific activities to core activities in central plans were essential to better address local issues. This context specific integration\(^{[2]}\) may prove to be handy for programme managers in different settings.
Easy access to multi-drugs is an advantage of integrated services. Visschedijk et al., opined that accessibility and quality of leprosy services depend on the health system through which they are implemented. Therefore, demonstrating the district decision allowing preventive institutions also to provide these services, we highlight the importance of identifying the most appropriate institutions to provide diagnosis and treatment based on easy access, client's acceptability and service providers' willingness.

In this exercise, we also learned that re-orientation should focus not only on knowledge enhancement but also positive attitudes of staff towards the service and patients. It required multiple methods of capacity-building and motivation for new roles without additional benefits. At times, extreme measures such as ‘One to one’ encounters with individuals reacting negatively to integration were effective.

In post-integration, prevalence (0.9-1.5/10 000 population) and New Case Detection Rate (NCDR) [1.6-2.1/10 000 population] increased relative to 1998 (prevalence 0.7/10 000 population, NCDR 1/10 000 population). Detection of relatively higher grade II deformity rates (12.2-16.1%) in post-integration indicated capturing of patients previously undetected by the vertical programme. Diagnosis and treatment of leprosy patients at all levels of institutions indicated competence of medical officers and access wise, it reflected provision of leprosy services closer to the community. This was consistent with the national trend of more patients being detected by non-specialized institutions in remote districts without dermatologists. As suggested by Feenstra, these reflect the success of integration. Based on this experience, we recommended that decision-making powers and flexibility vested upon district managers to introduce area-specific changes to centrally planned core activities be continued for effective context specific solutions to future challenges.

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